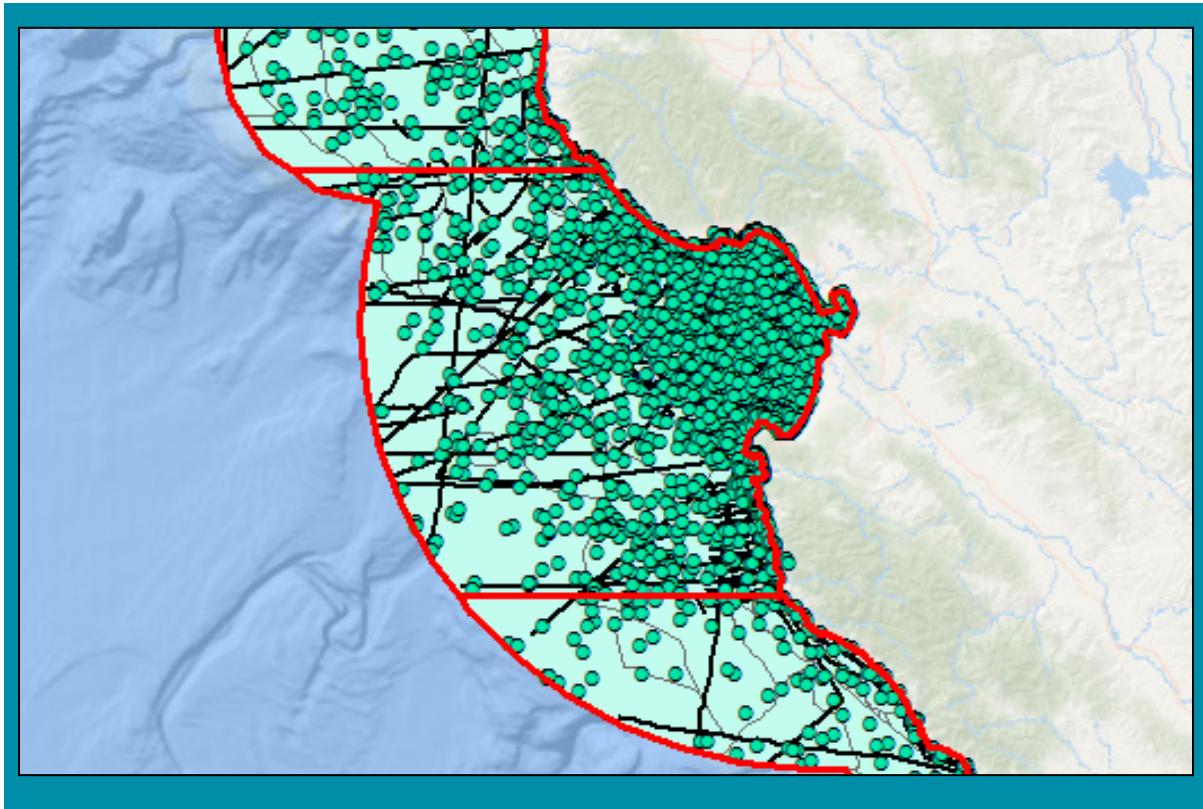


# The Spatio-Temporal Mosaic of Scientific Research: A Case Study from Monterey Bay National Marine Sanctuary



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## Abstract

Spatial management design is largely influenced by where and when research has been conducted throughout the designated area. Such information provides the scientific context that is critical for successful decision-making. We performed a meta-analysis on over 1,100 peer reviewed journal articles to discern the most commonly studied regions, habitats, and species within Monterey Bay National Marine Sanctuary (MBNMS), including selected studies conducted prior to sanctuary designation. We found that despite the substantial number of studies conducted within the boundaries of MBNMS, much of that research was isolated to particular locations and/or habitats. Specifically, we found notable differences along both latitudinal and onshore-offshore gradients, with research largely concentrated within the nearshore, central region of the sanctuary in the vicinity of Monterey Bay. Further, within that area much of the taxonomic focus of research to-date was conducted on invertebrates, and much of it occurred in and around the submarine canyon that defines the center of the bay. These results suggest that even for a well-studied area such as MBNMS, the spatio-temporal variation in scientific research needs to be considered when implementing decisions across large areas where information may be limited.

## Key Words

Monterey Bay National Marine Sanctuary, Davidson Seamount, marine protected areas, spatial management, marine spatial planning, marine research, meta-analysis, hotspots, sea otters, kelp, rockfishes.

## Acronyms

CDFW	California Department of Fish and Wildlife
CSU	California State University
MBARI	Monterey Bay Aquarium Research Institute
MBNMS	Monterey Bay National Marine Sanctuary
MPA	Marine protected area
MSP	Marine spatial planning
NERR	National Estuarine Research Reserve
NMS	National Marine Sanctuary
NOAA	National Oceanic and Atmospheric Administration
NOAA ONMS	National Oceanic and Atmospheric Administration's Office of National Marine Sanctuaries
SIMoN	Sanctuary Integrated Monitoring Network
UC	University of California
USGS	United States Geological Survey

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# Introduction

Effective management of marine areas requires knowledge of the spatial distribution of ecosystems, natural resources, and any potential anthropogenic impacts on those ecosystems and resources. The sheer size of marine areas can pose challenges for management, along with the myriad of interactions existing among marine ecosystems and the various ways they are exploited by humans for their services.

National Marine Sanctuaries (NMSs) are areas in the ocean and Great Lakes managed by the National Oceanic and Atmospheric Administration's Office of National Marine Sanctuaries (NOAA ONMS; NOAA 2016A). This system is comprised of 13 NMSs and two national monuments. The primary purpose of a NMS is to protect the natural beauty, biodiversity, cultural resources, and economic productivity of federally managed underwater parks. Sanctuaries also serve as significant hubs for scientific research and monitoring programs, individually tailored to meet the management needs of each sanctuary (NOAA 2016A). Research within the sanctuaries is essential for developing an in-depth understanding of assessment, protection, restoration and evaluation practices (NOAA 2015A). Sanctuary staff utilize conservation science as a means to monitor the conditions and trends within these marine ecosystems and establish management plans (NOAA 2015B; NOAA 2016C).

Monterey Bay National Marine Sanctuary (MBNMS) covers 15,800 km<sup>2</sup> of state and federally protected waters, spanning over 444 km of California's central coast and seaward an average of 48 km (NOAA 2016B). In 1992, MBNMS became the eleventh NMS in the system (NOAA 2015B). It is one of the largest NMSs and includes diverse ecosystems such as deep underwater canyons, rocky shores, sandy beaches, the Davidson Seamount, and the Elkhorn Slough. These habitats are home to 34 species of marine mammals, 180 species of shore- and seabirds, roughly 525 species of fishes, and a wealth of invertebrate and algae species (NOAA 2016D).

More than 30 research institutions dedicate their resources to studying the sanctuary's diverse ecosystems, operating independently and collaboratively to provide data on habitats and species of interest (<http://www.paduan.org/mbcorc/>). Marine scientific research within the current boundaries of MBNMS dates to 1892 with the founding of Stanford University's Hopkins Seaside Laboratory, now formally known as Hopkins Marine Station (Benson 1995). The abundance of marine life in Monterey Bay coupled with its coastal accessibility provided early researchers the opportunity to explore fundamental concepts in marine ecology and biology (e.g., Skogsberg and Van-Sell 1928; Hewatt 1935; Hewatt 1937). Publicly funded research became common as governmental agencies like NOAA, the California Department of Fish and Wildlife (CDFW), and the United States Geological Survey (USGS) gained resources and jurisdiction. Research also expanded with the establishment of institutions such as the University of California (UC) and California State University (CSU) systems, as well as nonprofit research centers like the Monterey Bay Aquarium Research Institute (MBARI). Today, sanctuary-specific monitoring efforts are inventoried through the Sanctuary Integrated Monitoring Network (SIMoN).

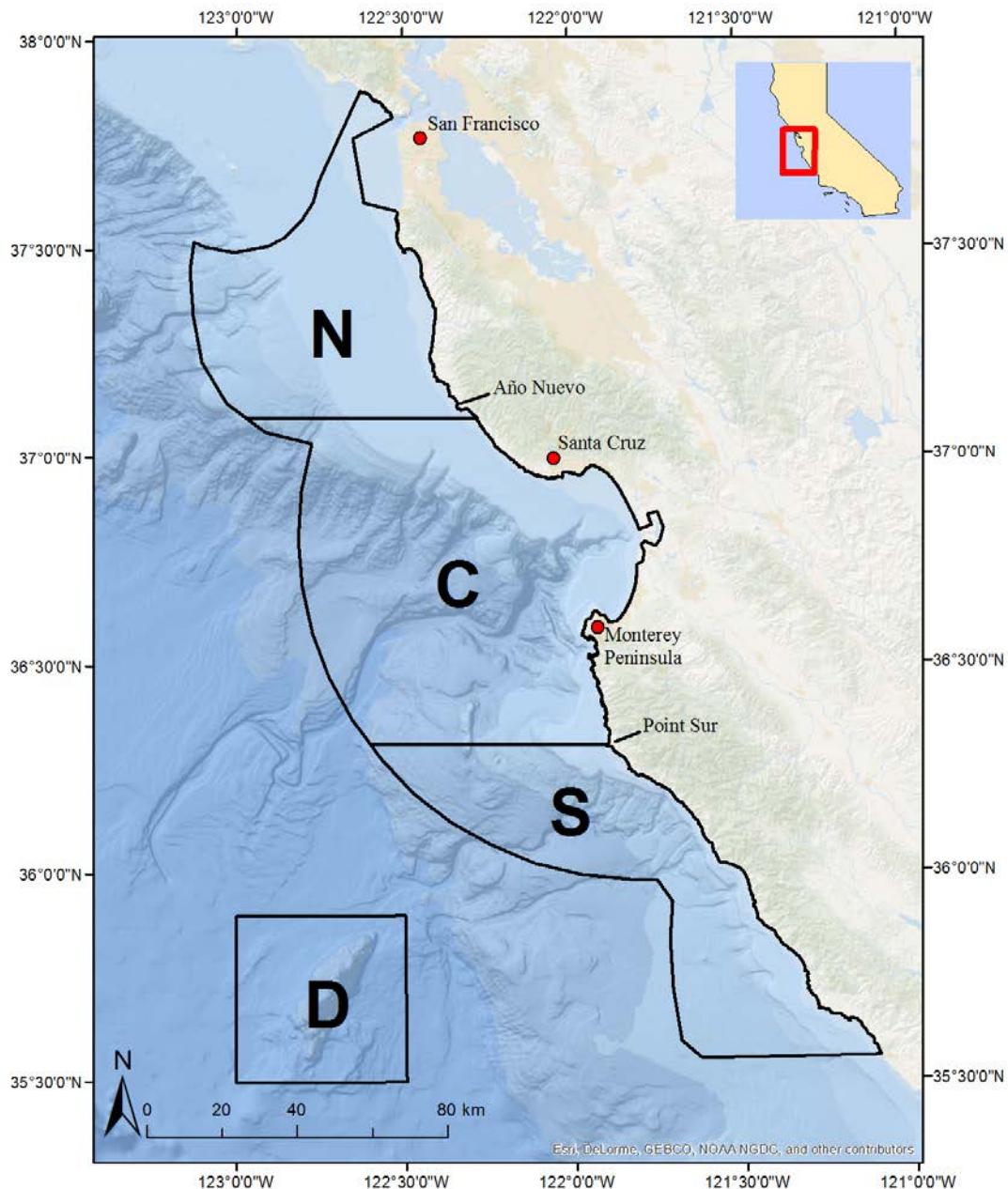
Despite the proliferation of marine scientific research within MBNMS, a comprehensive review of the spatio-temporal distribution and content of that research has not been completed. The quantity of research within MBNMS can give the false impression that the entire Sanctuary has been well-studied when in fact the research is not distributed homogeneously. Information regarding the number, distribution, and focus of studies with defined habitats and organisms is necessary for effective marine spatial planning (MSP) as well as identification of information gaps in areas requiring more scientific effort.

To inform spatial management and examine patterns of research coverage, we quantified the spatio-temporal distribution of scientific studies within MBNMS. We reviewed over 1,100 peer-reviewed publications from Sanctuary waters and assessed the distribution of research by geographic region, habitat, and organism categories to create a comprehensive meta-analysis. To our knowledge, this is the first study of its type conducted within a U.S. National Marine Sanctuary.

# Methods

## Study Site

Our study site encompassed the entire MBNMS, with sub-sets delineated based on the boundaries used in Adelaars *et al.* (2012; Fig. 1).



**Figure 1.** The boundaries of MBNMS off the central coast of California. The study area was divided into regions of North (N), Central (C), South (S), and the Davidson Seamount (D).

## **Data Collection**

We searched the SIMoN ([sanctuarysimon.org/monterey/](http://sanctuarysimon.org/monterey/)) database of more than 14,000 publications as a first step to collect research publications conducted in the vicinity of MBNMS, and limited our scope to include only peer-reviewed research conducted within the Sanctuary boundaries. Older articles in the database that were not available electronically were excluded from the study. Further, studies published outside the peer-reviewed literature, within such media as magazines, formal reports (e.g., reports produced by NOAA or USGS), theses, books, newspapers, etc., were not included as a part of this meta-analysis.

We searched for additional articles using scholarly literature search engines such as the Earth, Atmospheric & Aquatic Science Database, ProQuest, U.S. Geological Survey publications, Science Direct, Elsevier, and Google Scholar. We used search terms that were specific to the SIMoN categories described below (Table 1) and to locations such as “Monterey Bay National Marine Sanctuary” or “central California”.

Although MBNMS was not established until 1992, we chose to include accessible publications for work conducted prior to this designation to include relevant historical research. Dates of publication ranged from 1880 to January 2017. Additionally, studies were not excluded based on the entities conducting the work, and the database includes the works of researchers affiliated with federal, private, local, and international entities. It is important to note that separate publications may share common data produced by a single collaborative research effort, but we did not attempt to correct for data of this type and acknowledge that our analysis of publication effort may not capture some aspects of research effort. Furthermore, any studies that were in themselves a meta-analysis were excluded, as were studies with vague or unclear sampling locations as they could not accurately be represented spatially. Similarly, studies using satellite or modeled data were also excluded, with the exception of studies using field samples to create or validate models.

Ultimately, a total of 1,186 peer-reviewed journal articles were analyzed for this study (Appendix A). We entered each article into a digital database with fields for author(s), date, title, keywords, agency conducting the study, duration of study, species involved (if applicable), habitat studied (if applicable), and a regional designation within the Sanctuary for the study location. We defined regional designations as North, Central, South, and Davidson Seamount and delineated the North-Central boundary and the Central-South boundary as Año Nuevo and Point Sur, respectively. We used SIMoN biblioID numbers for articles in the SIMoN database and assigned unique identification numbers to articles found outside the database.

## **Temporal and Categorical Analyses**

To determine the temporal distribution of the studies in our database and discern any trends over time, we grouped and analyzed the studies by year published. It should be noted that we included one study with a publication date of 2017.

Articles were categorized by key study habitats and organisms to discern their levels of representation within the database. We placed habitats and organisms into categories modified

from a list on the SIMoN website ([sanctuarysimon.org/monterey/](http://sanctuarysimon.org/monterey/)) and the eight habitat categories in the MBNMS condition report (Table 1; ONMS 2015). Category designation was assigned based on the most pertinent organisms and/or most relevant habitats found within each study. Although the organism categories span several taxonomic levels, they were created to capture important ecological distinctions between focal species. In addition, habitat categories differ in terms of specificity and habitat abundance or availability. Due to these inequalities, the assigned categories vary notably in depth.

**Table 1. Organism and habitat categories used to classify publications.**

<i>Organism Categories</i>	<i>Habitat Categories</i>
Birds	Beaches
Bony Fish	Deep Seafloor & Canyons
Cartilaginous Fish	Estuaries
Invertebrates	Kelp & Shallow Reef
Macroalgae	Pelagic
Microbial	Rocky Shores
Otters	Sandy Seafloor
Phytoplankton	Seamounts & Ridges
Reptiles	
Seagrasses & Marsh Plants	
Seals & Sea Lions	
Whales & Dolphins	
Zooplankton	

Classification within individual categories was not mutually exclusive, and many papers applied to more than one habitat, organism, or region category (Table 2). Our confinement to studies with spatial information resulted in each paper applying to at least one region, but many papers did not apply to any habitat or organism. For example, articles pertaining to topics such as paleoclimatology and marine chemistry lacked habitats, those related to water quality and geophysical research lacked species, and articles about marine policy lacked both categories. The papers that did apply to an organism or habitat category were summed by region to create a categorical matrix for the two parameters (Table 3).

**Table 2. Total number of studies by habitat, organism group, and region organized by number of assigned categories. The number of publications classified in each category can be seen in Appendix B.**

Categories Assigned	Publication Count by Parameter		
	Habitat	Organism	Region
Single	1031	808	904
Multiple	107	105	282
None	48	273	0
<b>Total</b>	<b>1186</b>	<b>1186</b>	<b>1186</b>

**Table 3.** Matrix depicting the number of studies with assigned habitats and organisms by region. Totals differ between category groups since papers were assigned multiple habitat and organism groups. Studies that applied to the entire sanctuary are listed separately so as not to skew regional results. The absolute number of articles remain the same. Light, medium and dark blue shading indicate cells containing < 10, 10 ≤ n ≤ 100, and > 100 studies, respectively.

	North	Central	South	Davidson	Entire Sanctuary	Total
<b>Habitat Categories</b>						
Beaches	51	90	9	0	11	161
Deep Seafloor & Canyons	49	323	31	4	23	430
Estuaries	7	84	5	0	2	98
Kelp & Shallow Reef	9	116	21	0	3	149
Pelagic	52	177	29	0	26	284
Rocky Shores	81	230	45	0	15	371
Sandy Seafloor	4	22	4	0	1	31
Seamounts & Ridges	1	2	0	19	1	23
Total	254	1044	144	23	82	<b>1547</b>
<b>Organism Categories</b>						
Birds	23	47	1	0	11	82
Bony Fish	27	129	27	5	22	210
Cartilaginous Fishes	6	26	4	1	8	45
Invertebrates	45	311	28	9	11	404
Macroalgae	13	88	9	0	0	110
Microbial	0	21	0	0	3	24
Otters	5	60	23	0	2	90
Phytoplankton	11	58	6	0	12	77
Reptiles	0	3	0	0	5	8
Seagrasses & Marsh Plants	0	8	3	0	0	11
Seals & Sea Lions	66	57	5	0	12	140
Whales & Dolphins	11	31	8	0	2	52
Zooplankton	3	32	1	0	2	38
Total	210	871	115	15	80	<b>1291</b>

To test for equal representation of habitat and organism categories in the database, we explored the following hypotheses:

- $H_{0,1}$ : Habitat categories are equally represented in the database.
- $H_{A,1}$ : Habitat categories are not equally represented in the database.
- $H_{0,2}$ : Organism categories are equally represented in the database.
- $H_{A,2}$ : Organism categories are not equally represented in the database.

It should be noted that we formed our hypotheses under the assumption that categories were equally represented within the database. This is likely not the case given different levels of taxonomic specificity across categories and natural spatial heterogeneity in habitats. As this is the first study of this type and magnitude, it is important to establish a statistical baseline for the topical distribution of research effort.

We performed chi-squared tests of goodness-of-fit to determine whether organism and habitat categories were evenly represented in the database. For this portion of the analysis, we removed 273 and 48 studies that were not associated with any organism or habitat, respectively (Table 2). We also removed 105 and 107 studies that applied to more than one organism or habitat category, respectively (Table 2). This was to avoid double counting studies, thereby ensuring that counts were mutually exclusive to meet the assumptions required of chi-squared analysis. While we recognize that the removal of studies is suboptimal, we concluded that the remaining sample sizes were sufficiently large to provide for accurate representations of the database (Appendix B).

## Spatial Analyses

Using our database, we explored the spatial distribution of research within the Sanctuary. It is already known that management efforts are not uniform throughout the Sanctuary (Adelaars *et al.* 2012), therefore we predicted that research effort was also not uniform in distribution.

We explored spatial research trends throughout the Sanctuary by investigating the following hypotheses:

- $H_{0,3}$ : Studies are uniformly distributed in space.
- $H_{A,3}$ : Studies are not uniformly distributed in space.

Discrete sampling locations were manually extracted from collected literature as points, lines, or polygons using Google Earth before being compiled and imported into ArcGIS. Papers with discrete sampling locations to groundtruth modeled results were included using only those discrete samples. In ArcGIS, we created a  $3 \text{ km} \times 3 \text{ km}$  grid for the entire MBNMS area.

Resolution was determined through visual assessment of geographic and coastal features. We concluded that cells of this size qualitatively capture one spatial habitat unit. We binned studies into the grid cells by calculating how many unique studies occurred within each cell. We represented these cells as a heat map of studies within MBNMS. We used spatial autocorrelation analysis (Moran's I), with an inverse spatial relationship and Euclidian distance, in ArcGIS to quantify the spatial pattern of the study samples. Sampling hotspots were assessed qualitatively by visually analyzing the heat map.

## Focal Organisms

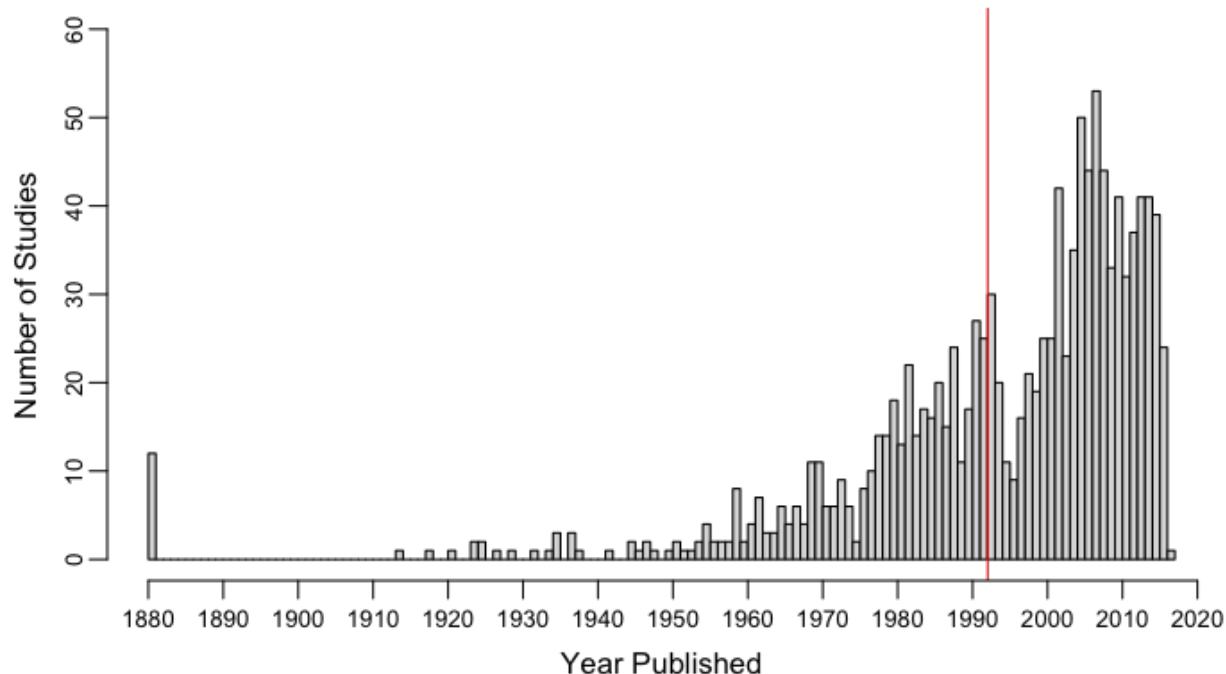
To further discern trends in research effort by organism group studied, we created heat maps for the three focal organisms with the highest study counts in the literature database. Focal organisms, defined as any organism empirically measured in a study, were individually gleaned from database articles to the highest level of taxonomic specificity provided. This list was queried to determine occurrence of unique values. Resulting groups reflected different levels of taxonomic specificity, but are considered to be a representative example of the varied inputs. Studies on kelp (order Laminariales), southern sea otters (*Enhydra lutris nereis*), and rockfishes (*Sebastodes* spp.) had the highest counts in the database: 47, 69, and 68, respectively. These focal groups differ from our matrix categories with the exception of the southern sea otter.

In order to show differences between locations of kelp studies and persistent kelp habitat found in MBNMS, the heat map of kelp studies was compared to the presence of persistent kelp forest, as recorded by California Department of Fish and Wildlife aerial surveys. Persistent kelp forest habitat was overlaid on the 3 km × 3 km grid used in the spatial analysis, creating a presence-absence grid of recorded kelp forest habitat. In this way, we were able to see differences in the spatial distribution of persistent kelp habitat and the distribution of kelp-focused studies.

# Results

## Temporal and Categorical Analyses

The number of studies per annum increased in frequency over time (Fig. 2). There was a notable decrease in studies immediately after Sanctuary designation in 1992 followed by a steady increase beginning five years after designation. The greatest number of studies (n = 53) was published in 2007.



**Figure 2. Number of studies in the database per year, 1880-2017. The vertical red line indicates the date of MBNMS designation in 1992.**

As expected, neither habitat nor organism categories were equally represented in the database [Chi-squared tests;  $X^2$  (df = 7, N = 1031) = 605.18, p < 0.001, and  $X^2$  (df = 12, N = 808) = 1111.6, p < 0.001, respectively]. Trends observed for habitat and organism categories in the chi-squared analysis were comparable to those shown by the matrix in most cases (Table 4). The habitat type with the greatest number of studies was Deep Seafloor & Canyons (n = 313), followed by Rocky Shores (n = 234) and Pelagic habitats (n = 181). The organism category with the greatest number of studies was Invertebrates (n = 285), followed by Bony Fish (n = 133) and Seals & Sea Lions (n = 79). The habitat categories with the least number of studies were Sandy Seafloor (n=16) and Seamounts & Ridges (n=16). The organism categories with the least number of studies were Reptiles (n=7) and Seagrasses & Marsh Plants (n=7). Values subject to chi-squared analysis can be found in Appendix B.

**Table 4. Comparison of the number of studies classified for each category by matrix and chi-squared analyses.** Dark, medium, and light blue shading indicate categories with the highest, second highest, and third highest number of studies represented, respectively. Red shading denotes the category with the fewest number of studies found.

Category	Number of Studies	
	Matrix	Chi-squared
<b>Habitat Categories</b>		
Beaches	161	94
Deep Seafloor & Canyons	430	313
Estuaries	98	75
Kelp & Shallow Reef	149	102
Pelagic	284	181
Rocky Shores	371	234
Sandy Seafloor	31	16
Seamounts & Ridges	23	16
Total	<b>1547</b>	<b>1031</b>
<b>Organism Categories</b>		
Birds	82	47
Bony Fish	210	133
Cartilaginous Fishes	45	27
Invertebrates	404	285
Macroalgae	110	71
Microbial	24	18
Otters	90	55
Phytoplankton	77	47
Reptiles	8	7
Seagrasses & Marsh Plants	11	7
Seals & Sea Lions	140	79
Whales & Dolphins	52	18
Zooplankton	38	14
Total	<b>1291</b>	<b>808</b>

## Spatial Analyses

We extracted spatial information from a total of 972 studies conducted within the MBNMS (Fig. 3). The studies had a positive non-random, clustered distribution across MBNMS, indicating our null hypothesis H03 was not supported ( $I = 0.690$ ,  $z = 42.70$ ,  $p < 0.001$ ). Clustering was also evident in the heat map, which depicted clear areas of concentrated research (Fig. 4). The central region contained the highest concentration of studies. Research was common within the Monterey Bay, and occurred in particularly high concentrations near Santa Cruz, Elkhorn Slough, the Monterey Bay Submarine Canyon, and the Monterey Peninsula. The northern region contained a clear hotspot at Año Nuevo Island. The northern, central, and southern regions all exhibited a pattern of research concentration that decreased with distance

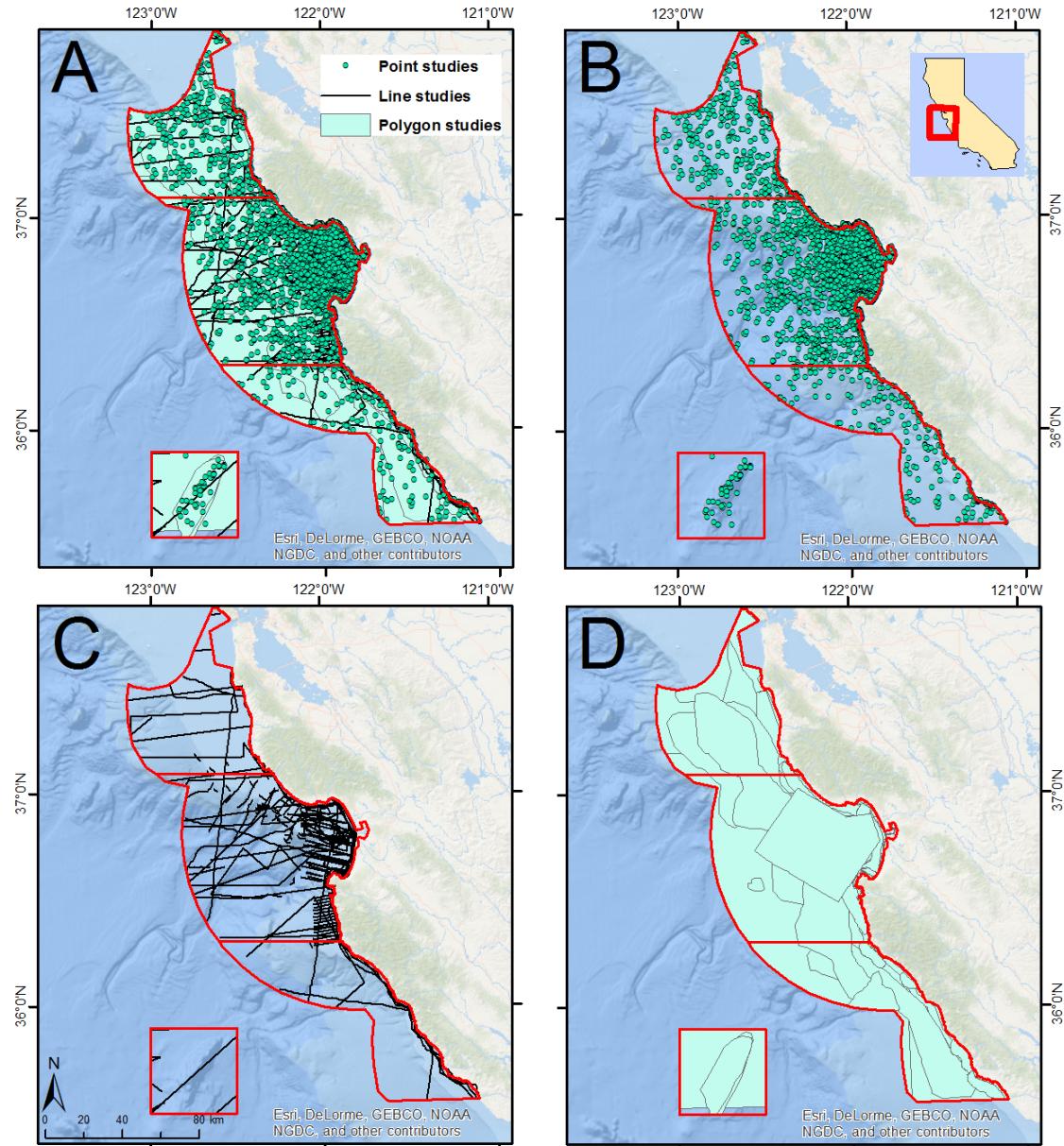
from shore. The Davidson Seamount Management Zone did not contain a clear pattern or hotspot.

## Focal Organisms

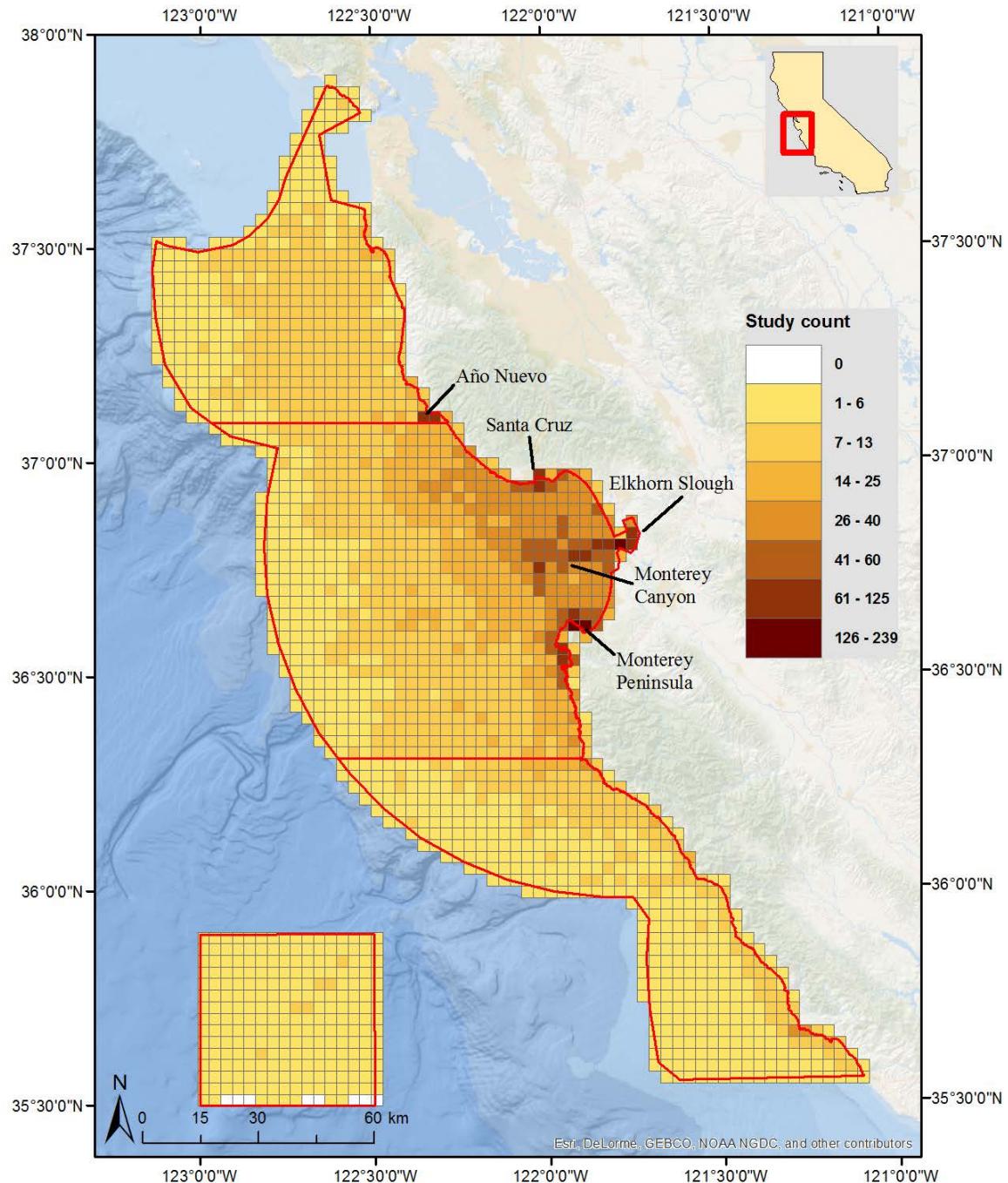
Kelp studies accounted for 4.8% or 47 of the 972 publications with spatial information. Studies occurred in the northern, central, and southern regions, with the majority distributed throughout the Monterey Bay (Fig. 5). As expected, most studies occurred nearshore where kelp is commonly found, with the exception of a study on drift kelp throughout much of Monterey Bay (Hernández-Carmona *et al.* 2006). The point furthest from shore included a measurement taken in a study that focused on biogeochemical variability within a central California kelp forest (Kowek *et al.* 2016). The highest concentration of kelp research was conducted around the Monterey Peninsula. Of the persistent kelp forest cover recorded by CDFW aerial surveys, only 29% has been studied in a peer-reviewed paper.

Sea otter studies accounted for 7.1% or 69 of the 972 publications with spatial information. These studies were located in the northern, central, and southern regions (Fig. 6). As expected, studies were primarily conducted in nearshore waters within kelp beds, where otters frequently live. There was more variation in the spatial distribution of sea otter studies in the central region, with studies occurring both along the coast and in offshore waters. The cell near the mouth of the Elkhorn Slough had the highest concentration of sea otter studies conducted within the sanctuary. Studies in the central region conducted far offshore analyzed the impacts of oil spills on sea otters (VanBlaricom *et al.* 1982, Kannan *et al.* 1998).

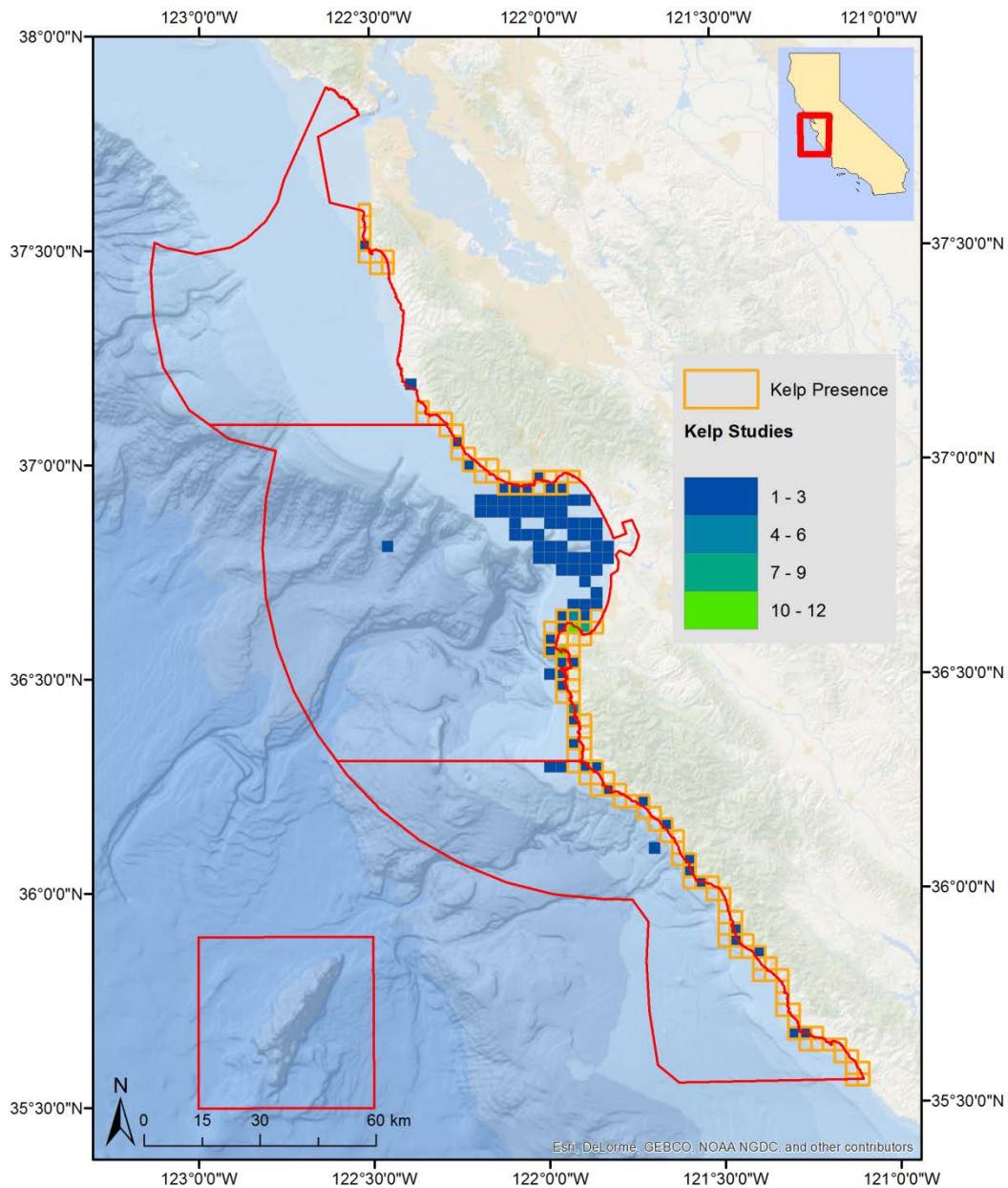
Rockfish studies accounted for 7.0% or 68 of the 972 publications with spatial information. Studies were located throughout all four regions (Fig. 7). The central region dominates rockfish research within the Sanctuary. A large majority of the cells within the central region have had at least one study on rockfishes, including every cell along the coast from Año Nuevo to Point Sur and within the Elkhorn Slough. The highest concentration of studies on rockfishes was observed in the coastal waters around the Monterey Peninsula and along the Monterey Bay Submarine Canyon. Most studies conducted in the northern region occurred along the coast, with the exception of a study that sampled multiple offshore sites to estimate how fishing impacts predators within the California Current (Field *et al.* 2010). The majority of the southern region rockfish studies occurred along the central-southern boundary line at Point Sur, continuing south into adjacent coastal and offshore waters. There were also several other grid cells featuring rockfish data in southern coastal waters, specifically around San Simeon.



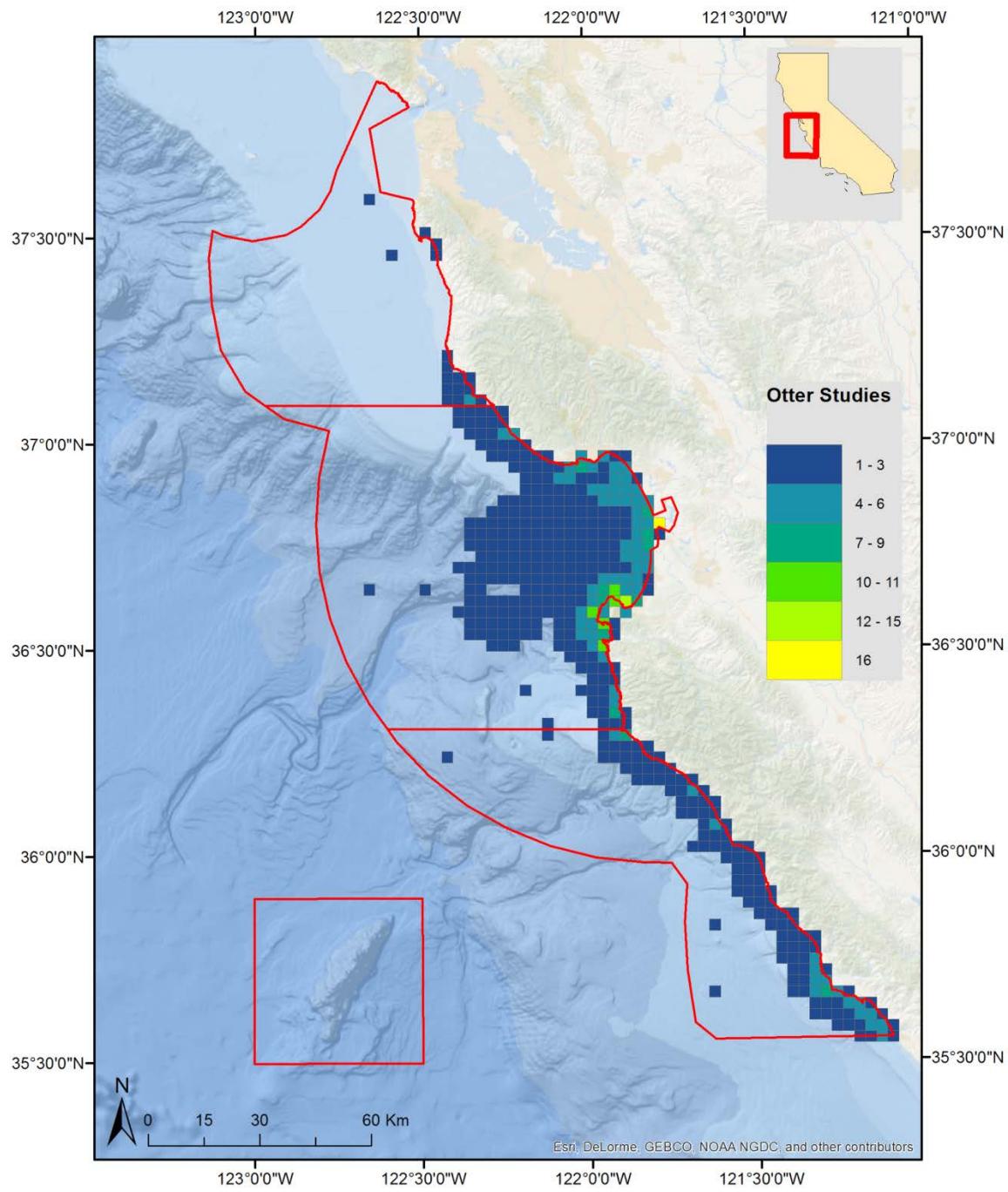
**Figure 3.** Raw data created from spatial information of 1186 studies conducted within MBNMS depicting (A) points, lines, and polygons, (B) points (n=860), (C) lines (n=40), and (D) polygons (n=67).



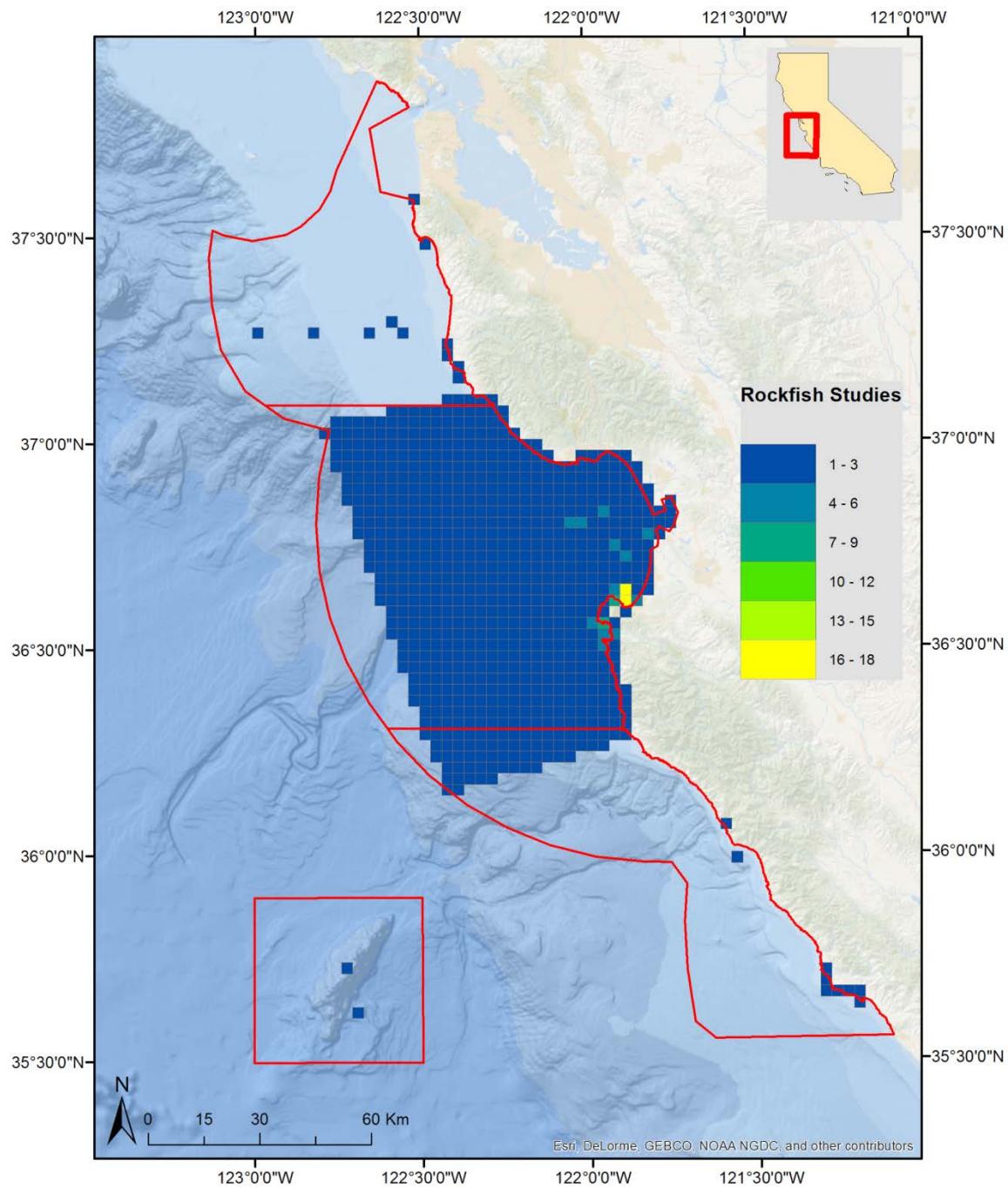
**Figure 4. Heat map created from the sampling locations of 1186 studies conducted within MBNMS. Darker colors represent greater sampling effort within the grid cell. Areas with high sampling concentrations are labeled. Thresholds for the heatmaps were determined using natural breaks, and an added break for 0 studies.**



**Figure 5. Heat map of 46 kelp studies identified in the literature review of research conducted within MBNMS. Grid cells where CDFW data showed persistent kelp cover are outlined in orange. 29% of the persistent kelp habitat within MBNMS has been studied at least once.**



**Figure 6. Heat map of 69 sea otter studies identified in the literature review of research conducted within MBNMS.**



**Figure 7. Heat map of 68 rockfish studies identified in the literature review of research conducted within MBNMS.**

## Discussion

The results of this meta-analysis revealed clear spatial, categorical, and temporal patterns in the distribution of research conducted within the MBNMS. Not surprisingly, research was concentrated in the Monterey Bay itself, particularly closer to shore and near geographic features such as the Monterey Bay Submarine Canyon and the Elkhorn Slough. The open ocean, including the waters near the Davidson Seamount, contained fewer studies than nearshore waters. Organism and habitat categories were also unequally represented; the Invertebrate and Deep Seafloor & Canyon categories contained substantially higher study counts than any other organism or habitat categories, respectively. Overall, all but eight of the grid cells assigned to the sanctuary contained some type of study. A deeper understanding of research patterns across the Sanctuary will help managers identify gaps to more effectively address future management information needs.

### Distribution of Hotspots in the Sanctuary

Ease of access to coastal regions may partially explain trends in research effort across the MBNMS. Fuel costs, vessel limitations, and budget constraints restrict the ability to conduct research offshore or in deeper waters. Acquiring information from nearshore environments and locations closer to research institutions is more economically feasible than sampling remote locations. Additionally, some habitats are located close to shore, making them more conducive to study than habitats requiring more effort to sample. Rocky intertidal habitats, for instance, have long been studied, partly due to their physical accessibility (e.g., Connell 1972; Paine 1974). This may explain the ranking of rocky shores as the second most heavily studied habitat in our analysis.

Several of the study hotspots were found near established marine research institutions. Many of these institutions are located close to shore and around the Monterey Bay, with more than ten near the Monterey Peninsula and six near the Elkhorn Slough (NOAA 2016E). The research efforts of these institutions could be primarily concentrated along the coastal regions and may explain the prevalence of nearshore hotspots.

We also observed high concentrations of studies located near unique geological features in the sanctuary. The Monterey Bay in the sanctuary's central region featured the highest concentration of hotspots among all four regions. This was also reflected in the categorical matrix; the maximum value of all but three of the habitat and organism categories occurred in the central region. Several of the spatial hotspots were clustered along the Monterey Bay Submarine Canyon, which was the dominant habitat category. As the largest submarine canyon on the west coast of North America, the canyon has long been a site of prolific geologic, oceanographic, and biological research (Breaker and Broenkow 1994; Greene *et al.* 2002; Paull *et al.* 2010). Despite this prominence, no submarine canyon species were identified as focal. This was most likely due to the high degree of biodiversity in this system, which served to dilute focal research effort.

Additional hotspots appeared around regions with high species richness or distinctive habitats. Two were located along the Monterey Peninsula, an area with a large diversity of marine habitats (Port *et al.* 2016). Several studies were conducted in the Elkhorn Slough, an ecologically rich habitat that links regionally important marine and freshwater systems. Two hotspots also appeared near Año Nuevo. These hotspots are likely a consequence of the unique Año Nuevo landscape, which serves as habitat and breeding grounds for pinnipeds such as the northern elephant seal (*Mirounga angustirostris*) and several species of birds (Pyle *et al.* 1999; Le Boeuf *et al.* 2011). In fact, Seals & Sea Lions was the only category for which the maximum value occurred in the northern region.

Coldspots mostly occurred in offshore locations and are a likely consequence of the greater challenges and costs of working offshore. This is particularly evident when looking at the Davidson Seamount. While the seamount is a unique geological feature, research effort in the vicinity was lower than in the northern, central, or southern regions presumably due to its remote location. This pattern of limited seamount studies was also apparent in the habitat matrix (Table 3).

## Focal Organisms

### *Kelp*

Kelp studies in the Sanctuary were primarily located near the kelp forest habitats of the central study region. The areas with the highest concentration of kelp studies were located along the Monterey Peninsula, a region recognized for biodiverse kelp forest communities dominated by giant kelp (*Macrocystis pyrifera*), bull kelp (*Nereocystis luetkeana*), and other macroalgae (McLean 1962; Spalding *et al.* 2003). The local diversity of both kelp and kelp-dwelling species likely draw high levels of research effort and could explain the concentration of studies conducted along these regions. However, there is a substantial amount good deal of persistent kelp forest habitat that remains unstudied outside of Monterey Bay, particularly in the southern region along the remote Big Sur coast.

### *Sea Otters*

Sea otter habitat preference and behavior likely explain why otter studies were clustered around coastal regions. Sea otters primarily inhabit nearshore kelp forests, coves, bays, and waters near sandy beaches (Laidre *et al.* 2001). In particular, kelp forests serve as important foraging sites and refugia for sea otters and could explain why sea otter hotspots were located near kelp hotspots (Lafferty and Tinker 2014). Otters frequently rest in kelp beds, wrapping themselves in canopy fronds to keep from floating away and for protection. They are also social animals and often congregate in groups (Loughlin 1988). These and other behaviors make it relatively easy for researchers to observe sea otters from onshore and nearshore locations.

The Elkhorn Slough contained the highest concentration of sea otter studies along the Monterey Bay. As the sea otter population in central California increases, more individuals are utilizing the Elkhorn Slough as foraging grounds for clams and other bivalves (Kvitek *et al.* 1988). There is a growing body of evidence indicating that otter population growth is spurring expansions in

geographic range (Feinholz 1998). A growing population and ease of foraging behavior observation may attract researchers and could explain the high concentration of sea otter studies in this area. The Elkhorn Slough's central location in the Monterey Bay area and the presence of a National Estuarine Research Reserve (NERR) also help explain the intensity of research effort.

### *Rockfishes*

Rockfish studies in the sanctuary were primarily located in the central region, and offshore locations. Several species of rockfish utilize kelp forests for habitat (Gaines and Roughgarden 1987). Abiotic conditions like wind-driven upwelling and advection of cold, nutrient-rich waters onto the continental shelf is beneficial to kelp systems and the rockfish populations they support (Graham *et al.* 1997). Increased nutrient levels stimulate primary productivity, bolster kelp forest habitat, and create favorable conditions for several rockfish species (Woodson *et al.* 2007). Several of the offshore studies consisted of trawl surveys assessing these commercially important species. The largest of the offshore rockfish studies was a rockfish length study conducted by the National Marine Fisheries Service over the span of several decades.

### **Representation of Research Categories**

The habitat and species matrix revealed trends that were not otherwise apparent in the spatial analysis. For instance, while the high representation of Deep Seafloor & Canyon and Rocky Shores studies was evident in both the spatial heat map and category analysis, there was also a high occurrence of Pelagic studies within the database. This may be attributed to strong upwelling and resulting productivity in the Monterey Bay, which attracts researchers seeking to investigate nutrient flow and pelagic ecosystem dynamics (Piskaln *et al.* 1996; Liang and Robinson 2007). It also creates the opportunity to study pelagic or migratory species such as marine mammals and seabirds that take advantage of enhanced food availability in the open ocean.

The high representation of Invertebrate studies in the organism matrix is likely a result of the immense species diversity encompassed by the category. Organism categories varied in taxonomic specificity from individual species to multi-phylum groups, and Invertebrates constituted the broadest multi-phylum category used in this analysis. The relative ease of studying invertebrates in both field and laboratory settings may have also contributed to this distinction. The high occurrence of Bony Fish studies might also be explained by the diversity of species included within this group, or their recreational and commercial importance.

### **Temporal Distribution of Research**

The number of articles published yearly within sanctuary bounds increased over time. This trend may have arisen because more recent publications are more easily accessible on the internet and were more likely to be included in our database. However, it can be presumed that this trend is also at least partially reflective of the true temporal distribution of research in the sanctuary.

Under this presumption, we can infer that research in the sanctuary has increased over the past century. Several marine research institutions (e.g., Hopkins Marine Station, MBARI) were

established during this period, which may have contributed to a growth in the number of studies, particularly around the Monterey Peninsula and in the Monterey Canyon. In addition, advancements in technology have enhanced scientific accessibility by allowing researchers to explore a greater diversity of marine environments and by increasing the frequency at which studies are performed (e.g., Paull *et al.* 2010).

Interestingly, the amount of research in the Sanctuary appears to have decreased immediately after Sanctuary designation in 1992, followed by a steady rise in publications approximately five years later. More data are needed to assess this trend. However, with the establishment of MBARI in 1987, it is no surprise that research in the Sanctuary began to increase substantially not long after its 1992 designation. In this review alone, MBARI contributed over 170 publications—nearly one-sixth of all studies collected—between 1988 and 2016 (Appendix A).

### **Limitations and Research Needs**

Our analysis provides valuable insight into the distribution of research among these categories in the Sanctuary. However, this analysis was heavily dependent on the development of a research database including only scientific peer-reviewed journal articles. We recognize this was not a completely comprehensive analysis, due in part to the omission of other types of research publications. It is also important to reiterate that peer-reviewed articles are not a measure of true research distribution but rather serve as a proxy for research effort.

In addition, we understand that our organism categories span several taxonomic levels, but feel strongly that most organisms of human interest and values were captured fairly within these specific categories. Ecological importance was not equally weighed when forming these categories. We also recognize that both organism and habitat categories were likely unequally represented within the sanctuary itself. While outside the scope of this study, a subsequent analysis could explore the actual representation of these categories within the sanctuary and, alternatively, test database representation against these proportions.

This analysis can serve as a framework for addressing future research needs within the Sanctuary. In addition, understanding current trends in research is a key component in the development of the MBNMS condition report. Managers are also encouraged to use this work in developing Science Needs Assessments for the Sanctuary. This database is a tool to build upon in the future and we hope that researchers or management officials will continue to add to it as well as mold it to best fit the needs of the Sanctuary. Successful use of this database and these results can pave the way for other NMS' to establish similar methods of analysis. Ultimately, we hope that this study highlights the importance of understanding research needs – between regions, organisms, and habitats – and identifying efficient means to address them.

## Conclusion

Monterey Bay is inarguably a hub for marine research, with more than 30 local research institutions and over a century of investigations conducted throughout the region. It is evident, however, that an underlying bias exists in the current allocation of sanctuary research, with spatial hotspots and focal habitat and organism preference evident in our meta-analysis. Although accessibility and the natural associations between geomorphology, habitat, and organisms can likely explain the heterogeneity in research, it is our hope that this study can illuminate realms of marine science needing additional focus and inspire future research opportunities throughout the sanctuary. Specifically, the overlay of marine zoning and management areas would be a robust addition, and could assist investigators in prioritizing research needs. Given the advancements of technology and the analytical potential associated with geospatial assessments, these meta-analyses are valuable sources of spatial information and will allow for more comprehensive sanctuary management. Our meta-analysis emphasizes the uniqueness of the Monterey Bay National Marine Sanctuary, not only as a place with additional research potential, but as a network of diverse ecosystems encompassing unique habitats and countless organisms.

## Acknowledgments

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## Literature Cited

- Adelaars J., Bassett M., Donlou N., Marks C., Pardieck B., Lindholm J. 2012. Examining the conservation level of marine management areas within the Monterey Bay National Marine Sanctuary: How protected is the Sanctuary? Marine Sanctuaries Conservation Series ONMS-12-04.
- Benson, K.R. 1995. The development of the research mission in marine biology stations. *Helgolander Meeresuntersuchungen* 49: 409–416.
- Breaker, L.C., W.W. Broenkow. 1994. The circulation of Monterey Bay and related processes. *Oceanography and Marine Biology: An Annual Review*.
- Connell, J.H. 1972. Community Interactions on Marine Rocky Intertidal Shores. *Annual Review of Ecology and Systematics* 3: 169–192.
- Feinholz, D. 1998. Abundance, distribution, and behavior of the southern sea otter (*Enhydra lutris nereis*) in a California estuary. *Aquatic Mammals* 24: 105–116.
- Field, J. C., A. D. MacCall, R. W. Bradley, and W. J. Sydeman. 2010. Estimating the impacts of fishing on dependent predators: a case study in the California Current. *Ecological Applications*, 20: 2223–2236
- Gaines, S. D., J. Roughgarden. 1987. Fish in offshore kelp forests affect recruitment to intertidal barnacle populations. *Science* 235: 479–81.
- Graham, M.H., C. Harrold, S. Lisin, K. Light, J.M. Watanabe, M.S. Foster. 1997. Population dynamics of giant kelp *Macrocystis pyrifera* along a wave exposure gradient. *Marine Ecology Progress Series* 148: 269–279.
- Greene, H.G., N.M. Maher, C.K. Paull. 2002. Physiography of the Monterey Bay National Marine Sanctuary and implications about continental margin development. *Marine Geology* 181: 55–82.
- Hernández-Carmona G, Hughes B, Graham MH. 2006. Reproductive longevity of drifting kelp *Macrocystis pyrifera* (Phaeophyceae) in Monterey Bay, USA. *Journal of Phycology* 42: 1199–1207.
- Hewatt, W.G. 1937. Ecological studies on selected marine intertidal communities of Monterey Bay, California. *The American Midland Naturalist* 18: 161-206.
- Hewatt, W.G. 1935. Ecological succession in the *Mytilus californianus* habitat as observed in Monterey Bay, California. *Ecology* 16: 244 - 251.

- Kannan, K., K.S. Guruge, N.J. Thomas, S. Tanabe, J.P. Giesy. 1998. Butyltin residues in southern sea otters (*Enhydra lutris nereis*) found dead along California coastal waters. Environmental Science and Technology 32: 1169–1175.
- Koweeck, D. A., K. J. Nickols, P. R. Leary, et al. 2016. A year in the life of a central California kelp forest: physical and biological insights into biogeochemical variability. Biogeosciences Discussions, in review, 2016.
- Kvitek, R.G., A.K. Fukayama, B.S. Anderson, B.K. Grimm. 1988. Sea otter foraging on deep-burrowing bivalves in a California coastal lagoon. Marine Biology 98: 157–167.
- Lafferty, K.D., M.T. Tinker. 2014. Sea otters are recolonizing southern California in fits and starts. Ecosphere 5: 1–11.
- Laidre, K.L., R.J. Jameson, D.P. Demaster. 2001. An estimation of carrying capacity for sea otters along the California coast. Marine Mammal Science 17: 294–309.
- Le Boeuf, B.J., R. Condit, P.A. Morris, J. Reiter. 2011. The northern elephant seal (*Mirounga angustirostris*) rookery at Año Nuevo: a case study in colonization. Aquatic Mammals 37: 486.
- Liang, X.S., and A.R. Robinson. 2009. Multiscale processes and nonlinear dynamics of the circulation and upwelling events off Monterey Bay. Journal of Physical Oceanography 39: 290–313.
- Loughlin, T.R. 1980. Home range and territoriality of sea otters near Monterey, California. The Journal of Wildlife Management 44: 576–582.
- McLean, J.H. 1962. Sublittoral ecology of kelp beds of the open coast area near Carmel, California. Biological Bulletin 122: 95–114.
- [NOAA] National Oceanic and Atmospheric Administration. 2016A. National Marine Sanctuaries: About. [Internet]. [cited 27 November 2016]. Available from: <http://sanctuaries.noaa.gov/about/>
- [NOAA] National Oceanic and Atmospheric Administration. Monterey Bay National Marine Sanctuary Overview. 2016B. [Internet] [cited 14 November 2016]. Available from: <http://montereybay.noaa.gov/intro/welcome.html>
- [NOAA] National Oceanic and Atmospheric Administration. 2016C. National Marine Sanctuaries: Overview of ONMS Science Needs Assessment. [Internet]. [cited 27 November 2016]. Available from: <http://sanctuaries.noaa.gov/science/assessment/overview.html>
- [NOAA] National Oceanic and Atmospheric Administration. 2016D. Monterey Bay National Marine Sanctuary Overview. [Internet]. [cited 27 November 2016]. Available from: <http://montereybay.noaa.gov/intro/welcome.html>

[NOAA] National Oceanic and Atmospheric Administration. Regional Marine Research Institutions. 2016E. [Internet] [cited 30 November 2016]. Available from: <http://montereybay.noaa.gov/research/resinstitute.html>

[NOAA] National Oceanic and Atmospheric Administration. Do I need a permit? 2016F. [Internet] [cited 02 December 2016]. Available from: [http://montereybay.noaa.gov/resourcepro/permit/permits\\_need.html](http://montereybay.noaa.gov/resourcepro/permit/permits_need.html)

[NOAA] National Oceanic and Atmospheric Administration. 2015A. National Marine Sanctuaries: Science to Management. [Internet]. [cited 27 November 2016]. Available from: <http://sanctuaries.noaa.gov/science/science-management.html>

[NOAA] National Oceanic and Atmospheric Administration. 2015B. Monterey Bay National Marine Sanctuary: History of the Monterey Bay National Marine Sanctuary. [Internet]. [cited 27 November 17 2016]. Available from: <http://montereybay.noaa.gov/intro/mbnms-history.html>

[ONMS] Office of National Marine Sanctuaries. 2015. Monterey Bay National Marine Sanctuary Condition Report Partial Update: A New Assessment of the State of Sanctuary Resources 2015. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Office of National Marine Sanctuaries, Silver Spring, MD. 133pp.

Paine, R.T. 1974. Intertidal community structure. Experimental studies on the relationship between a dominant competitor and its principal predator. *Oecologia* 15: 93–120.

Paull, C. K., W. Ussler III, D.W. Caress, E. Lundsten, J.A. Covault, K.L. Maier, J. Xu, S. Augenstein. 2010. Origins of large crescent-shaped bedforms within the axial channel of Monterey Canyon, offshore California. *Geosphere* 6: 755–774.

Pilskaln, C.H., J.B. Paduan, F.P. Chavez, R.Y. Anderson, and W.M. Berelson. 1996. Carbon export and regeneration in the coastal upwelling system of Monterey Bay, central California. *Journal of Marine Research* 54: 1149–1178.

Port, J.A., J.L. O'Donnell, O.C. Romero-Maraccini, P.R. Leary, S.Y. Litvin, K.J. Nickols, K.M. Yamahara, R.P. Kelly. 2016. Assessing vertebrate biodiversity in a kelp forest ecosystem using environmental DNA. *Molecular Ecology* 25: 527–541.

Pyle, P., W.J. Sydeman, E. McLaren. 1999. Organochlorine concentrations, eggshell thickness, and hatchability in seabirds off central California. *Waterbirds: The International Journal of Waterbird Biology* 22: 376–381.

Skosberg, T., G.H. Van-Sell. 1928. Structure and behavior of the amphipod, *Polycheria osborni*. *Proceedings of the California Academy of Sciences* 17: 267–295.

Spalding, H., M.S. Foster, J.N. Heine. 2003. Composition, distribution, and abundance of deep-water (> 30 m) macroalgae in central California. *Journal of Phycology* 39: 273–284.

VanBlaricom, G.R., R.J. Jameson. 1982. Lumber spill in central California waters: Implications for oil spills and sea otters. *Science* 215: 1503–1504.

Woodson, C.B., D.I. Eerkes-Medrano, A. Flores-Morales, M.M. Foley, S.K. Henkel, M. Hessing-Lewis, D. Jacinto, L. Needles, M.T. Nishizaki, J. O'Leary. 2007. Local diurnal upwelling driven by sea breezes in northern Monterey Bay. *Continental Shelf Research* 27: 2289–2302.

# Appendices

## Appendix A. Literature Review

Author(s)	Date	Title	Habitat Categories	Organism Categories
Abbott	1955	Larval structure and activity in the ascidian <i>Metandrocarpa taylori</i>	Rocky Shores	Invertebrates
Abbott	1971	On some Ceramiaceae, Rhodophyta, from California	Rocky Shores	Macroalgae
Abbott	1978	Morphologic and taxonomic observations on <i>Neoagardhiella</i> (Gigartinales, Rhodophyta), with emphasis on Pacific populations	Rocky Shores	Macroalgae
Abbott & Albee	1966	Summary of thermal conditions and phytoplankton volumes measured in Monterey Bay, California	Deep Seafloor & Canyons	NA
Abbott & Barksdale	1991	Phytoplankton pigment patterns and wind forcing off central California	Pelagic	Invertebrates
Abbott <i>et al.</i>	1990	Observations of phytoplankton and nutrients from a Lagrangian drifter off northern California	Pelagic	NA
Adams	1980	Morphology and distribution patterns of several important species of rockfish (genus <i>Sebastodes</i> )	NA	Bony Fish
Adams <i>et al.</i>	1995	Population estimates of Pacific coast groundfishes from video transects and swept-area trawls	Deep Seafloor & Canyons	Bony Fish
Adams <i>et al.</i>	2005	Nearshore wave-induced cyclical flexing of sea cliffs	Beaches	NA
Adams <i>et al.</i>	2012	Summer-time use of west coast US National Marine Sanctuaries by migrating sooty shearwaters ( <i>Puffinus griseus</i> )	Pelagic	Birds
Adams <i>et al.</i>	2015	Stomach contents of a Cuvier's Beaked Whale ( <i>Ziphius cavirostris</i> ) stranded in Monterey Bay, California	Beaches	Whales & Dolphins
Adell <i>et al.</i>	2014	Molecular epidemiology of <i>Cryptosporidium</i> spp. and <i>Giardia</i> spp. in mussels ( <i>Mytilus californianus</i> ) and California sea lions ( <i>Zalophus californianus</i> ) from central California	Rocky Shores	Microbial

<b>Author(s)</b>	<b>Date</b>	<b>Title</b>	<b>Habitat Categories</b>	<b>Organism Categories</b>
Aguilar <i>et al.</i>	2008	The distribution of nuclear genetic variation and historical demography of sea otters	Deep Seafloor & Canyons	Otters
Aguilera <i>et al.</i>	2015	Managing small-scale commercial fisheries for adaptive capacity: Insights from dynamic social-ecological drivers of change in Monterey Bay	Deep Seafloor & Canyons	Bony Fish Invertebrates
Ahlstrom	1966	Kinds and abundance of fishes in the California Current region based on egg and larval surveys	Pelagic	Bony Fish
Ahmad <i>et al.</i>	1999	Phylogenetic affinity of a wide, vacuolate, nitrate-accumulating <i>Beggiatoa</i> sp. from Monterey Canyon, California, with <i>Thioploca</i> spp.	Deep Seafloor & Canyons	Microbial
Aiello <i>et al.</i>	2005	Fossil seep structures of the Monterey Bay region and tectonic/structural controls on fluid flow in an active transform margin	Deep Seafloor & Canyons	NA
Ainley <i>et al.</i>	1976	The occurrence of seabirds in the coastal region of California	Beaches	Birds
Al-Abdulrazzak & Trombulak	2012	Classifying levels of protection in marine protected areas	NA	NA
Alderidge <i>et al.</i>	1982	Abundance and production rates of floating diatom mats ( <i>Rhizosolenia castracanei</i> and <i>R. imbricata</i> var. <i>shrubsolei</i> ) in the Eastern Pacific Ocean	Pelagic	Macroalgae
Allan <i>et al.</i>	1993	Red-pelaged harbor seals of the San Francisco Bay region	Beaches	Seals & Sea Lions
Altabet <i>et al.</i>	1999	The nitrogen isotope biogeochemistry of sinking particles from the margin of the Eastern North Pacific	Deep Seafloor & Canyons	NA
Anderson	1967	A comparison of the life histories of coastal and montane populations of <i>Ambystoma macroleactylum</i> in California	Estuaries	Reptiles
Anderson & Yoklavich	2007	Multiscale habitat associations of deepwater demersal fishes off central California	Deep Seafloor & Canyons	Bony Fish
Anderson <i>et al.</i>	1991	Copper toxicity to sperm, embryos and larvae of topsmelt <i>Atherinops affinis</i> , with notes on induced spawning	Estuaries	Bony Fish
Andrew <i>et al.</i>	2002	Ocean ambient sound: Comparing the 1960s with the 1990s for a receiver off the California coast	Pelagic	NA

Author(s)	Date	Title	Habitat Categories	Organism Categories
Andrews	1945	The kelp beds of the Monterey region	Kelp & Shallow Reef	Bony Fish Macroalgae Zooplankton
Andrews <i>et al.</i>	1997	Heart rates of northern elephant seals diving at sea and resting on the beach	Beaches Pelagic	Seals & Sea Lions
Andrews <i>et al.</i>	2005	Bomb radiocarbon and lead – radium disequilibria in otoliths of bocaccio rockfish ( <i>Sebastodes paucispinis</i> ): A determination of age and longevity for a difficult-to-age fish	Deep Seafloor & Canyons	Bony Fish
Andrews <i>et al.</i>	2009	Growth rate and age determination of bamboo corals from the northeastern Pacific Ocean using refined 210Pb dating	Seamounts & Ridges	Invertebrates
Anima <i>et al.</i>	2002	Nearshore morphology and late quaternary geologic framework of the northern Monterey Bay Marine Sanctuary, California	Deep Seafloor & Canyons	NA
Armitage	1961	Studies of the biology of <i>Polychoerus carmelensis</i> (Turbellaria, Acoela)	Kelp & Shallow Reef	Zooplankton
Arnold	1951	Occurrence of <i>Gromia oviformis</i> (Dujardin) in California (Testacea)	Beaches	Phytoplankton
Arnold	1982	<i>Psammophaga simplora</i> new Gen., new sp., a polygenomic Californian Saccamminid	Beaches	Zooplankton
Arora	1948	Observations on the habits and early life history of the batrachoid fish, <i>Porichthys notatus</i> (Girard)	Rocky Shores	Bony Fish
Arp <i>et al.</i>	1992	Burrow environment and coelomic fluid characteristics of the echiuran worm <i>Urechis caupo</i> from populations at three sites	Estuaries	Invertebrates
Athanasiades & Adey	2006	The genus <i>Leptophytum</i> (Melobesioideae, Corallinales, Rhodophyta) on the Pacific coast of North America	Rocky Shores	Macroalgae
Aughtry	1953	A note on mass mortality of the myctophid fish <i>Tarletonbeania crenularis</i>	Beaches	Bony Fish
Auth	2008	Distribution and community structure of ichthyoplankton from the northern and central California Current in May 2004-06	Deep Seafloor & Canyons	Bony Fish

Author(s)	Date	Title	Habitat Categories	Organism Categories
Axelrod	1982	Age and origin of the Monterey endemic area	NA	NA
Bailey <i>et al.</i>	2012	Identification of distinct movement patterns in Pacific leatherback turtle populations influenced by ocean conditions	Pelagic	Reptiles
Baldridge	1972	Killer whales attack and eat a gray whale	Pelagic	Whales & Dolphins
Baldridge	1977	The barnacle, <i>Lepas pacifica</i> , and the alga, <i>Navicula gregvillei</i> , on northern elephant seals, <i>Mirounga angustirostris</i>	Beaches	Invertebrates Seals & Sea Lions
Baltz & Morejohn	1976	Evidence from seabirds of plastic particle pollution off central California	Rocky Shores	Birds
Baltz & Morejohn	1977	Food habits and niche overlap of seabirds wintering on Monterey Bay, California	Beaches Pelagic	Birds
Baltz <i>et al.</i>	1979	Size selective predation and food habits of two California terns	Estuaries	Birds
Banerjee	1965	Some opecoelid trematodes from California with description of <i>Opecoelus noblei</i> sp. nov.	NA	Bony Fish Invertebrates
Banta <i>et al.</i>	1994	Evolution of the Monterey Bay sea-breeze layer as observed by pulsed doppler lidar	Beaches Rocky Shores	NA
Baptista & Johnson	1982	Song variation in insular and mainland California brown creepers, <i>Certhia familiaris</i>	Beaches	Birds
Bargu <i>et al.</i>	2006	Effect of dissolved domoic acid on the grazing rate of krill <i>Euphausia pacifica</i>	Beaches	Phytoplankton Seals & Sea Lions
Bargu <i>et al.</i>	2010	Complexity of domoic acid-related sea lion strandings in Monterey Bay, California: Foraging patterns, climate events, and toxic blooms	Pelagic	Invertebrates
Bargu <i>et al.</i>	2012	<i>Pseudo-nitzschia</i> blooms, domoic acid, and related California sea lion strandings in Monterey Bay, California	Pelagic	Phytoplankton Seals & Sea Lions
Barilotti & Zertuche-Gonzalez	1990	Ecological effects of seaweed harvesting in the Gulf of California and Pacific Ocean off Baja California and California	Kelp & Shallow Reef	Macroalgae

<b>Author(s)</b>	<b>Date</b>	<b>Title</b>	<b>Habitat Categories</b>	<b>Organism Categories</b>
Barnett <i>et al.</i>	2012	Evidence of stability in a chondrichthyan population: Case study of the spotted ratfish <i>Hydrolagus colliei</i> (Chondrichthyes: Chimaeridae)	Deep Seafloor & Canyons	Cartilaginous Fishes
Barry <i>et al.</i>	1995	Climate-related, long-term faunal changes in a California rocky intertidal community	Rocky Shores	Invertebrates
Barry <i>et al.</i>	1996	Trophic ecology of the dominant fishes in Elkhorn Slough, California, 1974-1980	Estuaries	Bony Fish Cartilaginous Fishes
Barry <i>et al.</i>	1996	Biologic and geologic characteristics of cold seeps in Monterey Bay, California	Deep Seafloor & Canyons	Invertebrates
Barry <i>et al.</i>	1997	The influence of pore-water chemistry and physiology on the distribution of vesicomyid clams at cold seeps in Monterey Bay: Implications for patterns of chemosynthetic community organization	Deep Seafloor & Canyons	Invertebrates
Barry <i>et al.</i>	2005	Utility of deep sea CO <sub>2</sub> release experiments in understanding the biology of a high-CO <sub>2</sub> ocean: Effects of hypercapnia on deep sea meiofauna	Deep Seafloor & Canyons	Invertebrates
Bascom	1951	The relationship between sand size and beach face slope	Beaches	NA
Bauer	1991	Aeolian decoupling of beach sediments	Beaches	NA
Beauchamp & Gowing	1982	A quantitative assessment of human trampling effects of a rocky intertidal community	Rocky Shores	Invertebrates
Becker & Beissinger	2006	Centennial decline in the trophic level of an endangered seabird after fisheries decline	Pelagic	Birds
Becker <i>et al.</i>	1997	At-sea density monitoring of marbled murrelets in central California: Methodological considerations	Pelagic	Birds
Becker <i>et al.</i>	2007	Ocean climate and prey availability affect the trophic level and reproductive success of the marbled murrelet, an endangered seabird	Pelagic	Birds
Bednarsek <i>et al.</i>	2014	<i>Limacina helicina</i> shell dissolution as an indicator of declining habitat suitability due to ocean acidification in the California Current ecosystem	Pelagic	Phytoplankton
Beeman	1970	An autoradiographic study of sperm exchange and storage in a sea hare, <i>Phyllaplysia taylori</i> , a hermaphroditic gastropod (Opisthobranchia: Anaspidea)	NA	Invertebrates

Author(s)	Date	Title	Habitat Categories	Organism Categories
Begovic & Lindberg	2011	Genetic population structure of <i>Tectura paleacea</i> : Implications for the mechanisms regulating population structure in patchy coastal habitats	Rocky Shores	Invertebrates Seagrasses & Marsh Plants
Bell & Denny	1994	Quantifying wave exposure: A simple device for recording maximum velocity and results of its use at several field sites	Sandy Seafloor	NA
Belman & Anderson	1979	Aquarium observations on feeding by <i>Melanostigma pammelas</i> (Pisces: Zoarcidae)	NA	Bony Fish
Benner & Tjeerdema	1993	Toxicokinetics and biotransformation of pentachlorophenol in the topsmelt ( <i>Atherinops affinis</i> )	Pelagic	Bony Fish
Bennett & Giese	1955	The annual reproductive and nutritional cycles in two western sea urchins	Kelp & Shallow Reef	Invertebrates
Bennett <i>et al.</i>	2004	Inverse regional responses to climate change and fishing intensity by the recreational rockfish ( <i>Sebastodes spp.</i> ) fishery in California	Deep Seafloor & Canyons Pelagic	Bony Fish
Benson <i>et al.</i>	2002	Changes in the cetacean assemblage of a coastal upwelling ecosystem during El Niño 1997-98 and La Niña 1999	Deep Seafloor & Canyons Pelagic	Whales & Dolphins Zooplankton
Benson <i>et al.</i>	2007	Abundance, distribution, and habitat of leatherback turtles ( <i>Dermochelys coriacea</i> ) off California, 1990-2003	Pelagic	Reptiles
Benson <i>et al.</i>	2011	Large-scale movements and high-use areas of western Pacific leatherback turtles, <i>Dermochelys coriacea</i>	Pelagic	Reptiles
Berelson <i>et al.</i>	2003	A time series of benthic flux measurements from Monterey Bay, CA	Deep Seafloor & Canyons	NA
Bergen	1968	The salinity tolerance limits of the adults and early-stage embryos of <i>Balanus glandula</i> Darwin, 1854 (Cirripedia, Thorac)	Rocky Shores	Invertebrates
Berger <i>et al.</i>	1966	Radiocarbon content of marine shells from the California and Mexican west coast	Deep Seafloor & Canyons	NA
Berkeley & Berkeley	1935	Some notes on the polychaetous annelids of Elkhorn Slough, Monterey Bay, California	Estuaries	Invertebrates
Berman-Kowalewski <i>et al.</i>	2010	Association between blue whale ( <i>Balaenoptera musculus</i> ) mortality and ship strikes along the California coast	Beaches Pelagic	Whales & Dolphins

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Bernardi	2000	Barriers to gene flow in <i>Embiotoca jacksoni</i> , a marine fish lacking a pelagic larval stage	Pelagic	Bony Fish
Bernhard	1992	Benthic foraminiferal distribution and biomass related to pore-water oxygen content: Central California continental slope	Deep Seafloor & Canyons	Microbial
Bernhard <i>et al.</i>	2001	Monterey Bay cold-seep biota: Assemblages, abundance, and ultrastructure of living foraminifera	Deep Seafloor & Canyons	Invertebrates
Bertsch	1969	A note on the range of <i>Gastropteron pacificum</i>	Deep Seafloor & Canyons	Invertebrates
Bertsch	1969	<i>Cadlina modesta</i> , a range extension, with notes on habitat and a color variation	Kelp & Shallow Reef	Invertebrates
Best	1964	Feeding activities of <i>Tegula funebralis</i>	Kelp & Shallow Reef	Macroalgae
Biller & Bruland	2013	Sources and distributions of Mn, Fe, Co, Ni, Cu, Zn, and Cd relative to macronutrients along the central California coast during the spring and summer upwelling season	Deep Seafloor & Canyons	NA
Biller <i>et al.</i>	2013	Coastal iron and nitrate distributions during the spring and summer upwelling season in the central California Current upwelling regime	Deep Seafloor & Canyons	NA
Biller <i>et al.</i>	2014	The central California Current transition zone: A broad region exhibiting evidence for iron limitation	Deep Seafloor & Canyons	NA
Bizzarro <i>et al.</i>	2007	Comparative feeding ecology of four sympatric skate species off central California, USA	Pelagic	Cartilaginous Fishes
Bizzarro <i>et al.</i>	2014	Spatial segregation in Eastern North Pacific skate assemblages	Pelagic	Cartilaginous Fishes
Bjorkstedt <i>et al.</i>	2002	Distributions of larval rockfishes <i>Sebastodes spp.</i> across nearshore fronts in a coastal upwelling region	Deep Seafloor & Canyons	Bony Fish
Black <i>et al.</i>	2005	Using tree-ring crossdating techniques to validate annual growth increments in long-lived fishes	Deep Seafloor & Canyons	Bony Fish
Black <i>et al.</i>	2008	Establishing climate-growth relationships for yelloweye rockfish ( <i>Sebastodes ruberrimus</i> ) in the northeast Pacific using a dendrochronological approach	Deep Seafloor & Canyons	Bony Fish

Author(s)	Date	Title	Habitat Categories	Organism Categories
Black <i>et al.</i>	2009	Stability of dimethylmercury in seawater and its conversion to monomethyl mercury	Deep Seafloor & Canyons	NA
Black <i>et al.</i>	2010	Wintertime ocean conditions synchronize rockfish growth and seabird reproduction in the central California Current ecosystem	Deep Seafloor & Canyons Rocky Shores	Birds Bony Fish
Blackwell & Le Boeuf	1993	Developmental aspects of sleep apnoea in northern elephant seals ( <i>Mirounga angustirostris</i> )	Beaches	Seals & Sea Lions
Boal	1980	Pacific Harbor Seal ( <i>Phoca vitulina richardii</i> ): Haul out impact on the rocky midtidal zone	Rocky Shores	Invertebrates Macroalgae Seals & Sea Lions
Bodkin	1986	Fish assemblages in <i>Macrocystis</i> and <i>Nereocystis</i> kelp forests off central California	Kelp & Shallow Reef	Bony Fish Cartilaginous Fishes
Bodkin	1988	Effects of kelp forest removal on associated fish assemblages in central California	Kelp & Shallow Reef	Bony Fish Cartilaginous Fishes
Bodkin & Jameson	1991	Patterns of seabird and marine mammal carcass deposition along the central California coast, 1980-1986	Beaches	Birds Whales & Dolphins Seals & Sea Lions Otters
Bodkin <i>et al.</i>	1987	Mortalities of kelp-forest fishes associated with large oceanic waves off central California, 1982-1983	Kelp & Shallow Reef	Bony Fish
Boessenecker <i>et al.</i>	2014	Comparative taphonomy, taphofacies, and bonebeds of the mio-pliocene purisima formation, central California: Strong physical control on marine vertebrate preservation in shallow marine settings	Rocky Shores	Birds Bony Fish Cartilaginous Fishes Whales & Dolphins
Boolootian	1962	The perivisceral elements of echinoderm body fluids	Rocky Shores	Invertebrates
Boolootian & Giese	1958	Coelomic corpuscles of echinoderms	Rocky Shores	Invertebrates
Boolootian & Moore	1956	Hermaphroditism in echinoids	Rocky Shores	Invertebrates
Boolootian <i>et al.</i>	1959	A contribution to the biology of a deep sea echinoid, <i>Allocentrotus fragilis</i> (Jackson)	Rocky Shores	Invertebrates

Author(s)	Date	Title	Habitat Categories	Organism Categories
Boolootian <i>et al.</i>	1959	Reproductive cycles of five west coast crabs	Rocky Shores	Invertebrates
Boolootian <i>et al.</i>	1962	On the reproductive cycle and breeding habits of two western species of <i>Haliothis</i>	Rocky Shores	Invertebrates
Booth <i>et al.</i>	2012	Natural intrusions of hypoxic, low pH water into nearshore marine environments on the California coast	Deep Seafloor & Canyons	NA
Boveng <i>et al.</i>	1988	Dynamic response analysis. III. A consistency filter and application to four northern elephant seal colonies	Rocky Shores	Seals & Sea Lions
Bowen <i>et al.</i>	2015	Effects of wildfire on sea otter ( <i>Enhydra lutris</i> ) gene transcript profiles	Deep Seafloor & Canyons	Otters
Boyd <i>et al.</i>	1986	Growth and sexual maturation of laboratory-cultured Monterey <i>Botryllus schlosseri</i>	Rocky Shores	Invertebrates
Boyd <i>et al.</i>	1990	Morphologic and genetic verification that Monterey <i>Botryllus</i> and Woods Hole <i>Botryllus</i> are the same species	Rocky Shores	Invertebrates
Boyle & Horn	2006	Comparison of feeding guild structure and ecomorphology of intertidal fish assemblages from central California and central Chile	Rocky Shores	Bony Fish
Braby & Somero	2006	Ecological gradients and relative abundance of native ( <i>Mytilus trossulus</i> ) and invasive ( <i>Mytilus galloprovincialis</i> ) blue mussels in the California hybrid zone	Rocky Shores	Invertebrates
Braby & Somero	2006	Following the heart: Temperature and salinity effects on heart rate in native and invasive species of blue mussels (genus <i>Mytilus</i> )	Deep Seafloor & Canyons	Invertebrates
Braby <i>et al.</i>	2007	Bathymetric and temporal variation among <i>Osedax</i> boneworms and associated megafauna on whale-falls in Monterey Bay, California	Deep Seafloor & Canyons	Invertebrates
Breaker	2005	What's happening in Monterey Bay on seasonal to interdecadal time scales	Pelagic	NA
Breaker	2006	Nonlinear aspects of sea surface temperature in Monterey Bay	Pelagic	NA
Breaker	2007	A closer look at regime shifts based on coastal observations along the eastern boundary of the North Pacific	Deep Seafloor & Canyons	NA

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Breaker & Brewster	2009	Predicting offshore temperatures in Monterey Bay based on coastal observations using linear forecast models	Pelagic	NA
Breaker <i>et al.</i>	2001	Intraseasonal oscillations in sea surface temperature, wind stress, and sea level off the central California Coast	Deep Seafloor & Canyons	NA
Breaker <i>et al.</i>	2008	Tidal and nontidal oscillations in Elkhorn Slough, CA	Estuaries	NA
Breaker <i>et al.</i>	2010	On the natural oscillations of Monterey Bay: Observations, modeling, and origins	Pelagic	NA
Breier <i>et al.</i>	2009	Tidally regulated chemical fluxes across the sediment–water interface in Elkhorn Slough, California: Evidence from a coupled geochemical and hydrodynamic approach	Estuaries	NA
Brewer <i>et al.</i>	2004	Small scale field study of an ocean CO <sub>2</sub> plume	Deep Seafloor & Canyons	NA
Briggs & Chu	1986	Sooty shearwaters off California: Distribution, abundance and habitat use	Pelagic Rocky Shores	Birds
Briggs <i>et al.</i>	1985	Aerial surveys for seabirds: Methodological experiments	Pelagic Rocky Shores	Birds
Brookens <i>et al.</i>	2007	Trace element concentrations in the Pacific harbor seal ( <i>Phoca vitulina richardii</i> ) in central and northern California	Beaches	Seals & Sea Lions
Brown	2006	Using the chemical composition of otoliths to evaluate the nursery role of estuaries for English sole <i>Pleuronectes vetulus</i> populations	Estuaries	Bony Fish
Brown	2006	Classification of juvenile flatfishes to estuarine and coastal habitats based on the elemental composition of otoliths	Estuaries	Bony Fish
Brown <i>et al.</i>	2015	Field observation of surf zone-inner shelf exchange on a rip-channelled beach	Beaches	NA
Bruland <i>et al.</i>	2001	Iron and macronutrients in California coastal upwelling regimes: Implications for diatom blooms	Pelagic	Phytoplankton
Bryan <i>et al.</i>	2012	Recent increase in <i>Nybelinia surmenicola</i> prevalence and intensity in Pacific hake ( <i>Merluccius productus</i> ) off the United States West Coast	Deep Seafloor & Canyons	Bony Fish

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Brzezinski <i>et al.</i>	1997	Silica production in the Monterey, California, upwelling system	Deep Seafloor & Canyons	Phytoplankton
Brzezinski <i>et al.</i>	2003	The balance between silica production and silica dissolution in the sea: Insights from Monterey Bay, California applied to the global data set	Pelagic	NA
Buck <i>et al.</i>	1992	Autecology of the diatom <i>Pseudonitzschia australis</i> , a domoic acid producer, from Monterey Bay, California	Pelagic Rocky Shores	Phytoplankton
Burdige <i>et al.</i>	1999	Fluxes of dissolved organic carbon from California continental margin sediments	Deep Seafloor & Canyons Pelagic Rocky Shores	NA
Burns <i>et al.</i>	2005	Development of body oxygen stores in harbor seals: Effects of age, mass, and body composition	NA	Seals & Sea Lions
Burrows <i>et al.</i>	2012	Marine mammal response to interannual variability in Monterey Bay, California	Pelagic	Whales & Dolphins Otters Seals & Sea Lions
Burton & Lundsten	2008	Davidson seamount taxonomic guide	Deep Seafloor & Canyons Seamounts & Ridges	Bony Fish Invertebrates
Burton <i>et al.</i>	1979	Population genetics of <i>Tigriopus californicus</i> (Copepoda: Harpacticoida): I. Population structure along the central California coast	Rocky Shores	Zooplankton
Bush & Robison	2007	Ink utilization by mesopelagic squid	Deep Seafloor & Canyons	Invertebrates
Byers	1999	The distribution of an introduced mollusc and its role in the long-term demise of a native confamilial species	Deep Seafloor & Canyons	Invertebrates
Byrd <i>et al.</i>	2004	Decadal changes in a Pacific estuary: A multi-source remote sensing approach for historical ecology	Estuaries	NA
Byrd <i>et al.</i>	2007	Temporal and spatial relationships between watershed land use and salt marsh disturbance in a Pacific estuary	Estuaries	NA
Caffrey <i>et al.</i>	1997	Water quality monitoring in Elkhorn Slough: A summary of results 1988-1996	Estuaries	NA

Author(s)	Date	Title	Habitat Categories	Organism Categories
Caffrey <i>et al.</i>	2007	High nutrient pulses, tidal mixing and biological response in a small California estuary: Variability in nutrient concentrations from decadal to hourly time scales	Estuaries	NA
Cairns	2007	<i>Calcxonian octocorals</i> (Cnidaria; Anthozoa) from eastern Pacific seamounts	Seamounts & Ridges	Invertebrates
Calambokids <i>et al.</i>	1996	Interchange and isolation of humpback whales off California and other North Pacific feeding grounds	Pelagic	Whales & Dolphins
Cameron & Rumrill	1982	Larval abundance and recruitment of the sand dollar <i>Dendraster excentricus</i> in Monterey Bay, California, USA	Pelagic Rocky Shores	Invertebrates
Campbell	1965	The structure and function of the alimentary canal of the black abalone, <i>Haliotis cracherodii</i> Leach	Rocky Shores	Invertebrates
Carlisle & Starr	2009	Habitat use, residency, and seasonal distribution of female leopard sharks <i>Triakis semifasciata</i> in Elkhorn Slough, California	Estuaries	Cartilaginous Fishes
Carlisle & Starr	2010	Tidal movements of female leopard sharks ( <i>Triakis semifasciata</i> ) in Elkhorn Slough, California	Estuaries	Cartilaginous Fishes
Carlisle <i>et al.</i>	2007	Long-term trends in catch composition from elasmobranch derbies in Elkhorn Slough, California	Estuaries	Cartilaginous Fishes
Carrington	1990	Drag and dislodgment of an intertidal macroalgae: Consequences of morphological variation in <i>Mastocarpus papillatus</i> Kützing	Rocky Shores	Macroalgae
Carter & Gregg	2002	Intense, variable mixing near the head of Monterey Submarine Canyon	Deep Seafloor & Canyons	NA
Carter <i>et al.</i>	2003	The 1986 Apex Houston oil spill in central California: seabird injury assessments and litigation process	Rocky Shores	Birds
Carter <i>et al.</i>	2005	Internal waves, solitary-like waves, and mixing on the Monterey Bay Shelf	Deep Seafloor & Canyons	NA
Castillo <i>et al.</i>	2010	Petrogenesis of Davidson Seamount lavas and its implications for fossil spreading center and intraplate magmatism in the eastern Pacific	Seamounts & Ridges	NA
Castro <i>et al.</i>	2002	Nutrient variability during El Niño 1997-98 in the California current system off central California	Pelagic	Phytoplankton

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Chapin <i>et al.</i>	2004	Nitrate sources and sinks in Elkhorn Slough, California: Results from long-term continuous <i>in situ</i> nitrate analyzers	Estuaries	NA
Chase <i>et al.</i>	2005	Manganese and iron distributions off central California influenced by upwelling and shelf width	Pelagic	NA
Chavez	1996	Forcing and biological impact of onset of the 1992 El Niño in central California	Deep Seafloor & Canyons	Phytoplankton
Chavez <i>et al.</i>	2002	Processing, mosaicking and management of the Monterey Bay digital sidescan-sonar images	Pelagic	NA
Chavez <i>et al.</i>	2002	Biological and chemical consequences of the 1997-1998 El Niño in central California waters	Deep Seafloor & Canyons	NA
Chelton	1984	Seasonal variability of alongshore geostrophic velocity off central California	Deep Seafloor & Canyons	NA
Chelton <i>et al.</i>	1988	Poleward flow off central California during the spring and summer of 1981 and 1984	Deep Seafloor & Canyons	NA
Chenillat <i>et al.</i>	2013	California coastal upwelling onset variability: Cross-shore and bottom-up propagation in the planktonic ecosystem	Pelagic	Phytoplankton Zooplankton
Cheriton <i>et al.</i>	2010	Towed vehicle observations of thin layer structure and a low-salinity intrusion in northern Monterey Bay, CA	Deep Seafloor & Canyons	Phytoplankton
Cheriton <i>et al.</i>	2014	Suspended particulate layers and internal waves over the southern Monterey Bay Continental Shelf: An important control on shelf mud belts?	Deep Seafloor & Canyons Pelagic	NA
Cheriton <i>et al.</i>	2014	Upwelling rebound, ephemeral secondary pycnoclines, and the creation of a near-bottom wave guide over the Monterey Bay Continental Shelf	Deep Seafloor & Canyons Pelagic	NA
Chin <i>et al.</i>	1988	Seismic stratigraphy and late quaternary shelf history, south-central Monterey Bay, California	Rocky Shores	NA
Christenson & Le Boeuf	1978	Aggression in the female northern elephant seal, <i>Mirounga angustirostris</i>	Beaches	Seals & Sea Lions
Clague <i>et al.</i>	2009	Five million years of compositionally diverse, episodic volcanism: Construction of Davidson Seamount atop an abandoned spreading center	Deep Seafloor & Canyons Seamounts & Ridges	NA

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Clague <i>et al.</i>	2012	Phylogeography of <i>Acasta</i> clams from submarine seamounts and escarpments along the western margin of North America	Seamounts & Ridges	Invertebrates
Clark & Haderlie	1962	The distribution of <i>Nephtys californiensis</i> and <i>N. caecoides</i> on the Californian coast	Beaches	Invertebrates
Clark <i>et al.</i>	2004	Effects of shade from multiple kelp canopies on an understory algal assemblage	Kelp & Shallow Reef	Macroalgae
Clinton & Le Boeuf	1993	Sexual selection's effects on male life history and the pattern of male mortality	Beaches	Seals & Sea Lions
Coale & Bruland	1985	<sup>234</sup> Th: <sup>238</sup> U disequilibria within the California Current	Pelagic	Phytoplankton Zooplankton
Cohn	1998	Understanding sea otters	Kelp & Shallow Reef	Otters
Collins <i>et al.</i>	2000	Mean structure of the inshore countercurrent and California undercurrent of Point Sur, California	Pelagic Rocky Shores	NA
Collins <i>et al.</i>	2003	The California Current system off Monterey, California: Physical and biological coupling	Pelagic	NA
Combellick & Osborne	1977	Sources and petrology of beach sand from southern Monterey Bay, California	Beaches	NA
Conaway <i>et al.</i>	2009	Dimethylmercury in coastal upwelling waters, Monterey Bay, California	Deep Seafloor & Canyons	NA
Conaway <i>et al.</i>	2010	Mercury speciation in Pacific coastal rainwater, Monterey Bay, California	Deep Seafloor & Canyons	NA
Conaway <i>et al.</i>	2012	Episodic suspended sediment transport and elevated polycyclic aromatic hydrocarbon concentrations in a small, mountainous river in coastal California	Estuaries	NA
Condit & Le Boeuf	1984	Feeding habits and feeding grounds of the northern elephant seal	Beaches	Seals & Sea Lions
Condit <i>et al.</i>	2007	Estimating population size in asynchronous aggregations: A bayesian approach and test with elephant seal censuses	Beaches	Seals & Sea Lions

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Connolly & Roughgarden	1998	A latitudinal gradient in northeast Pacific intertidal community structure: Evidence for an oceanographically based synthesis of marine community theory	Rocky Shores	Invertebrates
Connolly <i>et al.</i>	2001	A latitudinal gradient in recruitment of intertidal invertebrates in the northeast Pacific Ocean	Rocky Shores	Invertebrates
Conrad <i>et al.</i>	2005	Transmission of toxoplasma: Clues from the study of sea otters as sentinels of <i>Toxoplasma gondii</i> flow into the marine environment	Kelp & Shallow Reef	Otters
Cossaboon <i>et al.</i>	2015	Mercury offloaded in northern elephant seal hair affects coastal seawater surrounding rookery	Beaches	Seals & Sea Lions
Costa <i>et al.</i>	1986	The energetics of lactation in the northern elephant seal, <i>Mirounga angustirostris</i>	Beaches	Seals & Sea Lions
Costello & Costello	1938	A new species of <i>Polychaerus</i> from the Pacific coast	Rocky Shores	Invertebrates
Covault <i>et al.</i>	2011	The natural range of submarine canyon-and-channel longitudinal profiles	Deep Seafloor & Canyons	NA
Cowles	1994	Swimming dynamics of the mesopelagic vertically migrating penaeid shrimp <i>Sergestes similis</i> : modes and speeds of swimming	Pelagic	Invertebrates
Cox	1970	DDT residues in marine phytoplankton: increase from 1955 to 1969	Pelagic	Phytoplankton
Coyer <i>et al.</i>	1994	Genetic variability within a population and between diploid/haploid tissue of <i>Macrocystis pyrifera</i> (Phaeophyceae)	Kelp & Shallow Reef	Macroalgae
Craig <i>et al.</i>	2011	Discordant phylogeographic and biogeographic breaks in California halibut	Sandy Seafloor	Bony Fish
Crews <i>et al.</i>	1977	Different chemical types of <i>Plocamium violaceum</i> (Rhodophyta) from the Monterey Bay region, California	Kelp & Shallow Reef	Macroalgae
Crews <i>et al.</i>	1978	Halogenated alicyclic monoterpenes from the red algae <i>Plocamium</i>	Rocky Shores	Macroalgae
Crocker <i>et al.</i>	1998	Protein catabolism and renal function in lactating northern elephant seals	Beaches	Seals & Sea Lions
Croll	1990	Physical and biological determinants of the abundance, distribution, and diet of the common murre in Monterey Bay, California	Pelagic	Birds

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Croll & Holmes	1982	A note on the occurrence of diatoms on the feathers of diving seabirds	Pelagic	Birds
Croll <i>et al.</i>	1986	Movements and daily activity patterns of a brown pelican in central California.	Estuaries	Birds
Croll <i>et al.</i>	2001	The diving behavior of blue and fin whales: Is dive duration shorter than expected based on oxygen stores?	Pelagic	Whales & Dolphins
Croll <i>et al.</i>	2005	From wind to whales: Trophic links in a coastal upwelling system	Deep Seafloor & Canyons Pelagic	Whales & Dolphins Invertebrates
Crow <i>et al.</i>	1997	Evidence for multiple maternal contributors in nests of kelp greenling ( <i>Hexagrammos decagrammus</i> , Hexagrammidae)	Kelp & Shallow Reef	Bony Fish
Crowell	1952	Submarine canyons bordering central and southern California.	Deep Seafloor & Canyons	NA
Cullen & Sherrell	1999	Techniques for determination of trace metals in small samples of size-fractionated particulate matter: Phytoplankton metals off central California	Deep Seafloor & Canyons	Phytoplankton
Cummings & Partridge	2001	Visual pigments and optical habitats of surfperch (Embiotocidae) in the California kelp forest	Kelp & Shallow Reef	Bony Fish
Dagg <i>et al.</i>	2014	The distribution and vertical flux of fecal pellets from large zooplankton in Monterey Bay and coastal California	Pelagic	Zooplankton
Dallas & Bernard	2011	Anthropogenic influences on shoreline and nearshore evolution in the San Francisco Bay coastal system	Deep Seafloor & Canyons	NA
Dalton	2001	El Niño, expectations, and fishing effort in Monterey Bay, California	Deep Seafloor & Canyons	Bony Fish
Dau <i>et al.</i>	2009	Fishing gear-related injury in California marine wildlife	NA	Birds Seals & Sea Lions
Davidson <i>et al.</i>	1981	Verification of the bulk method for calculating overwater optical turbulence	Pelagic	NA
Davies <i>et al.</i>	1977	Fish school acoustic target strength	Pelagic	Bony Fish

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Davis & DiLorenzo	2015	Interannual forcing mechanisms of California Current transports I: Meridional currents	Pelagic	NA
Davis & DiLorenzo	2015	Interannual forcing mechanisms of California Current transports II: Mesoscale eddies	Pelagic	NA
Davis <i>et al.</i>	2001	Three-dimensional movements and swimming activity of a northern elephant seal	Pelagic	Seals & Sea Lions
Davis <i>et al.</i>	2002	Seamounts at the continental margin of California: A different kind of oceanic intraplate volcanism	Seamounts & Ridges	NA
Davis <i>et al.</i>	2007	Diverse origins of xenoliths from seamounts at the continental margin, offshore central California	Seamounts & Ridges	NA
Davis <i>et al.</i>	2010	Origin of volcanic seamounts at the continental margin of California related to changes in plate margins	Seamounts & Ridges	NA
Davis <i>et al.</i>	2013	Distribution and abundance of rippled scour depressions along the California coast	Deep Seafloor & Canyons	NA
Davis <i>et al.</i>	2016	Hg concentrations in fish from coastal waters of California and western North America	Deep Seafloor & Canyons	Bony Fish Cartilaginous Fishes
Davoll & Silver	1986	Marine snow aggregates: Life history sequence and microbial community of abandoned larvacean houses from Monterey Bay, California	Pelagic	Invertebrates
Dawson & Starr	2009	Movements of subadult prickly sharks <i>Echinorhinus cookei</i> in the Monterey Canyon	Deep Seafloor & Canyons	Cartilaginous Fishes
Dawson <i>et al.</i>	2001	Phylogeography of the tidewater goby, <i>Eucyclogobius newberryi</i> (Teleostei, Gobiidae), in coastal California	Rocky Shores	Bony Fish
Dayton <i>et al.</i>	1984	Patch dynamics and stability of some California kelp communities	Kelp & Shallow Reef	Macroalgae
de Laubenfels	1927	New sponges from California	Deep Seafloor & Canyons	Invertebrates
De Witt & Palumbi	2013	Transcriptome-wide polymorphisms of red abalone ( <i>Haliotis rufescens</i> ) reveal patterns of gene flow and local adaptation	Rocky Shores	Invertebrates

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Debier <i>et al.</i>	2005	Polychlorinated biphenyls, dioxins, and furans in weaned, free-ranging northern elephant seal pups from central California, USA	Beaches	Seals & Sea Lions
Delgado <i>et al.</i>	2016	Assessment of the deep sea wreck <i>USS Independence</i>	Deep Seafloor & Canyons	NA
DeMartini	1985	Social behavior and coloration changes in painted greenling, <i>Oxylebius pictus</i> (Pisces: Hexagrammidae)	Rocky Shores	Bony Fish
DeMartini & Anderson	1980	Comparative survivorship and life history of painted greenling ( <i>Oxylebius pictus</i> ) in Puget Sound, Washington and Monterey Bay, California	Kelp & Shallow Reef	Bony Fish
Denny & Harley	2006	Hot limpets: Predicting body temperature in a conductance-mediated thermal system	Rocky Shores	Invertebrates
Denny <i>et al.</i>	1989	Fracture mechanics and the survival of wave-swept macroalgae	Pelagic	Macroalgae
Denny <i>et al.</i>	1990	On the prediction of maximal intertidal wave forces	Rocky Shores	NA
Denny <i>et al.</i>	1992	Biological consequences of topography on wave-swept rocky shores: I. Enhancement of external fertilization	Rocky Shores	NA
Denny <i>et al.</i>	2004	Quantifying scale in ecology: Lessons from a wave-swept shore	Rocky Shores	Invertebrates
Deutsch <i>et al.</i>	1990	Reproductive effort of male northern elephant seals: Estimates from mass loss	Beaches	Seals & Sea Lions
Devinnny & Kirkwood	1974	Algae associated with kelp beds of the Monterey Peninsula, California	Kelp & Shallow Reef	Macroalgae
DeVogelaere <i>et al.</i>	2005	Deep-sea corals and resource protection at the Davidson Seamount, California, USA	Deep Seafloor & Canyons	Invertebrates
Dill <i>et al.</i>	1954	Deep-sea channels and delta of the Monterey Submarine Canyon	Deep Seafloor & Canyons	NA
Dingler	1981	Stability of a very coarse-grained beach at Carmel, California	Beaches	NA
Dingler & Anima	1989	Subaqueous grain flows at the head of Carmel Submarine Canyon, California	Deep Seafloor & Canyons	NA

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Dingler & Reiss	2002	Changes to Monterey Bay beaches from the end of the 1982-83 El Niño through the 1997-98 El Niño	Beaches	NA
Dominik & Zimmerman	2006	Surveillance for zoonotic and selected pathogens in harbor seals <i>Phoca vitulina</i> from central California	Rocky Shores	Macroalgae
Donnelly-Greenan <i>et al.</i>	2014	Prey and plastic ingestion of Pacific northern fulmars ( <i>Fulmarus glacialis rogersii</i> ) from Monterey Bay, California	Beaches	Birds
Dorman <i>et al.</i>	2011	Advection and starvation cause krill ( <i>Euphausia pacifica</i> ) decreases in 2005 northern California coastal populations: Implications from a model study	Deep Seafloor & Canyons	Invertebrates
Dorman <i>et al.</i>	2015	Modeling krill aggregations in the central-northern California Current	Deep Seafloor & Canyons	Zooplankton
Doty	1946	Critical tide factors that are correlated with the vertical distribution of marine algae and other organisms along the Pacific coast	Rocky Shores	Macroalgae
Drazen <i>et al.</i>	2001	The feeding habits of slope dwelling macrourid fishes in the eastern north Pacific	Deep Seafloor & Canyons	Bony Fish
Drazen <i>et al.</i>	2007	A comparison of absorption and assimilation efficiencies between four species of shallow- and deep-living fishes	Deep Seafloor & Canyons Rocky Shores	Bony Fish
Duncan <i>et al.</i>	2014	Ocean climate indicators: A monitoring inventory and plan for tracking climate change in the north-central California coast and ocean region	All	Birds Bony Fish Invertebrates Macroalgae Otters Phytoplankton
Durazo <i>et al.</i>	2001	The state of the California Current 2000-2001: A third straight La Niña year	Pelagic	NA
Ebert	1986	Biological aspects of the sixgill shark, <i>Hexanchus griseus</i>	Pelagic	Cartilaginous Fishes
Ebert & Davis	2007	Descriptions of skate egg cases (Chondrichthyes: Rajiformes: <i>Rajoidei</i> ) from the eastern North Pacific	Rocky Shores	Invertebrates

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Ebert & Russell	1988	Latitudinal variation in size structure of the west coast purple sea urchin: A correlation with headlands	Pelagic	Cartilaginous Fishes
Ebert et al.	2004	Occurrence of the Whale Shark, <i>Rhincodon typus</i> Smith 1828, in California waters	Seamounts & Ridges	Cartilaginous Fishes
Echeverria	1987	Relationship of otolith length to total length in rockfishes from northern and central California	Deep Seafloor & Canyons	Bony Fish
Echeverria	1987	Thirty-four species of California rockfishes: Maturity and seasonality of reproduction	Pelagic	Bony Fish
Edwards	1998	Effects of long-term kelp canopy exclusion on the abundance of the annual alga <i>Desmarestia ligulata</i> (Light F)	Kelp & Shallow Reef Rocky Shores	Macroalgae
Edwards	2002	Variations in sediment texture on the northern Monterey Bay National Marine Sanctuary continental shelf	Deep Seafloor & Canyons	NA
Edwards	2004	Estimating scale-dependency in disturbance impacts: El Niños and giant kelp forests in the northeast Pacific	Kelp & Shallow Reef	Macroalgae
Eernisse	1988	Reproductive patterns of six species of <i>Lepidochitonida</i> (Mollusca: Polyplacophora) from the Pacific coast of North America	Rocky Shores	Invertebrates
Eguchi & Harvey	2005	Diving behavior of the Pacific harbor seal ( <i>Phoca vitulina richardii</i> ) in Monterey Bay, California	Estuaries	Seals & Sea Lions
Eittreim et al.	2002	Seafloor geology of the Monterey Bay area continental shelf	Deep Seafloor & Canyons	NA
Eittreim et al.	2002	Towards a sediment budget for the Santa Cruz shelf	Deep Seafloor & Canyons	NA
Elliott-Smith et al.	2015	The cost of reproduction: Differential resource specialization in female and male California sea otters	Beaches	Otters
Elrod et al.	2008	A long-term, high-resolution record of surface water iron concentrations in the upwelling-driven central California region	Pelagic	NA

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Embley <i>et al.</i>	1990	Geological setting of chemosynthetic communities in the Monterey Fan Valley system	Deep Seafloor & Canyons	Invertebrates
Emiliani & Baxter	1985	A possible link between coho (silver) salmon enhancement and a decline in central California dungeness crab abundance	Pelagic	Bony Fish Invertebrates
Engel & Kvitek	1998	Effects of otter trawling on a benthic community in Monterey Bay National Marine Sanctuary	Deep Seafloor & Canyons	Invertebrates
Estes	1990	Growth and equilibrium in sea otter populations	Kelp & Shallow Reef	Otters
Estes <i>et al.</i>	1986	Activity-time budgets of sea otters in California	Deep Seafloor & Canyons	Otters
Estes <i>et al.</i>	2003	Individual variation in prey selection by sea otters: Patterns, causes and implications	Kelp & Shallow Reef	Otters
Eufemia <i>et al.</i>	2002	Algal products as naturally occurring substrates for p-glycoprotein in <i>Mytilus californianus</i>	Rocky Shores	Invertebrates
Fadlallah	1982	Reproductive ecology of the coral <i>Astrangia lajollaensis</i> : Sexual and asexual patterns in a kelp forest habitat	Kelp & Shallow Reef	Invertebrates
Fadlallah	1983	Population dynamics and life history of a solitary coral, <i>Balanophyllia elegans</i> , from central California	Rocky Shores	Invertebrates
Fahrenbach	1954	A new species of the genus <i>Diarthrodes</i> (Crustacea, Copepoda) parasitic in a red alga	Rocky Shores	Invertebrates Macroalgae
Fankboner	1971	The ciliary currents associated with feeding, digestion, and sediment removal in adult <i>Botula falcata</i> (Gould, 1851)	Rocky Shores	Invertebrates
Farmanfarmaian <i>et al.</i>	1958	Annual reproductive cycles in four species of west coast starfishes	Rocky Shores	Invertebrates
Farrell <i>et al.</i>	1991	Cross-shelf transport causes recruitment to intertidal populations in central California	Rocky Shores	Invertebrates
Farrington	1983	Bivalves as sentinels coastal chemical pollution: The mussel (and oyster) watch	Rocky Shores	Invertebrates
Farrington <i>et al.</i>	1983	U.S. Mussel watch 1976-1978: An overview of the trace-metal, DDE, PCB, hydrocarbon, and artificial radionuclide data	Rocky Shores	Invertebrates

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Faurot	1985	Haulout behavior of California sea otters, <i>Enhydra lutris</i>	Kelp & Shallow Reef	Otters
Faurot <i>et al.</i>	1986	Analysis of sea otter, <i>Enhydra lutris</i> , scats collected from a California haulout site	Kelp & Shallow Reef	Otters
Fawcett	1984	Local and latitudinal variation in predation on an herbivorous marine snail	Rocky Shores	Invertebrates
Feder	1955	On the methods used by the starfish <i>Pisaster ochraceus</i> in opening three types of bivalve molluscs	Rocky Shores	Invertebrates
Feder	1959	The food of the starfish, <i>Pisaster ochraceus</i> , along the California Coast	Rocky Shores	Invertebrates
Feder	1963	Gastropod defensive responses and their effectiveness in reducing predation by starfishes	Rocky Shores	Invertebrates
Feder	1970	Growth and predation by the ochre sea star, <i>Pisaster ochraceus</i> (Brandt), in Monterey Bay, California	Rocky Shores	Invertebrates
Feder & Lasker	1964	Partial purification of a substance from starfish tube feet which elicits escape responses in gastropod molluscs	Rocky Shores	Invertebrates
Feely <i>et al.</i>	2008	Evidence for upwelling of corrosive "acidified" water onto the continental shelf <i>Scopalatum vorax</i> (Esterly, 1911) and <i>Scolecithricella lobophora</i> (Park, 1970), calanoid copepods (Scolecitrichidae) associated with a pelagic tunicate in Monterey Bay	Deep Seafloor & Canyons	NA
Ferrari & Steinberg	1993	Food habits of the two-line eelpout, <i>Bothrocara brunneum</i> (family: Zoarcidae), at two deep-sea sites off Oregon and California	Deep Seafloor & Canyons	Invertebrates Zooplankton
Ferry	1997	Surface manifestations of subsurface thermal structure in the California Current	Deep Seafloor & Canyons	Bony Fish
Fiedler	1988	Spatial variability in rockfish ( <i>Sebastodes spp.</i> ) recruitment events in the California Current System	Pelagic	NA
Field & Ralston	2005	Estimating the impacts of fishing on dependent predators: A case study in the California Current	Deep Seafloor & Canyons	Bony Fish
Field <i>et al.</i>	2010		Pelagic	Bony Fish

Author(s)	Date	Title	Habitat Categories	Organism Categories
Field <i>et al.</i>	2012	Foraging ecology and movement patterns of jumbo squid ( <i>Dosidicus gigas</i> ) in the California Current System	Deep Seafloor & Canyons	Invertebrates
Figurski <i>et al.</i>	2016	Seasonal sediment dynamics shape temperate bedrock reef communities	Kelp & Shallow Reef	Invertebrates
Fildani & Normark	2004	Late quaternary evolution of channel and lobe complexes of the Monterey Fan	Deep Seafloor & Canyons	NA
Fiorenza <i>et al.</i>	2008	Persistence of depleted abalones in marine reserves of central California	Rocky Shores	Invertebrates
Firme <i>et al.</i>	2003	Spatial and temporal variability in phytoplankton iron limitation along the California coast and consequences for Si, N, and C biogeochemistry	Pelagic	Phytoplankton
Flammang <i>et al.</i>	2008	Reproductive biology of deep-sea catsharks (Chondrichthyes: Scyliorhinidae) in the eastern North Pacific	Deep Seafloor & Canyons	Cartilaginous Fishes
Flegal <i>et al.</i>	1981	Elevated concentrations of mercury in mussels ( <i>Mytilus californianus</i> ) associated with pinniped colonies	Rocky Shores	Invertebrates Seals & Sea Lions
Flegal <i>et al.</i>	1987	Isotope systematics of contaminant leads in Monterey Bay	Rocky Shores	Invertebrates
Foley & Koch	2010	Correlation between allochthonous subsidy input and isotopic variability in the giant kelp <i>Macrocystis pyrifera</i> in central California, USA	Kelp & Shallow Reef	Macroalgae
Follett & Powell	1988	<i>Ernogrammus walkeri</i> , new species, of prickleback (Pisces: Stichaeidae) from south-central California [USA]	Rocky Shores	Bony Fish
Fong	1993	Lunar control of epitokal swarming in the polychaete <i>Platynereis bicanaliculata</i> (Baird) from central California	Rocky Shores	Invertebrates
Foote <i>et al.</i>	2006	Acoustic detection and quantification of benthic egg beds of the squid <i>Loligo opalescens</i> in Monterey Bay, California	Deep Seafloor & Canyons	Invertebrates
Ford & Mitton	1993	Population structure of the pink barnacle, <i>Tetraclita squamosa rubescens</i> , along the California coast	Rocky Shores	Invertebrates

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Ford et al.	2004	The biogeographic patterns of seabirds in the central portion of the California Current	Beaches Pelagic	Birds
Forde & Raimondi	2004	An experimental test of the effects of variation in recruitment intensity on intertidal community composition	Rocky Shores	Invertebrates Macroalgae
Forney	1999	Trends in harbour porpoise abundance off central California, 1986-95: Evidence for interannual changes in distribution?	Pelagic	Whales & Dolphins
Forney	2000	Environmental models of cetacean abundance: Reducing uncertainty in population trends	Pelagic	Whales & Dolphins
Forney & Barlow	1998	Seasonal patterns in the abundance and distribution of California cetaceans, 1991-1992	Pelagic	Whales & Dolphins
Forney <i>et al.</i>	2012	Habitat-based spatial models of cetacean density in the eastern Pacific Ocean	Pelagic	Whales & Dolphins
Forsythe <i>et al.</i>	2004	Does the California market squid ( <i>Loligo opalescens</i> ) spawn naturally during the day or at night? A note on the successful use of ROVs to obtain basic fisheries data	Sandy Seafloor	Invertebrates
Foster	1982	Factors controlling the intertidal zonation of <i>Iridaea flaccida</i> (Rhodophyta)	Kelp & Shallow Reef	Invertebrates Macroalgae
Foster	1990	Organization of macroalgal assemblages in the Northeast Pacific: The assumption of homogeneity and the illusion of genera	Rocky Shores	Invertebrates Macroalgae
Foster & Vanblaricom	2001	Spatial variation in kelp forest communities along the Big Sur coast of central California, USA	Rocky Shores	Macroalgae
Foster <i>et al.</i>	1991	Point vs. photo quadrat estimates of the cover of sessile marine organisms	Rocky Shores	Invertebrates Macroalgae
Francis <i>et al.</i>	2005	Ubiquity and diversity of ammonia-oxidizing archaea in water columns and sediments of the ocean	Pelagic	Invertebrates
Francis <i>et al.</i>	2016	Non-excitatory fluorescent protein orthologs found in ctenophores	Estuaries	Microbial
Frechette <i>et al.</i>	2012	Assessing avian predation on juvenile salmonids using passive integrated transponder tag recoveries and mark-recapture methods	Estuaries	Bony Fish

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Fregosi <i>et al.</i>	2016	An animal-borne active acoustic tag for minimally invasive behavioral response studies on marine mammals	Deep Seafloor & Canyons	Seals & Sea Lions
Frey & DeVogelaere	2014	The containerized shipping industry and the phenomenon of containers lost at sea	Deep Seafloor & Canyons	NA
Friederick <i>et al.</i>	2002	Inorganic carbon in the central California upwelling system during the 1997-1999 El Niño – La Niña event	Pelagic	Phytoplankton
Friedman & Finley	2003	Anthropogenic introduction of the etiological agent of withering syndrome into northern California abalone populations via conservation efforts	Rocky Shores	Invertebrates
Froescheis <i>et al.</i>	2000	The deep-sea as a final global sink of semivolatile persistent organic pollutants? Part I: PCBs in surface and deep-sea dwelling fish of the north and south Atlantic and the Monterey Bay Canyon (California)	Deep Seafloor & Canyons	Bony Fish Invertebrates
Fuhrman	1970	Toxic effects produced by extracts of eggs of the cabezon <i>Scorpaenichthys marmoratus</i>	Pelagic	Bony Fish
Fujii <i>et al.</i>	2014	Ecological drivers of variation in tool-use frequency across sea otter populations	Deep Seafloor & Canyons	Otters
Furi <i>et al.</i>	2009	Helium systematics of cold seep fluids at Monterey Bay, California, USA: Temporal variations and mantle contributions	Deep Seafloor & Canyons	NA
Gaines & Roughgarden	1987	Fish in offshore kelp forests affect recruitment to intertidal barnacle populations	Kelp & Shallow Reef Rocky Shores	Invertebrates
Gaines <i>et al.</i>	1985	Spatial variation in larval concentration as a cause of spatial variation in settlement for the barnacle, <i>Balanus glandula</i>	Rocky Shores	Invertebrates
Galasso	1993	Monterey Bay National Marine Sanctuary water quality management: The use of coordinating mechanisms	Pelagic Rocky Shores	NA
Galigher	1925	On the occurrence of the larval stages of scyphozoa in the Elkhorn Slough, Monterey Bay, California	Estuaries	Invertebrates
García-García <i>et al.</i>	2013	High resolution seismic study of the Holocene infill of the Elkhorn Slough, central California	Estuaries	NA

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Garcia-Reyes & Sydeman	2017	California Multivariate Ocean Climate Indicator (MOCI) and marine ecosystem dynamics	Deep Seafloor & Canyons	NA
Garcia-Reyes <i>et al.</i>	2013	Integrated assessment of wind effects on central California's pelagic ecosystem	Rocky Shores	Birds Bony Fish
Gardner & Hemphill-Haley	1986	Evidence for a stronger oxygen-minimum zone off central California during late pleistocene to early holocene	Deep Seafloor & Canyons	Phytoplankton
Gardner-Taggart <i>et al.</i>	1993	Neogene folding and faulting in southern Monterey Bay, Central California, USA	Deep Seafloor & Canyons	NA
Garrison	1981	Monterey Bay phytoplankton II. Resting spore cycles in coastal diatom populations	Pelagic	Birds Phytoplankton
Garrison <i>et al.</i>	1992	Confirmation of domoic acid production by <i>Pseudonitzschia australis</i> (Bacillariophyceae) cultures	Pelagic	Phytoplankton
Gasca <i>et al.</i>	2007	Symbiotic associations between crustaceans and gelatinous zooplankton in deep and surface waters off California	Pelagic	Invertebrates
Gasca <i>et al.</i>	2015	<i>Sapphirina iris</i> Dana, 1849 and <i>S. sinuicauda</i> Brady, 1883 (Copepoda, Cyclopoida): Predators of salps in Monterey Bay and the Gulf of California	Deep Seafloor & Canyons Pelagic	Invertebrates Zooplankton
Gasca <i>et al.</i>	2015	New symbiotic associations of hyperiid amphipods (Peracarida) with gelatinous zooplankton in deep waters off California	Deep Seafloor & Canyons	Invertebrates Zooplankton
Gaylord <i>et al.</i>	1994	Mechanical consequences of size in wave-swept algae	Rocky Shores	Macroalgae
Gerber <i>et al.</i>	1993	Findings in pinnipeds stranded along the central and northern California Coast, 1984-1990	Beaches	Seals & Sea Lions
German <i>et al.</i>	2006	Gut length and mass in herbivorous and carnivorous prickleback fishes (Teleostei: Stichaeidae): Ontogenetic, dietary, and phylogenetic effects	Rocky Shores	Bony Fish
Gibble & Kudela	2014	Detection of persistent microcystin toxins at the land-sea interface in Monterey Bay, California	Deep Seafloor & Canyons Estuaries	Phytoplankton
Giese & Hart	1967	Seasonal changes in component indices and chemical composition in <i>Katharina tunicata</i>	Rocky Shores	Invertebrates

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Giese <i>et al.</i>	1959	Annual reproductive cycles of the chitons, <i>Katharina tunicata</i> and <i>Mopalia hindsii</i>	Rocky Shores	Invertebrates
Gilbert	1914	Two cottid fishes from Monterey Bay, California	Kelp & Shallow Reef Rocky Shores	Bony Fish
Gilbert-Horvath <i>et al.</i>	2006	Temporal recruitment patterns and gene flow in kelp rockfish ( <i>Sebastodes atrovirens</i> )	Kelp & Shallow Reef	Bony Fish
Gilly <i>et al.</i>	1991	Development of giant motor axons and neural control of escape responses in squid embryos and hatchlings	Pelagic	Invertebrates
Gilman <i>et al.</i>	2006	Evaluation of effective shore level as a method of characterizing intertidal wave exposure regimes	Rocky Shores	NA
Girard <i>et al.</i>	2016	Detection and characterization of diverse coccidian protozoa shed by California sea lions	Rocky Shores	Microbial Seals & Sea Lions
Gladfelter	1972	Structure and function of the locomotory system of <i>Polyorchis montereyensis</i> (Cnidaria, Hydrozoa)	Pelagic	Invertebrates
Glickstein	1978	Acute toxicity of mercury and selenium to <i>Crassostrea gigas</i> embryos and <i>Cancer magister</i> larvae	Kelp & Shallow Reef Rocky Shores	Invertebrates
Gobalet & Jones	1995	Prehistoric Native American fisheries of the central California coast	Estuaries Rocky Shores	Bony Fish Cartilaginous Fishes
Goddard <i>et al.</i>	2011	Impacts associated with the recent range shift of the aeolid nudibranch <i>Phidiana hiltoni</i> (Mollusca, Opisthobranchia) in California	Rocky Shores	Invertebrates
Goericke <i>et al.</i>	2005	The State of the California Current, 2004-2005: Still Cool?	Pelagic	NA
Goff & Coleman	1985	The role of secondary pit connections in red algal parasitism	Kelp & Shallow Reef Rocky Shores	Macroalgae
Goff & Moon	1993	PCR amplification of nuclear and plastid genes from algal herbarium specimens and algal spores	Kelp & Shallow Reef Rocky Shores	Macroalgae

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Goffredi <i>et al.</i>	2004	Unusual benthic fauna associated with a whale fall in Monterey Canyon, California	Deep Seafloor & Canyons	NA
Goffredi <i>et al.</i>	2008	Temporal evolution of methane cycling and phylogenetic diversity of archaea in sediments from a deep-sea whale-fall in Monterey Canyon, California.	Deep Seafloor & Canyons	Microbial
Goldberg & Foster	2002	Settlement and post-settlement processes limit the abundance of the geniculate coralline alga <i>Calliarthron</i> on subtidal walls	Kelp & Shallow Reef	Macroalgae
Goldberg <i>et al.</i>	1978	The Mussel Watch	Rocky Shores	Invertebrates
Goldstein <i>et al.</i>	1999	Human-related injuries observed in live stranded pinnipeds along the central California coast 1986-1998	Beaches	Seals & Sea Lions
Goldstein <i>et al.</i>	2007	Novel symptomatology and changing epidemiology of domoic acid toxicosis in California sea lions ( <i>Zalophus californianus</i> ): An increasing risk to marine mammal health	Beaches	Seals & Sea Lions
Goldstein <i>et al.</i>	2013	Pandemic H1N1 influenza isolated from free-ranging northern elephant seals in 2010 off the central California coast	Beaches	Seals & Sea Lions
Goley & Straley	1994	Attack on gray whales ( <i>Eschrichtius robustus</i> ) in Monterey Bay, California, by killer whales ( <i>Orcinus orca</i> ) previously identified in Glacier Bay, Alaska	Pelagic	Whales & Dolphins
Gonzalez & Goff	1989	The red algal epiphytes <i>Microcladia coulteri</i> and <i>M. californica</i> (Rhodophyceae, Ceramiaceae). I. Taxonomy, life history, and phenology	Rocky Shores	Macroalgae
Gooding	1960	North and South American copepods of the genus <i>Hemicyclops</i> (Cyclopoida, Clausidiidae)	Estuaries	Invertebrates
Gosliner	1991	Four new species and a new genus of opisthobranch gastropods from the Pacific coast of North America	Rocky Shores	Invertebrates
Gosliner <i>et al.</i>	1999	A new species of <i>Doriopsilla</i> (Nudibranchia: Dendrodondidae) from the Pacific coast of North America, including a comparison with <i>Doriopsilla albopunctata</i> (Cooper, 1863)	Rocky Shores	Invertebrates
Grabowski <i>et al.</i>	2016	Episodic suspended sediment transport and elevated polycyclic aromatic hydrocarbon concentrations in a small, mountainous river in coastal California	Beaches	NA

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Graham	1993	Spatio-temporal scale assessment of an upwelling shadow in northern Monterey Bay, California	Deep Seafloor & Canyons	NA
Graham	1997	Factors determining the upper limit of giant kelp, <i>Macrocystis pyrifera</i> Agardh, along the Monterey Peninsula, central California, USA	Kelp & Shallow Reef Rocky Shores	Macroalgae
Graham	1996	Effect of high irradiance on recruitment of the giant kelp <i>Macrocystis</i> ( <i>Phaeophyta</i> ) in shallow water	Kelp & Shallow Reef	Macroalgae
Graham & Largier	1997	Upwelling shadows as nearshore retention sites: the example of northern Monterey Bay	Deep Seafloor & Canyons	NA
Graham <i>et al.</i>	1992	Persistent "upwelling shadows" and their influence on zooplankton distributions	Deep Seafloor & Canyons	Zooplankton
Graham <i>et al.</i>	2010	The acoustic identification and enumeration of scyphozoan jellyfish, prey for leatherback sea turtles ( <i>Dermochelys coriacea</i> ), off central California	Pelagic	Reptiles Zooplankton
Green & Starr	2011	Movements of small adult black rockfish: Implications for the design of MPAs	Kelp & Shallow Reef	Bony Fish
Green <i>et al.</i>	2014	Movements of blue rockfish ( <i>Sebastodes mystinus</i> ) off Central California with comparisons to similar species	Kelp & Shallow Reef	Bony Fish
Greene <i>et al.</i>	1991	Offshore and onshore liquefaction at Moss Landing spit, central California - result of the October 17, 1989, Loma Prieta earthquake	Beaches Deep Seafloor & Canyons	NA
Greene <i>et al.</i>	2002	Physiography of the Monterey Bay National Marine Sanctuary and implications about continental margin development	Deep Seafloor & Canyons	NA
Greene <i>et al.</i>	1999	A classification scheme for deep seafloor habitats	Deep Seafloor & Canyons	NA
Greenley <i>et al.</i>	2016	Seasonal and ontogenetic movements of lingcod ( <i>Ophiodon elongatus</i> ) in central California, with implications for marine protected area management	Rocky Shores	Bony Fish
Greig <i>et al.</i>	2005	A decade of live California sea lion ( <i>Zalophus californianus</i> ) strandings along the central California coast: Causes and trends, 1991-2000	Beaches	Seals & Sea Lions
Greig <i>et al.</i>	2011	Geography and stage of development affect persistent organic pollutants in stranded and wild-caught harbor seal pups from central California	Rocky Shores	Seals & Sea Lions

Author(s)	Date	Title	Habitat Categories	Organism Categories
Griggs	1986	Relocation or reconstruction: Viable approaches for structures in areas of high coastal erosion	Beaches	NA
Griggs & Fulton-Bennett	1987	Failure of coastal protection at Seacliff State Beach, Santa Cruz County, California, USA	Beaches	NA
Griggs & Hein	1980	Sources, dispersal, and clay mineral composition of fine-grained sediment off central and northern California	Deep Seafloor & Canyons	NA
Griggs & Johnson	1976	Effects of the Santa Cruz Harbor on coastal processes of northern Monterey Bay, California	Beaches	NA
Griggs & McCrory	1976	Comparative discharges of fresh and waste water along the California coast	Beaches	NA
Griggs & Tait	1988	The effects of coastal protection structures on beaches along northern Monterey Bay, California	Pelagic	NA
Griggs <i>et al.</i>	1994	The interaction of seawalls and beaches: Seven years of monitoring, Monterey Bay, California	Beaches	NA
Grinell	1918	The status of the white-rumped petrels of the California coast	Beaches	Birds
Grosberg	1982	Intertidal zonation of barnacles: The influence of planktonic zonation of larvae on vertical distribution of adults	Rocky Shores	Invertebrates Zooplankton
Grosholz & Ruiz	1995	Spread and potential impact of the recently introduced European green crab, <i>Carcinus maenas</i> , in central California	Rocky Shores	Invertebrates
Grossman <i>et al.</i>	2006	Shallow stratigraphy and sedimentation history during high-frequency sea-level changes on the central California shelf	Deep Seafloor & Canyons	NA
Gruber <i>et al.</i>	2012	Rapid progression of ocean acidification in the California Current ecosystem	Pelagic	NA
Guinotte & Davies	2014	Predicted deep-sea coral habitat suitability for the U.S. West Coast	Deep Seafloor & Canyons	Invertebrates
Gulland <i>et al.</i>	1997	Nematode ( <i>Otostrongylus circumlitus</i> ) infestation of northern elephant seals ( <i>Mirounga angustirostris</i> ) stranded along the central California coast	Beaches	Invertebrates Seals & Sea Lions
Gunderson & Sample	1980	Distribution and abundance of rockfish off Washington, Oregon, and California during 1977	Deep Seafloor & Canyons	Bony Fish

<b>Author(s)</b>	<b>Date</b>	<b>Title</b>	<b>Habitat Categories</b>	<b>Organism Categories</b>
Gutowska <i>et al.</i>	2004	Digestive chitinolytic activity in marine fishes of Monterey Bay, California	Deep Seafloor & Canyons Pelagic	Bony Fish
Gwiadza <i>et al.</i>	2015	Evidence of modern fine-grained sediment accumulation in the Monterey Fan from measurements of the pesticide DDT and its metabolites	NA	NA
Hand & Hendrickson	1950	A two-tentacled, commensal hydroid from California (Limnomedusae, <i>Proboscidactyla</i> )	Rocky Shores	Invertebrates
Hand & Steinberg	1955	On the occurrence of the nudibranch <i>Alderia modesta</i> (Loven, 1844) on the central Californian coast	Rocky Shores	Invertebrates
Haderlie	1968	Marine fouling organisms in Monterey Harbor	Sandy Seafloor	Invertebrates
Haderlie	1969	Marine fouling and boring organisms in Monterey Harbor - II. Second year of investigation	Rocky Shores	Invertebrates
Haderlie	1971	Marine fouling and boring organisms at 100 feet depth in open water of Monterey Bay	Rocky Shores	Invertebrates
Haderlie	1973	Settlement, growth rates, and depth preference of the shipworm <i>Bankia setacea</i> in Monterey Bay	Rocky Shores	Invertebrates
Haderlie	1974	Growth rates, depth preference and ecological succession of some sessile marine invertebrates in Monterey Harbor	Kelp & Shallow Reef Rocky Shores	Invertebrates
Haderlie	1979	Range extension for <i>Penitella fitchi</i> Turner, 1955 (Bivalvia: Pholadidae)	Kelp & Shallow Reef Rocky Shores	Invertebrates
Haderlie	1980	Sea star predation on rock boring bivalves	Rocky Shores	Invertebrates
Haderlie	1980	Stone boring marine bivalves from Monterey Bay, California	Deep Seafloor & Canyons Rocky Shores	Invertebrates
Haderlie	1981	Growth rates of <i>Penitella penita</i> (Conrad, 1837), <i>Chaceia ovoidea</i> (Gould, 1851) (Bivalvia: Pholadidae) and other rock boring bivalves in Monterey Bay	Rocky Shores	Invertebrates Macroalgae
Haderlie	1983	Depth distribution and settlement times of the molluscan wood borers <i>Bankia setacea</i> and <i>Xyloshaga washingtona</i> in Monterey	Rocky Shores	Invertebrates

Author(s)	Date	Title	Habitat Categories	Organism Categories
Haderlie & Donat	1978	Wharf piling fauna and flora in Monterey Harbor, California	Rocky Shores	Invertebrates
Hadfield	1970	Observations on the anatomy and biology of two California vermetid gastropods	Deep Seafloor & Canyons	Invertebrates
Hahn & Denny	1989	Tenacity-mediated selective predation by oystercatchers on intertidal limpets and its role in maintaining habitat partitioning by <i>Collisella scabra</i> and <i>Lottia digitalis</i>	Beaches	Seals & Sea Lions
Hakanson	1987	The feeding condition of <i>Calanus pacificus</i> and other zooplankton in relation to phytoplankton pigments in the California Current	Pelagic	NA
Haley <i>et al.</i>	1994	Size, dominance and copulatory success in male northern elephant seals, <i>Mirounga angustirostris</i>	Deep Seafloor & Canyons	NA
Haley <i>et al.</i>	2009	Forecasting and reanalysis in the Monterey Bay/California Current region for the Autonomous Ocean Sampling Network-II experiment	Deep Seafloor & Canyons	NA
Hall & Carter	2007	Internal tides in Monterey Submarine Canyon	Kelp & Shallow Reef	Bony Fish
Hall <i>et al.</i>	2014	Transition from partly standing to progressive internal tides in Monterey Submarine Canyon	Deep Seafloor & Canyons	Microbial
Hallacher & Roberts	1985	Differential utilization of space and food by the inshore rockfishes (Scorpaenidae: <i>Sebastodes</i> ) of Carmel Bay, California	Deep Seafloor & Canyons	Bony Fish Invertebrates
Hallam <i>et al.</i>	2003	Identification of methyl coenzyme M reductase A ( <i>mcrA</i> ) genes associated with methane-oxidizing archaea	All	NA
Hallenbeck <i>et al.</i>	2012	Rippled scour depressions add ecologically significant heterogeneity to soft-bottom habitats on the continental shelf	Rocky Shores	Invertebrates
Halpern <i>et al.</i>	2009	Mapping cumulative human impacts to California Current marine ecosystems	Deep Seafloor & Canyons	Invertebrates
Hamm & Burton	2000	Population genetics of black abalone, <i>Haliotis cracherodii</i> , along the central California coast	Beaches	Birds
Hamner & Robison	1992	<i>In situ</i> observations of giant appendicularians in Monterey Bay	Pelagic	Cartilaginous Fishes

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Hampton <i>et al.</i>	2003	Tank vessel operations, seabirds, and chronic oil pollution in California	Rocky Shores	Invertebrates
Hanan <i>et al.</i>	1993	The California drift gill net fishery for sharks and swordfish 1981-82 through 1990-91	Estuaries	Invertebrates
Hanggi & Schusterman	1994	Underwater acoustic displays and individual variation in male harbour seals, <i>Phoca vitulina</i>	Beaches Rocky Shores	Seals & Sea Lions
Hanlon <i>et al.</i>	2004	Egg-capsule deposition and how behavioral interactions influence spawning rate in the squid <i>Loligo opalescens</i> in Monterey Bay, CA	Deep Seafloor & Canyons	Invertebrates
Hannan	1981	Polychaete larval settlement: Correspondence of patterns in suspended jar collectors and in the adjacent natural habitat in Monterey Bay, California	Sandy Seafloor	Invertebrates
Hanni <i>et al.</i>	2005	Sightings and strandings of Guadalupe fur seals in central and northern California, 1988-1995	Beaches	Seals & Sea Lions
Hansen	1970	Commensal activity as a function of age in two species of California abalones	Beaches Rocky Shores	Invertebrates
Hansen	1977	Ecology and natural history of <i>Iridaea cordata</i> (Gigartinales, Rhodophyta) growth	Rocky Shores	Macroalgae
Hapke	2005	Estimation of regional material yield from coastal landslides based on historical digital terrain modeling	Beaches Rocky Shores	NA
Hapke & Green	2006	Coastal landslide material loss rates associated with severe climatic events	Deep Seafloor & Canyons	NA
Hapke & Richmond	2000	Monitoring beach morphology changes using small-format aerial photography and digital softcopy photogrammetry	Beaches	NA
Hapke & Richmond	2002	The impact of climatic and seismic events on the short-term evolution of seacliffs based on 3-D mapping: Northern Monterey Bay, California	Deep Seafloor & Canyons	NA
Harley & Rogers-Bennett	2004	The potential synergistic effects of climate change and fishing pressure on exploited invertebrates on rocky intertidal shores	Rocky Shores	Invertebrates
Harris & Howe	1979	An analysis of the defensive mechanisms observed in the anemone <i>Anthopleura elegantissima</i> in response to its nudibranch predator <i>Aeolidia papillosa</i>	Rocky Shores	Invertebrates

Author(s)	Date	Title	Habitat Categories	Organism Categories
Harris <i>et al.</i>	2010	Lesions and behavior associated with forced copulation of juvenile Pacific harbor seals ( <i>Phoca vitulina richardsii</i> ) by Southern sea otters ( <i>Enhydra lutris nereis</i> )	Deep Seafloor & Canyons	Otters
Harrold & Hardin	1986	Prey consumption on land by the California sea otter, <i>Enhydra lutris</i>	Rocky Shores	Otters
Harrold <i>et al.</i>	1988	Spatial variation in the structure of kelp forest communities along a wave exposure gradient	Kelp & Shallow Reef	Macroalgae
Harrold <i>et al.</i>	1998	Organic enrichment of submarine-canyon and continental-shelf benthic communities by macroalgal drift imported from nearshore kelp forests	Deep Seafloor & Canyons Rocky Shores	Macroalgae
Hartman & Zahary	1983	Biogeography of protected rocky intertidal communities of the northeastern Pacific	Rocky Shores	Invertebrates Macroalgae
Hartwell	2004	Distribution of DDT in sediments off the central California coast	Deep Seafloor & Canyons	NA
Hartwell	2008	Distribution of DDT and other persistent organic contaminants in canyons and on the continental shelf off the central California coast	Deep Seafloor & Canyons	NA
Harvey & Goley	2011	Determining a correction factor for aerial surveys of harbor seals in California	Pelagic	Seals & Sea Lions
Harvey <i>et al.</i>	2012	Robotic sampling, <i>in situ</i> monitoring and molecular detection of marine zooplankton	Pelagic	Zooplankton
Hassrick <i>et al.</i>	2007	Swimming speeds and foraging strategies of northern elephant seals	Pelagic	Seals & Sea Lions
Hatfield <i>et al.</i>	2011	Sea otter mortality in fish and shellfish traps: Estimating potential impacts and exploring possible solutions	Beaches Deep Seafloor & Canyons	Otters
Hauri <i>et al.</i>	2013	Spatiotemporal variability and long-term trends of ocean acidification in the California Current System	Pelagic	NA
Haury <i>et al.</i>	1992	Simultaneous measurements of small-scale physical dynamics and zooplankton distributions	Deep Seafloor & Canyons	Zooplankton
Haven	1971	Niche differences in the intertidal limpets <i>Acmea scabra</i> and <i>Acmea digitalis</i> (Gastropoda) in central California	Rocky Shores	Invertebrates

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Haven	1973	Competition for food between the intertidal gastropods <i>Acmaea scabra</i> and <i>Acmaea digitalis</i>	Rocky Shores	Invertebrates
Havenhand <i>et al.</i>	2006	<i>Megalodicopia hians</i> in the Monterey Submarine Canyon: Distribution, larval development, and culture	Deep Seafloor & Canyons	Invertebrates
Hayes <i>et al.</i>	2006	Mating system and reproductive success in eastern Pacific harbor seals	Estuaries	Seals & Sea Lions
Hayes <i>et al.</i>	2008	Steelhead growth in a small central California watershed: upstream and estuarine rearing patterns	Estuaries	Bony Fish
Hayes <i>et al.</i>	2013	Mobile receivers: Releasing the mooring to "see" where fish go	Rocky Shores	Seals & Sea Lions
Hayward & Venrick	1982	Relation between surface chlorophyll, integrated chlorophyll and integrated primary production	Pelagic	Phytoplankton
Hein <i>et al.</i>	1976	The occurrence of glauconite in Monterey Bay, California, diversity, origins, and sedimentary environmental significance	Estuaries	Invertebrates
Heine	1983	Seasonal productivity of two red algae in a central California kelp forest	Deep Seafloor & Canyons	Macroalgae
Helmuth	2002	How do we measure the environment? Linking intertidal thermal physiology and ecology through biophysics	Kelp & Shallow Reef	Macroalgae
Helmuth <i>et al.</i>	2006	Mosaic patterns of thermal stress in the rocky intertidal zone: Implications for climate change	Rocky Shores	Invertebrates
Hendrickson & MacMahan	2009	Diurnal sea breeze effects on inner-shelf cross-shore exchange	Rocky Shores	Invertebrates
Henkel	2006	Effect of water clarity on the distribution of marine birds in nearshore waters of Monterey Bay, California	Deep Seafloor & Canyons	NA
Henkel	2009	Co-occurrence and aggregation of marine birds and mammals in Monterey Bay, California, USA	Deep Seafloor & Canyons	Birds
Henkel & Harvey	2008	Abundance and distribution of marine mammals in nearshore waters of Monterey Bay, California	Rocky Shores	Birds Whales & Dolphins Seals & Sea Lions

Author(s)	Date	Title	Habitat Categories	Organism Categories
Henkel & Hoffman	2008	Thermal ecophysiology of gametophytes cultured from invasive <i>Undaria pinnatifida</i> (Harvey) in coastal California harbors	Rocky Shores	Macroalgae
Henkel & Hofmann	2008	Differing patterns of hsp70 gene expression in invasive and native kelp species: Evidence for acclimation-induced variation	Deep Seafloor & Canyons	Seals & Sea Lions
Henkel <i>et al.</i>	2004	At-sea activity and diving behavior of a radio-tagged marbled murrelet in central California	Deep Seafloor & Canyons	Macroalgae
Henkel <i>et al.</i>	2014	Chronic oiling of marine birds in California by natural petroleum seeps, shipwrecks, and other sources	Rocky Shores	Birds
Hernández-Carmona <i>et al.</i>	2006	Reproductive longevity of drifting kelp <i>Macrocystis pyrifera</i> (Phaeophyceae) in Monterey Bay, USA	Beaches	Birds
Hewatt	1935	Ecological succession in the <i>Mytilus californianus</i> habitat as observed in Monterey Bay, California	Kelp & Shallow Reef Pelagic	Macroalgae
Hewatt	1937	Ecological studies on selected intertidal marine communities of Monterey Bay	Rocky Shores	Invertebrates
Hewson <i>et al.</i>	2014	Densovirus associated with sea-star wasting disease and mass mortality	Rocky Shores	Invertebrates
Hickman	1994	The genus <i>Parvilucina</i> in the eastern Pacific: Making evolutionary sense of a chemosymbiotic species complex	Rocky Shores	Invertebrates
Hicks & Inman	1987	Sand dispersion from an ephemeral river delta on the central California coast	Deep Seafloor & Canyons	Invertebrates
Hieman & Micheli	2008	Non-native habitat as home for non-native species: Comparison of communities associated with invasive tubeworm and native oyster reefs	Beaches	NA
Hilgard	1960	A study of reproduction in the intertidal barnacle, <i>Mitella polymerus</i> , in Monterey Bay, California	Rocky Shores	Invertebrates
Hines	1982	Coexistence in a kelp forest: Size, population dynamics, and resource partitioning in a guild of spider crabs (Brachyura, Majidae)	Kelp & Shallow Reef	Invertebrates

Author(s)	Date	Title	Habitat Categories	Organism Categories
Hines & Pearse	1982	Abalones, shells, and sea otters: Dynamics of prey populations in central California	Kelp & Shallow Reef	Invertebrates Otters
Hobbs	1929	A new species of <i>Centrolophus</i> from Monterey Bay, California	Rocky Shores	Invertebrates
Hodgson	1980	Control of the intertidal distribution of <i>Gastroclonium coulteri</i> in Monterey Bay	Rocky Shores	Macroalgae
Hoelzel	1993	Elephant seal genetic variation and the use of simulation models to investigate historical population bottlenecks	Rocky Shores	Seals & Sea Lions
Hoelzer	1987	The effect of early experience on aggression in two territorial scorpaenid fishes	Kelp & Shallow Reef	Bony Fish
Hoelzer	1988	Juvenile movement patterns in a territorial scorpaenid fish before and during settlement	Kelp & Shallow Reef	Bony Fish
Hofmann <i>et al.</i>	2011	High-frequency dynamics of ocean pH: A multi-ecosystem comparison	Estuaries	NA
Hoge <i>et al.</i>	1993	Inherent optical properties of the ocean: Retrieval of the absorption coefficient of chromophoric dissolved organic matter from airborne laser spectral fluorescence measurements	Pelagic	NA
Hollenberg & Abbott	1965	New species and new combinations of marine algae from the region of Monterey, California	Rocky Shores	Macroalgae
Hollibaugh	1988	Limitations of the [ <sup>3</sup> H]thymidine method for estimating bacterial productivity due to thymidine metabolism	Estuaries Deep Seafloor & Canyons	Microbial
Holliday <i>et al.</i>	2010	Acoustic scattering in the coastal ocean at Monterey Bay, CA, USA: Fine-scale vertical structures	Deep Seafloor & Canyons	Zooplankton
Holt <i>et al.</i>	2010	Call directionality and its behavioural significance in male northern elephant seals, <i>Mirounga angustirostris</i>	Beaches	Seals & Sea Lions
Holts & Beauchamp	1993	Sexual reproduction in the corallimorpharian sea anemone <i>Corynactis californica</i> in a central California kelp forest	Kelp & Shallow Reef	Invertebrates
Hopcroft & Robison	1999	A new mesopelagic larvacean, <i>Mesochordaeus erythrocephalus</i> , sp. nov., from Monterey Bay, with a description of its filtering house	Deep Seafloor & Canyons	Invertebrates

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Hopcroft & Robison	2005	New mesopelagic larvaceans in the genus <i>Fritillaria</i> from Monterey Bay, California	Deep Seafloor & Canyons	Invertebrates
Hopcroft <i>et al.</i>	2002	Copepod communities in Monterey Bay during the 1997-1999 El Niño and La Niña	Pelagic	Zooplankton
Hopkins <i>et al.</i>	2016	Perceptions of practitioners: Managing marine protected areas for climate change resilience	Deep Seafloor & Canyons	NA
Horn	1983	Optimal diets in complex environments: Feeding strategies of two herbivorous fishes from a temperate rocky intertidal zone	Rocky Shores	Bony Fish
Horn <i>et al.</i>	1982	Dietary selectivity in the field and food preferences in the laboratory for two herbivorous fishes ( <i>Cebidichthys violaceus</i> and <i>Xiphister mucosus</i> ) from a temperate intertidal zone	Rocky Shores	Bony Fish
Hostettler <i>et al.</i>	2004	Geochemical characterization of tarballs on beaches along the California coast. Part I - Shallow seepage impacting the Santa Barbara Channel Islands, Santa Cruz, Santa Rosa and San Miguel	Beaches	NA
Howard & Scott	1959	Predaceous feeding in two common gooseneck barnacles	Rocky Shores	Invertebrates
Hsueh	1991	Seasonal occurrence and abundance of <i>Brachyuran</i> larvae in a coastal embayment of central California	Estuaries	Invertebrates Zooplankton
Hubbs	1921	The ecology and life-history of <i>Amphigonopterus aurora</i> and of other viviparous perches of California	Kelp & Shallow Reef Rocky Shores	Bony Fish
Hubbs	1925	Racial and seasonal variation in the Pacific herring, California sardine, and California anchovy	NA	Bony Fish
Hubbs	1925	The metamorphosis of the Californian ribbon fish, <i>Trachypterus rex-salmonoium</i>	NA	Bony Fish
Hubbs	1947	Mixture of marine and fresh water fishes in the lower Salinas River, California	Estuaries	Bony Fish
Hubbs & Schultz	1934	The reef liparid fishes inhabiting the west coast of the United States	Kelp & Shallow Reef	Bony Fish
Hughes	2010	Variable effects of a kelp foundation species on rocky intertidal diversity and species interactions in central California	Rocky Shores	Macroalgae

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Hughes <i>et al.</i>	2011	Identifying factors that influence expression of eutrophication in a central California estuary	Estuaries	Phytoplankton
Hughes <i>et al.</i>	2013	Recovery of a top predator mediates negative eutrophic effects on seagrass	NA	NA
Hughes <i>et al.</i>	2013	Dynamics of vibrio with virulence genes detected in Pacific harbor seals ( <i>Phoca vitulina richardii</i> ) off California: Implications for marine mammal health	Estuaries	Microbial Seals & Sea Lions
Hughes <i>et al.</i>	2015	Climate mediates hypoxic stress on fish diversity and nursery function at the land–sea interface	Estuaries	Bony Fish
Hughes <i>et al.</i>	2016	Trophic cascades on the edge: fostering seagrass resilience via a novel pathway	Estuaries	Invertebrates Macroalgae Seagrasses & Marsh Plants
Hughes <i>et al.</i>	2013	Recovery of a top predator mediates negative eutrophic effects on seagrass	Estuaries	Otters Seagrasses & Marsh Plants
Hulberg & Gruber	1980	Diet and behavioral aspects of the wolf-eel, <i>Anarrhichthys ocellatus</i> , on sandy bottom in Monterey Bay, California	Sandy Seafloor	Bony Fish
Hulberg & Oliver	1980	Caging manipulations in marine soft-bottom communities: Importance of animal interactions or sedimentary habitat modifications	Sandy Seafloor	Invertebrates
Hult	1969	Nitrogenous waste products and excretory enzymes in the marine polychaete <i>Cirriformia spirabrancha</i> (Moore, 1904)	Sandy Seafloor	Invertebrates
Hunter <i>et al.</i>	1988	Coarse-sediment bands on the inner shelf of southern Monterey Bay, California	Sandy Seafloor	NA
Hunter <i>et al.</i>	1990	Bathymetric patterns in size, age, sexual maturity, water content, and caloric density of Dover sole, <i>Microstomus pacificus</i>	Sandy Seafloor	Bony Fish
Huntley <i>et al.</i>	1984	The contribution of nasal countercurrent heat exchange to water balance in the northern elephant seal, <i>Mirounga angustirostris</i>	Beaches	Seals & Sea Lions
Hutchins & Bruland	1994	Grazer-mediated regeneration and assimilation of Fe, Zn, and Mn from planktonic prey	Pelagic	Phytoplankton Zooplankton

Author(s)	Date	Title	Habitat Categories	Organism Categories
Hutchins & Bruland	1995	Fe, Zn, Mn and N transfer between size classes in a coastal phytoplankton community: trace metal and major nutrient recycling compared	Pelagic	Phytoplankton
Hutchins <i>et al.</i>	1993	Iron and regenerated production: evidence for biological iron recycling in two marine environments	Pelagic	Phytoplankton
Hutchins <i>et al.</i>	1998	An iron limitation mosaic in the California upwelling regime	Pelagic	Phytoplankton
Hyman	1947	Two new hydromedusae from the California coast	Rocky Shores	Invertebrates
Hymanson <i>et al.</i>	1990	The validity of using morphological characteristics as predictors of age in the kelp, <i>Pterygophora californica</i> (Laminariales, Phaeophyta)	Kelp & Shallow Reef	Macroalgae
Hyrenbach <i>et al.</i>	2006	Use of marine sanctuaries by far-ranging predators: Commuting flights to the California Current System by breeding Hawaiian albatrosses	Pelagic	Birds
Iampietro <i>et al.</i>	2008	Recent advances in automated genus-specific marine habitat mapping enabled by high-resolution multibeam bathymetry	Kelp & Shallow Reef	Bony Fish
Imamura <i>et al.</i>	2011	Wrack promotes the persistence of fecal indicator bacteria in marine sands and seawater	Beaches	Macroalgae
Inman & Jenkins	1999	Climate change and the episodicity of sediment flux of small California rivers	Deep Seafloor & Canyons	NA
Intrieri <i>et al.</i>	1990	The Land/Sea Breeze Experiment (LASBEX)	NA	NA
Irving	1924	Ciliary currents in starfish	NA	Invertebrates
Ish <i>et al.</i>	2004	Environment, krill and squid in the Monterey Bay: From fisheries to life histories and back again	Deep Seafloor & Canyons	Invertebrates
Itsweire <i>et al.</i>	1989	Horizontal distribution and characteristics of shear layers in the seasonal thermocline	Pelagic	NA
Iverson	1972	A new subtidal Synidotea from central California (Crustacea: Isopoda)	Deep Seafloor & Canyons	Invertebrates

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Jachec <i>et al.</i>	2006	Numerical simulation of internal tides and the resulting energetics within Monterey Bay and the surrounding area	Pelagic	NA
Jacobson <i>et al.</i>	2005	An ecosystem-based hypothesis for climatic effects on surplus production in California sardine ( <i>Sardinops sagax</i> ) and environmentally dependent surplus production models.	Pelagic	Bony Fish
Jaeckle	1981	New distributional records for two California nudibranchs	Rocky Shores	Invertebrates
Jahnke <i>et al.</i>	1990	Intensification of recycling of organic matter at the sea floor near ocean margins	Deep Seafloor & Canyons	NA
Jameson	1983	Evidence of birth of a sea otter on land in central California	Rocky Shores	Otters
Jameson	1989	Movements, home range, and territories of male sea otters off central California	Rocky Shores	Otters
Jameson & Johnson	1993	Reproductive characteristics of female sea otters	NA	Otters
Jefferson	1991	Observations on the distribution and behavior of Dall's porpoise ( <i>Phocoenoides dalli</i> ) in Monterey Bay, California [USA]	Pelagic	Whales & Dolphins
Jensen & Swartzell	1967	California salmon landings 1952 through 1965	NA	Bony Fish
Jessup <i>et al.</i>	2009	Mass stranding of marine birds caused by a surfactant-producing red tide	Beaches	Birds
Johansen & Austin	1970	Growth rates in the articulated coralline <i>Calliarthron</i> ( <i>Rhodophyta</i> )	Kelp & Shallow Reef	Macroalgae
Johnson	1976	Biology and population dynamics of the intertidal isopod <i>Cirolana harfordi</i>	Rocky Shores	Invertebrates
Johnson	2006	Density dependence in marine fish populations revealed at small and large spatial scales	Kelp & Shallow Reef	Bony Fish
Johnson <i>et al.</i>	2001	A decadal record of underflows from a coastal river into the deep sea	Pelagic	NA
Johnson <i>et al.</i>	2001	The annual cycle of iron and the biological response in central California coastal waters	Deep Seafloor & Canyons	NA
Johnson <i>et al.</i>	2001	Recruitment of three species of juvenile rockfish ( <i>Sebastodes spp.</i> ) on soft benthic habitat in Monterey Bay, California	Sandy Seafloor	Bony Fish

Author(s)	Date	Title	Habitat Categories	Organism Categories
Johnson <i>et al.</i>	2006	Diel nitrate cycles observed with <i>in situ</i> sensors predict monthly and annual new production	Deep Seafloor & Canyons	Phytoplankton
Johnson <i>et al.</i>	2009	Prey choice and habitat use drive sea otter pathogen exposure in a resource-limited coastal system	Rocky Shores	Otters
Jones	1967	A hydrodamalis skull fragment from Monterey Bay, California	NA	NA
Jones	1981	Food habits of smaller marine mammals from northern California	Beaches	Whales & Dolphins Seals & Sea Lions
Jones & Blinks	1957	The amino acid constituents of phycobilin chromoproteins of the red algae <i>Porphyra</i>	Rocky Shores	Macroalgae
Jones <i>et al.</i>	2008	Breeding phenology and reproductive success of the Brandt's cormorant at three nearshore colonies in central California, 1997-2001	Deep Seafloor & Canyons	Invertebrates
Jones <i>et al.</i>	2008	Marine worms (Genus <i>Osedax</i> ) colonize cow bones	Rocky Shores	Birds
Jones <i>et al.</i>	1999	Late holocene sea temperatures along the central California coast	Rocky Shores	Invertebrates
Jordan & Gilbert	1880	Description of a new scorpaenoid fish ( <i>Sebastichthys proriger</i> ), from Monterey Bay, California	NA	Bony Fish
Jordan & Gilbert	1880	Description of a new species of <i>Sebastichthys</i> ( <i>Sebastichthys miniatus</i> ) from Monterey Bay, California	NA	Bony Fish
Jordan & Gilbert	1880	Description of two new species of <i>Sebastichthys</i> ( <i>Sebastichthys entomelas</i> and <i>Sebastichthys rhodochloris</i> ) from Monterey Bay	NA	Bony Fish
Jordan & Gilbert	1880	Description of a new agonoid fish ( <i>Brachyopsis xyosternus</i> ), from Monterey Bay, California	NA	Cartilaginous Fishes
Jordan & Gilbert	1880	Description of a new Notidanoid shark ( <i>Hexanchus corinus</i> ), from the Pacific coast of the United States	NA	Cartilaginous Fishes
Jordan & Gilbert	1880	Description of a new Embiotocoid ( <i>Abeona aurora</i> ), from Monterey, California, with notes on a related species	NA	Cartilaginous Fishes

<b>Author(s)</b>	<b>Date</b>	<b>Title</b>	<b>Habitat Categories</b>	<b>Organism Categories</b>
Jordan & Gilbert	1880	Description of new species of <i>Xiphister</i> and <i>Apodichthys</i> , from Monterey, California	NA	Bony Fish
Jordan & Gilbert	1880	Description of a new species of Rockfish ( <i>Sebastichthys carnatus</i> ), from the coast of California	NA	Bony Fish
Jordan & Gilbert	1880	Description of a new species of ray ( <i>Raja stellulata</i> ) from Monterey, California	NA	Cartilaginous Fishes
Jordan & Gilbert	1880	Description of seven new species of Sebastoid fishes, from the coast of California	NA	Bony Fish
Jordan & Gilbert	1880	Description of a new species of ray, <i>Raia rhina</i> , from the coast of California	NA	Cartilaginous Fishes
Jordan & Gilbert	1880	Notes on sharks from the coast of California	NA	Bony Fish
Jow	1969	Results of English sole tagging off California	Deep Seafloor & Canyons Sandy Seafloor	Bony Fish
Kahru <i>et al.</i>	2014	Evaluation of satellite retrievals of ocean chlorophyll-a in the California current	Pelagic	Phytoplankton
Kajiwara <i>et al.</i>	2001	Organochlorine pesticides, polychlorinated biphenyls, and butyltin compounds in blubber and livers of stranded California sea lions, elephant seals, and harbor seals from coastal California, USA	Beaches	Seals & Sea Lions
Kannan <i>et al.</i>	1998	Butyltin residues in southern sea otters ( <i>Enhydra lutris nereis</i> ) found dead along California coastal waters	Deep Seafloor & Canyons	Otters
Kannan <i>et al.</i>	2004	Profiles of polychlorinated biphenyl congeners, organochlorine pesticides, and butyltins in Southern sea otters and their prey	Deep Seafloor & Canyons	Otters
Kannan <i>et al.</i>	2004	Organochlorine pesticides and polychlorinated biphenyls in California sea lions	Rocky Shores	Seals & Sea Lions
Kannan <i>et al.</i>	2006	Association between perfluorinated compounds and pathological conditions in Southern sea otters	Beaches Deep Seafloor & Canyons	Otters
Kannan <i>et al.</i>	2006	Comparison of trace element concentrations in livers of diseased, emaciated and non-diseased southern Sea otters from the California coast	Deep Seafloor & Canyons	Otters

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Karpov & Cailliet	1979	Prey composition of the market squid, <i>Loligo opalescens</i> Berry, in relation to depth and location of capture, size of squid, and sex of spawning squid	NA	Invertebrates
Kaysner <i>et al.</i>	1987	Incidence of vibrio-cholerae from estuaries of the USA West Coast	Estuaries	Microbial
Keck & Adams	1969	The status of thermal discharges on the Pacific Coast	Pelagic	NA
Keiper <i>et al.</i>	2005	Marine mammal occurrence and ocean climate off central California, 1986 to 1994 and 1997 to 1999	Pelagic	Seals & Sea Lions
Keith <i>et al.</i>	1984	California sea lions breeding at Año Nuevo Island, California	Rocky Shores	Seals & Sea Lions
Keller <i>et al.</i>	2010	Distribution and abundance of anthropogenic marine debris along the shelf and slope of the U.S. west coast	Deep Seafloor & Canyons	NA
Keller <i>et al.</i>	2013	Shifts in condition and distribution of eastern North Pacific flatfish along the U.S. west coast (2003-2010)	Deep Seafloor & Canyons	Bony Fish
Kelly & Palumbi	2010	Genetic structure among 50 species of the northeastern Pacific rocky intertidal community	Rocky Shores	Invertebrates
Kenner	1992	Population dynamics of the sea urchin <i>Strongylocentrotus purpuratus</i> in a central California kelp forest: Recruitment, mortality, growth, and diet	Kelp & Shallow Reef	Invertebrates
Kenner & Lares	1991	Size at first reproduction of the sea urchin <i>Strongylocentrotus purpuratus</i> in a central California kelp forest	Kelp & Shallow Reef	Invertebrates
Kim <i>et al.</i>	1979	Chlorophyll gradient map from high-altitude ocean-color-scanner data	Deep Seafloor & Canyons	Invertebrates
Kim <i>et al.</i>	2007	Developing a high-resolution climatology for the central California coastal region	NA	NA
Kim <i>et al.</i>	2015	CO <sub>2</sub> -driven decrease in pH disrupts olfactory behaviour and increases individual variation in deep-sea hermit crabs	NA	NA
Kimura & Foster	1984	The effects of harvesting <i>Macrocystis pyrifera</i> on the algal assemblage in a giant kelp forest	Kelp & Shallow Reef	Macroalgae

Author(s)	Date	Title	Habitat Categories	Organism Categories
Kitchen <i>et al.</i>	1982	Effect of particle size distribution and chlorophyll content on beam attenuation spectra	Pelagic	Phytoplankton
Kitting	1979	The use of feeding noises to determine the algal foods being consumed by individual intertidal molluscs	Rocky Shores	Invertebrates
Kitting	1980	Herbivore-plant interactions of individual limpets maintaining a mixed diet of intertidal marine algae	Rocky Shores	Invertebrates Macroalgae
Kitzes & Denny	2005	Red algae respond to waves: morphological and mechanical variation in <i>Mastocarpus papillatus</i> along a gradient of force	Rocky Shores	Macroalgae
Klimley <i>et al.</i>	2001	The hunting strategy of white sharks ( <i>Carcharodon carcharias</i> ) near a seal colony	Rocky Shores	Cartilaginous Fishes
Kline <i>et al.</i>	2013	Records of the longfin gunnel, <i>Pholis clemensi</i> , from California with a southern range extension to Point Lobos, California	Kelp & Shallow Reef	Bony Fish
Knauer & Martin	1972	Mercury in a marine pelagic food chain	Pelagic	Bony Fish
Knauer & Martin	1973	Seasonal variations of cadmium, copper, manganese, lead, and zinc in water and phytoplankton in Monterey Bay	Pelagic	Phytoplankton
Knauer <i>et al.</i>	1979	Fluxes of particulate carbon, nitrogen, and phosphorus in the upper water column of the northeast Pacific	Pelagic	NA
Koehn <i>et al.</i>	2016	Developing a high taxonomic resolution food web model to assess the functional role of forage fish in the California Current ecosystem	Deep Seafloor & Canyons	Bony Fish
Kogan <i>et al.</i>	2006	ATO/C/Pioneer Seamount cable after 8 years on the seafloor: Observations, environmental impact	Deep Seafloor & Canyons	Invertebrates
Konar & Foster	1992	Distribution and recruitment of subtidal geniculate coralline algae	Kelp & Shallow Reef	Macroalgae
Konar & Stephenson	1995	Gradients of subsurface water toxicity to oyster larvae in bays and harbors in California and their relation to mussel watch bioaccumulation data	NA	Invertebrates
Kopczak <i>et al.</i>	1991	Variation in nitrogen physiology and growth among geographically isolated populations of the giant kelp, <i>Macrocystis pyrifera</i>	Kelp & Shallow Reef	Macroalgae

Author(s)	Date	Title	Habitat Categories	Organism Categories
Koweeck <i>et al.</i>	2016	A year in the life of a central California kelp forest: Physical and biological insights into biogeochemical variability	Kelp & Shallow Reef	Macroalgae
Kretzmann <i>et al.</i>	1993	Maternal energy investment in elephant seal pups: Evidence for sexual equality?	Beaches	Seals & Sea Lions
Krigsman <i>et al.</i>	2012	Models and maps: Predicting the distribution of corals and other benthic macro-invertebrates in shelf habitats	Deep Seafloor & Canyons	Invertebrates
Krueger-Hadfield <i>et al.</i>	2013	Reproductive effort of <i>Mastocarpus papillatus</i> (Rhodophyta) along the California coast	Kelp & Shallow Reef	Macroalgae
Kudela & Chavez	2004	The impact of coastal runoff on ocean color during an El Niño year in central California	Pelagic	Phytoplankton
Kudela <i>et al.</i>	2000	Nutrient regulation of phytoplankton productivity in Monterey Bay, California	Deep Seafloor & Canyons	NA
Kudela <i>et al.</i>	2008	The potential role of anthropogenically derived nitrogen in the growth of harmful algae in California, USA	Deep Seafloor & Canyons	Phytoplankton
Kuhn <i>et al.</i>	2009	Time to eat: Measurements of feeding behaviour in a large marine predator, the northern elephant seal <i>Mirounga angustirostris</i>	Pelagic	Seals & Sea Lions
Kusher <i>et al.</i>	1992	Validated age and growth of the leopard shark, <i>Triakis semifasciata</i> , with comments on reproduction	NA	Cartilaginous Fishes
Kvenvolden <i>et al.</i>	2002	Hydrocarbons in recent sediment of the Monterey Bay National Marine Sanctuary	Deep Seafloor & Canyons	NA
Kvitek & Bretz	2005	Shorebird foraging behavior, diet, and abundance vary with harmful algal bloom toxin concentrations in invertebrate prey	Deep Seafloor & Canyons Pelagic	Birds Phytoplankton
Kvitek <i>et al.</i>	2008	Domoic acid contamination within eight representative species from the benthic food web of Monterey Bay, California, USA	Deep Seafloor & Canyons	Phytoplankton
Lander <i>et al.</i>	2005	Implantation of subcutaneous radio transmitters in the harbor seal ( <i>Phoca vitulina</i> )	Kelp & Shallow Reef	Bony Fish
Laidig	2010	Influence of ocean conditions on the timing of early life history events for the blue rockfish ( <i>Sebastodes mystinus</i> ) off California	Kelp & Shallow Reef	Bony Fish

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Laidig <i>et al.</i>	2003	Age and growth of blue rockfish ( <i>Sebastodes mystinus</i> ) from central and northern California	Deep Seafloor & Canyons	Bony Fish Cartilaginous Fishes
Laidig <i>et al.</i>	2009	Demersal fish and habitat associations from visual surveys on the central California shelf	Deep Seafloor & Canyons	Bony Fish
Laidig <i>et al.</i>	2013	Reactions of fishes to two underwater survey tools, a manned submersible and a remotely operated vehicle	Pelagic	Bony Fish
Laidig <i>et al.</i>	2004	Description and growth of larval and pelagic juvenile pygmy rockfish ( <i>Sebastodes wilsoni</i> ) (family Sebastidae)	Rocky Shores	Seals & Sea Lions
Lane <i>et al.</i>	2009	Development of a logistic regression model for the prediction of toxicogenic <i>Pseudo-nitzschia</i> blooms in Monterey Bay, California	Pelagic	Phytoplankton
Larson <i>et al.</i>	1992	Deep-sea benthic and benthopelagic medusae: Recent observations from submersibles and a remotely operated vehicle	Deep Seafloor & Canyons	Invertebrates
Larson <i>et al.</i>	1994	The distribution of pelagic juvenile rockfish of the genus <i>Sebastodes</i> in the upwelling region off central California	Pelagic	Bony Fish
Laudier <i>et al.</i>	2011	Measured and modeled wave overtopping on a natural beach	Beaches	NA
Lauerman	1998	Diet and feeding behavior of the deep-water sea star <i>Rathbunaster californicus</i> (Fisher) in the Monterey Submarine Canyon	Deep Seafloor & Canyons	Invertebrates
Lawrence & Giese	1969	Changes in the lipid composition of the chiton, <i>Katharina tunicata</i> , with the reproductive and nutritional state	Rocky Shores	Invertebrates
Lawson <i>et al.</i>	2015	Development of an animal-borne "sonar tag" for quantifying prey availability: Test deployments on northern elephant seals	Rocky Shores	Seals & Sea Lions
Le Boeuf	1972	Sexual behavior in the northern elephant seal, <i>Mirounga angustirostris</i>	Beaches Rocky Shores	Seals & Sea Lions
Le Boeuf	1974	Male-male competition and reproductive success in elephant seals	Beaches Rocky Shores	Seals & Sea Lions

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Le Boeuf & Briggs	1977	The cost of living in a seal harem	Rocky Shores	Seals & Sea Lions
Le Boeuf & Campagna	2013	Wildlife viewing spectacles: Best practices from elephant seal ( <i>Mirounga sp.</i> ) colonies	Beaches Rocky Shores	Seals & Sea Lions
Le Boeuf & Peterson	1969	Social status and mating activity in elephant seals	Pelagic	Seals & Sea Lions
Le Boeuf <i>et al.</i>	1972	Perinatal behavior of northern elephant seal females and their young	Pelagic	Seals & Sea Lions
Le Boeuf <i>et al.</i>	1986	Pattern and depth of dives in northern elephant seals, <i>Mirounga angustirostris</i>	Beaches Rocky Shores	Seals & Sea Lions
Le Boeuf <i>et al.</i>	1987	Crater wounds on northern elephant seals: The cookie cutter shark strikes again	Beaches Rocky Shores	Seals & Sea Lions
Le Boeuf <i>et al.</i>	1988	Continuous, deep diving in female northern elephant seals, <i>Mirounga angustirostris</i>	Beaches Rocky Shores	Seals & Sea Lions
Le Boeuf <i>et al.</i>	1989	Prolonged, continuous, deep diving by northern elephant seals	Beaches Rocky Shores	Seals & Sea Lions
Le Boeuf <i>et al.</i>	1991	Sexual behavior of male northern elephant seals: Lethal injuries to adult females	Beaches Rocky Shores	Seals & Sea Lions
Le Boeuf <i>et al.</i>	1992	Swim speed in a female northern elephant seal - metabolic and foraging implications	Beaches Rocky Shores	Seals & Sea Lions
Le Boeuf <i>et al.</i>	1996	Diving behavior of juvenile northern elephant seals	Beaches	Seals & Sea Lions
Le Boeuf <i>et al.</i>	2000	Foraging ecology of northern elephant seals	Beaches Rocky Shores	Seals & Sea Lions
Le Boeuf <i>et al.</i>	2000	Respiration and heart rate at the surface between dives in northern elephant seals	Rocky Shores	Seals & Sea Lions
Lea	2013	Record of the Kamchatka flounder, <i>Atheresthes evermanni</i> , in California waters	Pelagic	Bony Fish

Author(s)	Date	Title	Habitat Categories	Organism Categories
Lea & Haas	2012	An abnormally colored redbanded rockfish, <i>Sebastodes babcocki</i>	Deep Seafloor & Canyons	Bony Fish
Lecher <i>et al.</i>	2015	Nutrient loading through submarine groundwater discharge and phytoplankton growth in Monterey Bay, CA	Deep Seafloor & Canyons	Phytoplankton
Lee <i>et al.</i>	2012	An extraordinary new carnivorous sponge, <i>Chondrocladia lyra</i> , in the new subgenus <i>Symmetrocladia</i> ( <i>Demospongiae</i> , <i>Cladorhizidae</i> ), from off of northern California, USA	Pelagic	Invertebrates
Lefebvre <i>et al.</i>	2002	From sanddabs to blue whales: The pervasiveness of domoic acid	Pelagic	Whales & Dolphins
Lefebvre <i>et al.</i>	2016	Reproductive dynamics of Pacific sanddab, <i>Citharichthys sordidus</i> , off the central coast of California	Deep Seafloor & Canyons	Bony Fish
Leising <i>et al.</i>	2015	State of the California current 2014-15: Impacts of the warm-water "blob"	Pelagic	NA
Lenarz <i>et al.</i>	1991	Depth distributions of late larvae and pelagic juveniles of some fishes of the California current	Pelagic	Bony Fish
Levin <i>et al.</i>	2007	Immunomodulatory effects of organochlorine mixtures upon in vitro exposure of peripheral blood leukocytes differ between free-ranging and captive Southern sea otters ( <i>Enhydra lutris</i> )	Deep Seafloor & Canyons	Otters
Lewis <i>et al.</i>	2002	Accumulation rate and mixing of shelf sediments in the Monterey Bay National Marine Sanctuary	Deep Seafloor & Canyons	NA
Li & Denny	2004	Limits to phenotypic plasticity: Flow effects on barnacle feeding appendages	Rocky Shores	Invertebrates
Limbaugh	1961	Observations on the California sea otter	Kelp & Shallow Reef	Otters
Limber <i>et al.</i>	2014	Unraveling the dynamics that scale cross-shore headland relief on rocky coastlines: 1. Model development	Rocky Shores	NA
List & Koh	1976	Variations in coastal temperatures on the southern and central California coast	NA	NA
Lluch-belda <i>et al.</i>	1992	Sardine population expansion in eastern boundary systems of the Pacific ocean as related to sea surface temperature	Pelagic	Bony Fish

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Lo <i>et al.</i>	1992	Indices of relative abundance from fish spotter data based on delta-lognormal models	Pelagic	Bony Fish
Loeb <i>et al.</i>	1983	Ichthyoplankton and zooplankton abundance patterns in the California Current area, 1975	Pelagic	Bony Fish Zooplankton
Lonhart & Tupen	2001	New range records of 12 marine invertebrates: The role of El Niño and other mechanisms in southern and central California	Rocky Shores	Invertebrates
Loosier <i>et al.</i>	2000	The deep-sea as a final global sink of semivolatile persistent organic pollutants? Part II: organochlorine pesticides in surface and deep-sea dwelling fish of the north and south Atlantic and the Monterey Bay Canyon (California)	Deep Seafloor & Canyons	Bony Fish Invertebrates
Lorenson <i>et al.</i>	2002	Hydrocarbon geochemistry of cold seeps in the Monterey Bay National Marine Sanctuary	Deep Seafloor & Canyons	NA
Loughlin	1980	Home range and territoriality of sea otters near Monterey, California	Kelp & Shallow Reef	Otters
Loury <i>et al.</i>	2015	Trophic ecology of the gopher rockfish <i>Sebastodes carnatus</i> inside and outside of central California marine protected areas	Kelp & Shallow Reef	Bony Fish
Love & Larson	1978	Geographic variation in the occurrence of tympanic spines and possible genetic differentiation in the kelp rockfish ( <i>Sebastes atrovirens</i> )	Kelp & Shallow Reef	Bony Fish
Lowry & Forney	2005	Abundance and distribution of California sea lions ( <i>Zalophus californianus</i> ) in central and northern California during 1998 and summer 1999	Rocky Shores	Seals & Sea Lions
Lowry & Pearse	1973	Abalones and sea urchins in an area inhabited by sea otters	Kelp & Shallow Reef	Invertebrates Macroalgae Otters
Lowry <i>et al.</i>	2014	Abundance, distribution, and population growth of the northern elephant seal ( <i>Mirounga angustirostris</i> ) in the United States from 1991 to 2010	Rocky Shores, Beaches	Seals & Sea Lions
Lubina <i>et al.</i>	1988	The spread of a reinvading species: Range expansion in the California sea otter	NA	Otters
Luck <i>et al.</i>	2008	<i>In-situ</i> observations of a deep-sea ceratioid anglerfish of the genus <i>Oneirodes</i>	Deep Seafloor & Canyons	Bony Fish

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Ludington <i>et al.</i>	2004	Genetic variation in <i>Mastocarpus papillatus</i> (Rhodophyta) in central California using amplified fragment length polymorphisms	Rocky Shores	Macroalgae
Lundsten <i>et al.</i>	2009	Benthic invertebrate communities on three seamounts off southern and central California, USA	Seamounts & Ridges	Invertebrates
Lundsten <i>et al.</i>	2009	Ichthyofauna on three seamounts off southern and central California, USA	Seamounts & Ridges	Bony Fish
Lundsten <i>et al.</i>	2010	Time-series analysis of six whale-fall communities in Monterey Canyon, California, USA	Deep Seafloor & Canyons	Whales & Dolphins Invertebrates
Lundsten <i>et al.</i>	2012	Morphological, molecular, and <i>in situ</i> behavioral observations of the rare deep-sea anglerfish <i>Chaunacops coloratus</i> (Garman, 1899) order Lophiiformes, in the eastern North Pacific	Seamounts & Ridges	Bony Fish
Lynn & Simpson	1987	The California Current system: The seasonal variability of its physical characteristics	NA	NA
Lyons <i>et al.</i>	2012	Parasitological examination for presence of hookworms ( <i>Uncinaria</i> spp.) in northern elephant seals ( <i>Mirounga angustirostris</i> ) at Año Nuevo State Reserve, California (2012)	Rocky Shores	Invertebrates Seals & Sea Lions
Mach <i>et al.</i>	2007	Death by small forces: A fracture and fatigue analysis of wave-swept macroalgae	Kelp & Shallow Reef	Macroalgae
Mach <i>et al.</i>	2011	Failure by fatigue in the field: A model of fatigue breakage for the macroalga <i>Mazzaella</i> , with validation	Rocky Shores	Macroalgae
Mackey <i>et al.</i>	2012	Phosphorus cycling in the red tide incubator region of Monterey Bay in response to upwelling	Pelagic	NA
MacMahan <i>et al.</i>	2009	Low-cost handheld global positioning system for measuring surf-zone currents	Beaches	NA
MacMahan <i>et al.</i>	2005	RIPEX: Observations of a rip current system	Beaches	NA
MacMahan <i>et al.</i>	2010	Mean Lagrangian flow behavior on an open coast rip-channelled beach: A new perspective	Beaches	NA
Mah & Foltz	2014	New taxa and taxonomic revisions to the Poraniidae (Valvatacea; Asteroidea) with comments on feeding biology	Seamounts & Ridges	Invertebrates

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Maier <i>et al.</i>	2011	The elusive character of discontinuous deep-water channels: New insights from Lucia Chica channel system, offshore California	Deep Seafloor & Canyons	NA
Maier <i>et al.</i>	2013	Deep-sea channel evolution and stratigraphic architecture from inception to abandonment from high-resolution autonomous underwater vehicle surveys offshore central California	Deep Seafloor & Canyons	NA
Maldini <i>et al.</i>	2010	Southern sea otter diet in a soft sediment community	Estuaries	Otters
Maldini <i>et al.</i>	2010	Prevalence of epidermal conditions in California coastal bottlenose dolphins ( <i>Tursiops truncatus</i> ) in Monterey Bay	Pelagic	Whales & Dolphins
Maldini <i>et al.</i>	2012	Patterns of sea otter haul-out behavior in a California tidal estuary in relation to environmental variables	Estuaries	Otters
Manley & Lowe	2012	Canopy-forming kelps as California's coastal dosimeter: From damaged Japanese reactor measured in <i>Macrocystis pyrifera</i>	Kelp & Shallow Reef	Macroalgae
Manuwal	1974	Effects of territoriality on breeding in a population of Cassin's auklet	Rocky Shores	Birds
Manuwal	1974	Natural history of Cassin's auklet ( <i>Ptychoramphus aleuticus</i> )	Rocky Shores	Birds
Manuwal	1979	Reproductive commitment and success of Cassin's auklet <i>Ptychoramphus aleuticus</i>	Rocky Shores	Birds
Marinovic <i>et al.</i>	2002	Effects of the 1997-1999 El Niño and La Niña events of the zooplankton abundance and euphausiid community composition within the Monterey Bay coastal upwelling system	Pelagic	Zooplankton
Markham	2008	New records of <i>Pseudionine</i> Bopyrid Isopods, including two new species and one new genus, infesting Porcellanid Crabs (Decapoda: Anomura) on the Pacific coast of North and Central America	Rocky Shores	Invertebrates
Marraffini <i>et al.</i>	2015	Species richness and interacting factors control invasibility of a marine community	Deep Seafloor & Canyons	Invertebrates
Martin	1963	Toxicity of dialyzed extracts of some California anemones (Coelenterata)	Rocky Shores	Invertebrates

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Martin	1985	State mussel watch: Toxics surveillance in California	Rocky Shores	Invertebrates
Martin & Cailliet	1988	Age and growth determination of the bat ray, <i>Myliobatis californica</i> gill, in central California	Estuaries	Cartilaginous Fishes
Martin & Castle	1984	Petrowatch: Petroleum hydrocarbons, synthetic organic compounds, and heavy metals in mussels from the Monterey Bay area of central California	Rocky Shores	Invertebrates
Martin & Orange	1997	Chemical and isotopic evidence of gas-influenced flow at a transform plate boundary, Monterey Bay, California	Deep Seafloor & Canyons	Invertebrates
Martin <i>et al.</i>	2004	Relationships between the stable isotopic signatures of living and fossil foraminifera in Monterey Bay, California	Deep Seafloor & Canyons	Phytoplankton
Martone	2006	Size, strength and allometry of joints in the articulated coralline <i>Calliarthron</i>	Rocky Shores	Macroalgae
Martone	2007	Kelp versus coralline: Cellular basis for mechanical strength in the wave-swept seaweed <i>Calliarthron</i> (Corallinaceae, Rhodophyta)	Rocky Shores	Macroalgae
Martone & Wasson	2008	Impacts and interactions of multiple human perturbations in a California salt marsh	Estuaries	NA
Maruya <i>et al.</i>	2013	Refocusing mussel watch on contaminants of emerging concern (CECs): The California pilot study (2009–10)	Rocky Shores	Invertebrates
Mason	1995	Species trends in sport fisheries, Monterey Bay, California, 1959–86	Kelp & Shallow Reef Sandy Seafloor	Bony Fish
Mason	1996	Declining rockfish lengths in the Monterey Bay, California, recreational fishery, 1959 – 94	Pelagic	Bony Fish
Matsui <i>et al.</i>	1990	Biology and potential use of Pacific grenadier, <i>Coryphaenoides acrolepis</i> , off California	Pelagic	Bony Fish
Matsumoto & Robison	1991	<i>Kiyohimea usagi</i> , a new species of lobate ctenophore from the Monterey Submarine Canyon	Deep Seafloor & Canyons	Invertebrates
Matsumoto <i>et al.</i>	1997	Observations of the deep-sea trachymedusa <i>Benthocodon pedunculata</i>	Deep Seafloor & Canyons	Invertebrates

Author(s)	Date	Title	Habitat Categories	Organism Categories
Mattison <i>et al.</i>	1977	Movement and feeding activity of red sea urchins <i>Strongylocentrotus franciscanus</i> adjacent to a kelp forest	Kelp & Shallow Reef	Invertebrates
Maxwell <i>et al.</i>	2013	Cumulative human impacts on marine predators	Pelagic	Reptiles
Mayer <i>et al.</i>	2003	Helminth parasites of the Southern sea otter <i>Enhydra lutris nereis</i> in central California: Abundance, distribution and pathology	Deep Seafloor & Canyons	Otters
Mazzillo <i>et al.</i>	2010	Angler exposure to domoic acid via consumption of contaminated fishes	Pelagic	Bony Fish Invertebrates Phytoplankton
Mazzillo <i>et al.</i>	2011	Parasitism as a biological control agent of dinoflagellate blooms in the California Current System	Deep Seafloor & Canyons Pelagic	Phytoplankton
Mazzillo <i>et al.</i>	2013	A new pathogen transmission mechanism in the ocean: the case of sea otter exposure to the land-parasite <i>Toxoplasma gondii</i>	Kelp & Shallow Reef	Invertebrates Microbial Otters
McChesney <i>et al.</i>	2000	Nesting of ashy storm-petrels and Cassin's auklets in Monterey County, California	Rocky Shores	Birds
McClain	2007	Seamounts: Identity crisis or split personality?	Deep Seafloor & Canyons	NA
McClain & Barry	2010	Habitat heterogeneity, disturbance, and productivity work in concert to regulate biodiversity in deep submarine canyons	Deep Seafloor & Canyons	Invertebrates
McClain & Barry	2014	Beta-diversity on deep-sea wood falls reflects gradients in energy availability	Deep Seafloor & Canyons	Invertebrates
McClain <i>et al.</i>	2009	Endemicity, biogeography, composition, and community structure on a northeast Pacific seamount	Seamounts & Ridges	Invertebrates
McClain <i>et al.</i>	2010	Assemblage structure, but not diversity or density, change with depth on a northeast Pacific seamount	Seamounts & Ridges	NA
McClatchie <i>et al.</i>	2016	Correction to 'Food limitation of sea lion pups and the decline of forage off central and southern California'	Rocky Shores	Seals & Sea Lions

Author(s)	Date	Title	Habitat Categories	Organism Categories
McClatchie <i>et al.</i>	2016	Food limitation of sea lion pups and the decline of forage off central and southern California	Rocky Shores	Seals & Sea Lions
McCosker <i>et al.</i>	2006	White Shark attacks upon humans in California and Oregon, 1993-2003	Pelagic	Cartilaginous Fishes
McDonald	1969	Quantitative studies of salt marsh mollusc faunas from the North American Pacific coast	Estuaries	Invertebrates
McDonald <i>et al.</i>	1988	The mussels <i>Mytilus galloprovincialis</i> and <i>Mytilus trossulus</i> on the Pacific coast of North America	Rocky Shores	Invertebrates
McDonald <i>et al.</i>	1991	Allozymes and morphometric characters of three species of <i>Mytilus</i> in the northern and southern hemispheres	Rocky Shores	Invertebrates
McGann <i>et al.</i>	2002	Historical and modern distributions of benthic foraminifers on the continental shelf of Monterey Bay, California	Deep Seafloor & Canyons	Invertebrates
McGinty	1969	<i>Batillipes gilmartini</i> , a new marine tardigrade from a California beach	Beaches	Invertebrates
McGowan <i>et al.</i>	1998	Climate-ocean variability and ecosystem response in the northeast Pacific	Deep Seafloor & Canyons	Bony Fish Macroalgae Phytoplankton Zooplankton
McHatton <i>et al.</i>	1996	High nitrate concentrations in vacuolate, autotrophic marine <i>Beggiatoa</i> spp.	Deep Seafloor & Canyons	Microbial
McHugh <i>et al.</i>	1992	Contemporary sedimentary processes in the Monterey Canyon - fan system	Deep Seafloor & Canyons	NA
McHugh <i>et al.</i>	1998	The influence of the San Gregorio fault on the morphology of Monterey Canyon	Deep Seafloor & Canyons	NA
McHugh <i>et al.</i>	2000	Sedimentary features associated with channel overbank flow: Examples from the Monterey Fan	Deep Seafloor & Canyons	NA
McHuron <i>et al.</i>	2014	Selenium and mercury concentrations in harbor seals ( <i>Phoca vitulina</i> ) from central California: Health implications in an urbanized estuary	Deep Seafloor & Canyons	Seals & Sea Lions
McHuron <i>et al.</i>	2015	Effects of age, colony, and sex on mercury concentrations in California sea lions	Rocky Shores	Seals & Sea Lions

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McLaughlin <i>et al.</i>	2006	The oxygen isotopic composition of phosphate in Elkhorn Slough, California: A tracer for phosphate sources	Estuaries	NA
McLean	1962	Sublittoral ecology of kelp beds of the open coast area near Carmel, California	Kelp & Shallow Reef	Invertebrates Macroalgae
McLean	1992	Cocculiniform limpets (Cocculinidae and Pyropeltidae) living on whale bone in the deep sea off California	Deep Seafloor & Canyons	Invertebrates
McManus <i>et al.</i>	2008	Cryptic Blooms: Are Thin Layers the Missing Connection?	Estuaries	Invertebrates Microbial
McShane <i>et al.</i>	1995	Vocal repertoire, structure and individual variation in the sea otter	Pelagic	Otters
Melwani <i>et al.</i>	2014	Mussel Watch update: Long-term trends in selected contaminants from coastal California, 1977–2010	Rocky Shores	Invertebrates
Menzel <i>et al.</i>	2013	Linking human activity and ecosystem condition to inform marine ecosystem based management	Kelp & Shallow Reef	Bony Fish Invertebrates Macroalgae
Mesnick <i>et al.</i>	1991	Sexual behavior of male northern elephant seals: II. Female response to potentially injurious encounters	Beaches	Seals & Sea Lions
Micheli <i>et al.</i>	2008	Persistence of depleted abalones in marine reserves of central California	Rocky Shores	Invertebrates
Micheli <i>et al.</i>	2016	Combined impacts of natural and human disturbances on rocky shore communities	Rocky Shores	NA
Michelou <i>et al.</i>	2013	The ecology of microbial communities associated with <i>Macrocystis pyrifera</i>	Kelp & Shallow Reef	Macroalgae
Miller	2007	Feeding in extreme flows: Behavior compensates for mechanical constraints in barnacle cirri	Rocky Shores	Invertebrates
Miller <i>et al.</i>	2002	Coastal freshwater runoff is a risk factor for <i>Toxoplasma gondii</i> infection of Southern sea otters ( <i>Enhydra lutris nereis</i> )	Beaches Estuaries Kelp & Shallow Reef	Otters

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Miller <i>et al.</i>	2007	Dislodged but not dead: Survivorship of a high intertidal snail following wave dislodgement	Rocky Shores	Invertebrates
Miller <i>et al.</i>	2008	Transplacental toxoplasmosis in a wild Southern sea otter ( <i>Enhydra lutris nereis</i> )	Beaches	Otters
Miller <i>et al.</i>	2008	Type X <i>Toxoplasma gondii</i> in a wild mussel and terrestrial carnivores from coastal California: New linkages between terrestrial mammals, runoff and toxoplasmosis of sea otters	Beaches	Otters
Miller <i>et al.</i>	2009	First report of the Japanese species <i>Gratelouphia lanceolata</i> (Halymeniaceae, Rhodophyta) from California, USA	Deep Seafloor & Canyons	Macroalgae
Miller <i>et al.</i>	2010	Evidence for a novel marine harmful algal bloom: Cyanotoxin (microcystin) transfer from land to sea otters	Deep Seafloor & Canyons	Microbial Otters
Mincer <i>et al.</i>	2007	Quantitative distribution of presumptive archaeal and bacterial nitrifiers in Monterey Bay and the north Pacific subtropical gyre	Pelagic	Microbial
Miner <i>et al.</i>	2006	Recruitment failure and shifts in community structure following mass mortality limit recovery prospects of black abalone	Rocky Shores	Invertebrates
Mitchell	1962	A walrus and a sea lion from the Pliocene purisima formation at Santa Cruz, California, with remarks on the type locality and geologic age of the sea lion <i>Dusignathus Santacruzensis</i> Kellogg	Beaches	Otters Seals & Sea Lions
Mitchell & Huthnance	2007	Comparing the smooth, parabolic shapes of interfluves in continental slopes to predictions of diffusion transport models	Deep Seafloor & Canyons	NA
Modini <i>et al.</i>	2015	Primary marine aerosol-cloud interactions off the coast of California	NA	NA
Monaco <i>et al.</i>	1992	Assemblages of U.S. west coast estuaries based on the distribution of fishes	Estuaries	Bony Fish Cartilaginous Fishes
Moore <i>et al.</i>	1999	Coastal erosion hazards in Santa Cruz and San Diego Counties, California	Beaches	NA
Moore <i>et al.</i>	2002	Long-term cliff retreat and erosion hotspots along the central shores of the Monterey Bay National Marine Sanctuary	Beaches	NA

Author(s)	Date	Title	Habitat Categories	Organism Categories
Moore <i>et al.</i>	2009	Entanglements of marine mammals and seabirds in central California and the north-west coast of the United States 2001–2005	Beaches	Birds Whales & Dolphins Seals & Sea Lions
Moore <i>et al.</i>	2011	Bayesian state-space model of fin whale abundance trends from a 1991–2008 time series of line-transect surveys in the California Current	Pelagic	Whales & Dolphins
Morejohn & Briggs	1973	Post-mortem studies of northern elephant seal pups	Beaches	Seals & Sea Lions
Morelissen & Harley	2007	The effects of temperature on producers, consumers, and plant-herbivore interactions in an intertidal community	Rocky Shores	Invertebrates Macroalgae Phytoplankton
Morgan <i>et al.</i>	2005	Conservation and management implications of deep-sea coral and fishing effort distributions in the northeast Pacific Ocean	Deep Seafloor & Canyons	Invertebrates
Moore & Shumway	1959	Sediment thickness and physical properties: Pigeon Point Shelf, California	Deep Seafloor & Canyons	NA
Moser & Hsieh	1992	Biological tags for stock separation in Pacific Herring <i>Clupea harengus pallasi</i> in California	Pelagic	Bony Fish
Moser & Rhinehart	1993	The lungworm, <i>Halocercus spp.</i> (Nematoda: Pseudaliidae) in cetaceans from California	Pelagic	Whales & Dolphins Invertebrates
Moser & Sakanari	1986	Experimental infection of blue rockfish ( <i>Sebastes mystinus</i> ) with larval anisakid nematodes	Pelagic	Bony Fish Invertebrates
Mullins	1981	Franciscan-type rocks off Monterey Bay, California: Implications for western boundary of Salinian Block	Deep Seafloor & Canyons	NA
Mullins & Rasch	1985	Sea-floor phosphorites along the central California continental margin	Deep Seafloor & Canyons	NA
Mullins <i>et al.</i>	1985	Tectonic and eustatic controls of late quaternary shelf sedimentation along the central California (Santa Cruz) continental margin: High-resolution seismic stratigraphic evidence	Deep Seafloor & Canyons	NA

Author(s)	Date	Title	Habitat Categories	Organism Categories
Mullins <i>et al.</i>	1985	Oxygen-minimum zone edge effects: Evidence from the central California coastal upwelling system	Deep Seafloor & Canyons	Invertebrates
Murata <i>et al.</i>	2008	Contamination status and accumulation profiles of organotins in sea otters ( <i>Enhydra lutris</i> ) found dead along the coasts of California, Washington, Alaska (USA), and Kamchatka (Russia)	Deep Seafloor & Canyons	Otters
Murphy	1978	<i>Collisella austrodigitalis</i> sp. nov.: a sibling species of limpet (Acmaeidae) discovered by electrophoresis	Rocky Shores	Invertebrates
Murray & Horn	1989	Variations in standing stocks of central California macrophytes from a rocky intertidal habitat before and during the 1982-1983 El Niño	Rocky Shores	Seagrasses & Marsh Plants
Murray & Horn	1989	Seasonal dynamics of macrophyte populations from an eastern north Pacific rocky-intertidal habitat	Rocky Shores	Seagrasses & Marsh Plants
Muth	2012	Effects of zoospore aggregation and substrate rugosity on kelp recruitment success	Kelp & Shallow Reef	Macroalgae
Naehr <i>et al.</i>	2000	Mass wasting, ephemeral fluid flow, and barite deposition on the California continental margin	Deep Seafloor & Canyons	Invertebrates
Nagel <i>et al.</i>	1986	Ascension submarine canyon, California-Evolution of a multi-headed canyon system along a strike-slip continental margin	Deep Seafloor & Canyons	NA
Narum <i>et al.</i>	2004	Genetic divergence between gopher rockfish ( <i>Sebastodes carnatus</i> ) and black and yellow rockfish ( <i>Sebastodes chrysomelas</i> )	NA	Bony Fish
Neighbors & Horn	1991	Nutritional quality of macrophytes eaten and not eaten by two temperate- zone herbivorous fishes: A multivariate comparison	Rocky Shores	Seagrasses & Marsh Plants
Nelson	2001	Behavioral ecology of young-of-the-year kelp rockfish, <i>Sebastodes atrovirens</i> Jordan and Gilbert (Pisces: Scorpaenidae)	Kelp & Shallow Reef	Bony Fish
Nelson & Zavaleta	2012	Salt marsh as a coastal filter for the oceans: Changes in function with experimental increases in nitrogen loading and sea-level rise	Estuaries	NA
Neuman <i>et al.</i>	2008	Shorebird use of sandy beaches in central California	Beaches	Birds

Author(s)	Date	Title	Habitat Categories	Organism Categories
Neuman <i>et al.</i>	2010	Overall status and threats assessment of black abalone ( <i>Haliotis cracherodii</i> Leach, 1814) populations in California	Rocky Shores	Invertebrates
Nevins & Carter	2003	Age and sex of common murres <i>Uria aalge</i> recovered during the 1997-98 Point Reyes tarball incidents in central California	Deep Seafloor & Canyons	Birds
Newby	1932	The early embryology of the echiuroid	Estuaries	Invertebrates
Newsome <i>et al.</i>	2009	Using stable isotopes to investigate individual diet specialization in California sea otters ( <i>Enhydra lutris nereis</i> )	Kelp & Shallow Reef Rocky Shores	Invertebrates
Newsome <i>et al.</i>	2015	The interaction of intraspecific competition and habitat on individual diet specialization: a near range-wide examination of sea otters	Rocky Shores	Invertebrates Otters
Newton <i>et al.</i>	2009	At-sea mortality of seabirds based on beachcast and offshore surveys	Pelagic	Birds
Nicholson	1970	Field studies on the giant kelp <i>Nereocystis</i>	Kelp & Shallow Reef	Macroalgae
Nielsen <i>et al.</i>	2008	Sustainable energy from deep ocean cold seeps	Deep Seafloor & Canyons	NA
Noble & Noble	1937	<i>Accacladium nematulum</i> n. sp., a trematode from the sunfish mola mola	Pelagic	Bony Fish Invertebrates
Normark	1970	Channel piracy on Monterey deep-sea fans	Deep Seafloor & Canyons	NA
Normark	1999	Late Pleistocene channel-levee development on Monterey Submarine Fan, central California	Deep Seafloor & Canyons	NA
Normark <i>et al.</i>	1980	Sediment waves on the Monterey Fan levee: A preliminary physical interpretation	Deep Seafloor & Canyons	NA
Normark <i>et al.</i>	1984	Monterey Fan: growth pattern control by basin morphology and changing sea levels	Deep Seafloor & Canyons	NA
Novak & Tinker	2015	Timescales alter the inferred strength and temporal consistency of intraspecific diet specialization	Rocky Shores	Otters

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Nur <i>et al.</i>	2011	Where the wild things are: Predicting hotspots of seabird aggregations in the California Current System	Pelagic	Birds
Nybakken	1978	Abundance, diversity and temporal variability in a California intertidal nudibranch assemblage	Rocky Shores	Invertebrates
Nybakken <i>et al.</i>	1988	Distribution density and relative abundance of benthic invertebrate megafauna from three sites at the base of the continental slope off central California as determined by camera sled and beam trawl	Deep Seafloor & Canyons	Invertebrates
Oaken	1984	Feeding and substrate preference in five species of Phoxocephalid amphipods from central California	Deep Seafloor & Canyons	Invertebrates
Oaken <i>et al.</i>	1984	Behavioral responses of a Phoxocephalid amphipod to organic enrichment and trace metals in sediment	Deep Seafloor & Canyons	Invertebrates
Oaken <i>et al.</i>	1984	EDTA chelation and zinc antagonism with cadmium in sediment: Effects on the behavior and mortality of two infaunal amphipods	Deep Seafloor & Canyons	Invertebrates
Oates <i>et al.</i>	2012	Epidemiology and potential land-sea transfer of enteric bacteria from terrestrial to marine species in the Monterey Bay region of California	Deep Seafloor & Canyons	Otters
O'Connor & Ehler	1991	Results from the NOAA national status and trends program on distribution and effects of chemical contamination in the coastal and estuarine United States	Estuaries Pelagic	NA
Odaka <i>et al.</i>	1988	Bone softening, a practical way to utilize small fish	Pelagic	Bony Fish
O'Donnell	2008	Reduction of wave forces within bare patches in mussel beds	Rocky Shores	Invertebrates
O'Donnell & Denny	2008	Hydrodynamic forces and surface topography: Centimeter-scale spatial variation in wave forces	Rocky Shores	NA
O'Halloran <i>et al.</i>	2006	<i>Heterosigma akashiwo</i> in central California waters	Deep Seafloor & Canyons Pelagic	Phytoplankton
Ohlendorf	1988	Organochlorines and mercury in eggs of coastal terns and herons in California, USA	Estuaries	Birds

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Ohman	1988	Sources of variability in measurements of copepod lipids and gut fluorescence in the California Current coastal zone	Pelagic	Invertebrates
Okey	1997	Sediment flushing observations, earthquake slumping, and benthic community changes in Monterey Canyon head	Deep Seafloor & Canyons	Invertebrates
Okey	2003	Macrobenthic colonist guilds and renegades in Monterey Canyon (USA) drift algae: Partitioning multidimensions	Deep Seafloor & Canyons	Invertebrates Macroalgae
Oliver <i>et al.</i>	1980	Relationships between wave disturbance and zonation of benthic invertebrate communities along a subtidal high-energy beach in Monterey Bay, California	Deep Seafloor & Canyons	Invertebrates
Oliver <i>et al.</i>	1982	Phoxocephalid amphipod crustaceans as predators on larvae and juveniles in marine soft-bottom communities	Deep Seafloor & Canyons	Invertebrates
Oliver <i>et al.</i>	2011	High species density patterns in macrofaunal invertebrate communities in the marine benthos	Deep Seafloor & Canyons	Invertebrates
Olivieri & Chavez	2000	A model of plankton dynamics for the coastal upwelling system of Monterey Bay, California	Deep Seafloor & Canyons	Microbial Phytoplankton Zooplankton
Orsi <i>et al.</i>	2015	Ecophysiology of uncultivated marine euryarchaea is linked to particulate organic matter	Pelagic	Microbial
Ortiz <i>et al.</i>	1978	Water and energy flux in elephant seal pups fasting under natural conditions	Rocky Shores	Seals & Sea Lions
Ortiz <i>et al.</i>	1984	Milk intake of elephant seal pups: An index of parental investment	Rocky Shores	Seals & Sea Lions
Osborn <i>et al.</i>	2007	The habitat of mesopelagic scyphomedusae in Monterey Bay, California	Deep Seafloor & Canyons	Invertebrates
Ostarecko	1973	Natural history of the hydrocoral <i>Allopora californica</i> Verrill (1866)	Rocky Shores	Invertebrates
Osterback <i>et al.</i>	2015	Long-term shifts in anthropogenic subsidies to gulls and implications for an imperiled fish	Rocky Shores	Birds
Osterback <i>et al.</i>	2013	High predation on small populations: Avian predation on imperiled salmonids	NA	Birds Bony Fish

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Paddack & Estes	2000	Kelp forest fish populations in marine reserves and adjacent exploited areas of central California	Kelp & Shallow Reef	Bony Fish
Paduan <i>et al.</i>	2007	Erratic continental rocks on volcanic seamounts off the U.S. west coast	Seamounts & Ridges	NA
Pane & Barry	2007	Extracellular acid-base regulation during short-term hypercapnia is effective in a shallow-water crab, but ineffective in a deep-sea crab	Deep Seafloor & Canyons	Invertebrates
Parker <i>et al.</i>	2007	Assessment of social attraction techniques used to restore a common murre colony in central California	Rocky Shores	Birds
Parrish <i>et al.</i>	2007	Beached birds and physical forcing in the California Current System	Beaches	Birds
Paull <i>et al.</i>	2002	Pesticides as tracers of sediment transport through Monterey Canyon	Deep Seafloor & Canyons	NA
Paull <i>et al.</i>	2002	Pockmarks off Big Sur, California	NA	NA
Paull <i>et al.</i>	2002	Caught in the act: The 20 December 2001 gravity flow event in Monterey Canyon	Deep Seafloor & Canyons	NA
Paull <i>et al.</i>	2005	Trail of sand in upper Monterey Canyon: Offshore California	Deep Seafloor & Canyons	NA
Paull <i>et al.</i>	2005	Distribution of chemosynthetic biological communities in Monterey Bay, California	Deep Seafloor & Canyons	Invertebrates
Paull <i>et al.</i>	2005	Bioerosion by chemosynthetic biological communities on Holocene submarine slide scars	Deep Seafloor & Canyons	NA
Paull <i>et al.</i>	2006	Discordant 14C-stratigraphies in upper Monterey Canyon: A signal of anthropogenic disturbance	Pelagic	NA
Paull <i>et al.</i>	2010	Origins of large crescent-shaped bedforms within the axial channel of Monterey Canyon, offshore California	Deep Seafloor & Canyons	Invertebrates
Paull <i>et al.</i>	2010	Submarine mass transport within Monterey Canyon: Benthic disturbance controls on the distribution of chemosynthetic biological communities	Deep Seafloor & Canyons	NA
Payne & Jameson	1984	Early behavioral development of the sea otter, <i>Enhydra lutris</i>	Beaches Estuaries Kelp & Shallow Reef	Otters

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Pearse & Hines	1979	Expansion of central California kelp forest following the mass mortality of sea urchins	Kelp & Shallow Reef	Invertebrates Macroalgae
Pearse & Hines	1987	Long-term population dynamics of sea urchins in a central California kelp forest: Rare recruitment and rapid decline	Kelp & Shallow Reef	Invertebrates Macroalgae
Pearse <i>et al.</i>	2015	Long-term monitoring of surfgrass meadows in the Monterey Bay National Marine Sanctuary: Recovery followed by stability after the termination of a domestic sewage discharge	Rocky Shores	Seagrasses & Marsh Plants
Pennington <i>et al.</i>	2015	Seawater sampling by an autonomous underwater vehicle: “Gulper” sample validation for nitrate, chlorophyll, phytoplankton, and primary production	Pelagic	Phytoplankton
Perez-Brazen <i>et al.</i>	2014	Reproduction of the sandpaper skate, <i>Bathyraja kincaidii</i> (Garman 1908) in the eastern North Pacific	Deep Seafloor & Canyons	Cartilaginous Fishes
Perryman <i>et al.</i>	2002	Gray whale calf production 1994-2000: Are observed fluctuations related to changes in seasonal ice cover?	Deep Seafloor & Canyons	Whales & Dolphins Invertebrates
Peterson <i>et al.</i>	2015	Origins of quaternary coastal dune sheets in San Francisco and Monterey Bay, central California Coast, U.S.A.: Reflecting contrasts in shelf depocenters and coastal neotectonics	Sandy Seafloor	NA
Petruncio <i>et al.</i>	1998	Observations of the internal tide in Monterey Canyon	Deep Seafloor & Canyons	NA
Phillips	1976	The effect of a species specific avoidance response to predatory starfish on the intertidal distribution of two gastropods	Rocky Shores	Invertebrates
Pilskaln <i>et al.</i>	1998	Spatial and temporal dynamics in marine aggregate abundance, sinking rate and flux: Monterey Bay, central California	Deep Seafloor & Canyons	NA
Plant <i>et al.</i>	2010	Tidally oscillating bisulfide fluxes and fluid flow rates observed with <i>in situ</i> chemical sensors at a warm spring in Monterey Bay, California	Deep Seafloor & Canyons	NA

Author(s)	Date	Title	Habitat Categories	Organism Categories
Port <i>et al.</i>	2016	Assessing vertebrate biodiversity in a kelp forest ecosystem using environmental DNA	Kelp & Shallow Reef Pelagic Sandy Seafloor	Birds Bony Fish Whales & Dolphins Macroalgae Otters Seals & Sea Lions Seagrasses & Marsh Plants
Pratson & Ryan	1996	Automated drainage extraction in mapping the Monterey submarine drainage system, California margin	Deep Seafloor & Canyons	NA
Preston <i>et al.</i>	2011	Underwater application of quantitative PCR on an ocean mooring	Deep Seafloor & Canyons	Microbial
Pyle <i>et al.</i>	1999	Organochlorine concentrations, eggshell thickness, and hatchability in seabirds off central California	Rocky Shores	Birds
Quan <i>et al.</i>	2013	Using vessel-based LIDAR to quantify coastal erosion during El Niño and inter-El Niño periods in Monterey Bay, California	Beaches	NA
Raimondi <i>et al.</i>	2015	Evaluating potential conservation conflicts between two listed species: Sea otters and black abalone	Rocky Shores	Invertebrates Otters
Ramp <i>et al.</i>	2005	Observations of upwelling and relaxation events in the northern Monterey Bay during August 2000	Deep Seafloor & Canyons Pelagic	NA
Ramp <i>et al.</i>	2006	Oceanographic and atmospheric conditions on the continental shelf north of the Monterey Bay during August 2006	Deep Seafloor & Canyons Pelagic	NA
Raskoff	2002	Foraging, prey capture, and gut contents of the mesopelagic narcomedusa <i>Solmissus spp.</i> (Cnidaria: Hydrozoa)	Pelagic	Invertebrates
Rau <i>et al.</i>	2003	Linking nitrogen dynamics to climate variability off central California: A 51 year record based on 15N/14N in CalCOFI zooplankton	Deep Seafloor & Canyons	Zooplankton
Reed & Foster	1984	The effects of canopy shading on algal recruitment and growth in a giant kelp forest	Kelp & Shallow Reef	Macroalgae

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Reed <i>et al.</i>	2011	Wave disturbance overwhelms top-down and bottom-up control of primary production in California kelp forests	Kelp & Shallow Reef	Macroalgae
Reid & Schwartzlose	1962	Direct measurements of the Davidson Current off central California.	Pelagic	NA
Reilly & Thompson	2007	Temperature effects on low-light vision in juvenile rockfish (genus <i>Sebastodes</i> ) and consequences for habitat utilization	Kelp & Shallow Reef	Bony Fish
Reilly <i>et al.</i>	1983	Population assessment of the gray whale, <i>Eschrichtius robustus</i> , from California shore censuses, 1967-1980	Pelagic	Whales & Dolphins
Rein	1999	An economic analysis of vegetative buffer strip implementation case study: Elkhorn Slough, Monterey Bay, California	Estuaries	NA
Reniers <i>et al.</i>	2010	Rip current pulses tied to Lagrangian coherent structures	Beaches	NA
Reshkin & Knauer	1977	Light stimulation of phosphate uptake in natural assemblages of phytoplankton	Pelagic	Phytoplankton
Reynolds <i>et al.</i>	2015	Late Quaternary relative sea level in Southern California and Monterey Bay	Beaches Estuaries	NA
Ribic	1982	Autumn movement and home range of sea otters in California	Deep Seafloor & Canyons Rocky Shores	Otters
Rice <i>et al.</i>	1993	Seasonal and annual distribution of organic contaminants in marine sediments from Elkhorn Slough, Moss Landing Harbor and nearshore Monterey Bay, California	Estuaries	NA
Rice <i>et al.</i>	1994	Mixed-function oxidase-specific activity in wild and caged speckled sanddabs <i>Citharichthys stigmaeus</i> in Elkhorn Slough, Moss Landing Harbor and nearshore Monterey Bay, California	Estuaries	Bony Fish
Riedman & Le Boeuf	1982	Mother-pup separation and adoption in northern elephant seals	Rocky Shores	Seals & Sea Lions
Riedman <i>et al.</i>	1981	Spatial segregation of four species of turban snails (Gastropoda: <i>Tegula</i> ) in central California.	Deep Seafloor & Canyons Rocky Shores	Invertebrates

Author(s)	Date	Title	Habitat Categories	Organism Categories
Riedman & Estes	1988	Predation on seabirds by sea otters	Deep Seafloor & Canyons	Otters
Riegel	1959	A revision of the sphaeromid genus <i>Gnorimosphaeroma menzies</i> (Crustacea, Isopoda) on the basis of morphological, physiological and ecological studies of two of its "subspecies"	NA	Invertebrates
Riggin <i>et al.</i>	2010	Photographic case studies of skin conditions in wild-ranging bottlenose dolphin ( <i>Tursiops truncatus</i> ) calves	Pelagic	Whales & Dolphins
Rinewalt <i>et al.</i>	2007	Food habits of the Sandpaper skate, <i>Bathyraja kincaidii</i> (Garman, 1908) off central California: Seasonal variation in diet linked to oceanographic conditions	Deep Seafloor & Canyons	Cartilaginous Fishes
Rinkevich <i>et al.</i>	1992	Allogeneic responses between three remote populations of the cosmopolitan ascidian <i>Botryllus schlosseri</i>	NA	Invertebrates
Riser	1956	Observations on the plerocercoid larva of <i>Pelichnibothrium speciosum</i> Monticelli 1889	Deep Seafloor & Canyons	Invertebrates
Ristau	1978	Six new species of shallow-water marine demosponges from California	Deep Seafloor & Canyons	Invertebrates
Ritter	2008	Habitat variation influences movement rates and population structure of an intertidal fish	Rocky Shores	Bony Fish
Ritter & Preisler	2006	Spatial variation in structure of an intertidal fish assemblage reflects daily settlement patterns	Rocky Shores	Bony Fish
Ritter <i>et al.</i>	2008	Ecological signatures of anthropogenically altered tidal exchange in estuarine ecosystems	Estuaries	Birds Bony Fish Cartilaginous Fishes Invertebrates Macroalgae Otters Seals & Sea Lions
Robinson	1961	The use of a common reference period for evaluating climatic coherence in temperature and salinity records from Alaska to California	Deep Seafloor & Canyons	NA

Author(s)	Date	Title	Habitat Categories	Organism Categories
Robinson <i>et al.</i>	2007	Food habits of the longnose skate, <i>Raja rhina</i> (Jordan and Gilbert, 1880), in central California waters	Deep Seafloor & Canyons Sandy Seafloor	Cartilaginous Fishes
Robinson <i>et al.</i>	2012	Foraging behavior and success of a mesopelagic predator in the northeast Pacific ocean: Insights from a data-rich species, the northern elephant seal	Pelagic	Seals & Sea Lions
Robison & Reisenbichler	2008	<i>Macropinna microstoma</i> and the paradox of its tubular eyes	Deep Seafloor & Canyons Seamounts & Ridges	Bony Fish
Robison <i>et al.</i>	1998	Seasonal abundance of the siphonophore, <i>Nanomia bijuga</i> , in Monterey Bay	Deep Seafloor & Canyons	Invertebrates
Robison <i>et al.</i>	2005	Ecological substrate in midwater: <i>Doliolula equus</i> , a new mesopelagic tunicate	Pelagic	Invertebrates
Robison <i>et al.</i>	2010	The bathypelagic community of Monterey Canyon	Deep Seafloor & Canyons	Invertebrates
Robison <i>et al.</i>	2014	Deep-Sea Octopus ( <i>Graneledone boreopacifica</i> ) conducts the longest-known egg-brooding period of any animal	Deep Seafloor & Canyons	Invertebrates
Roden	1961	On nonseasonal temperature and salinity variations along the west coast of the United States and Canada	Deep Seafloor & Canyons	NA
Rodriguez-Ramos Fernandez <i>et al.</i>	2012	Osteosarcoma of the maxilla with concurrent osteoma in a southern sea otter ( <i>Enhydra lutris nereis</i> )	Beaches	Otters
Roe	1979	Aspects of development and occurrence of <i>Carcinonemertes epialti</i> (Nemertea) from shore crabs in Monterey Bay, California	NA	Invertebrates
Roe	1993	Aspects of the biology of <i>Pantinonemertes californiensis</i> , a high intertidal nemerteian	Deep Seafloor & Canyons Estuaries Rocky Shores	Invertebrates
Rogers-Bennett <i>et al.</i>	2001	Indirect benefits of marine protected areas for juvenile abalone	Kelp & Shallow Reef	Invertebrates
Rohrbough <i>et al.</i>	1964	Quasi-weekly and daily profile changes on a distinctive sand beach	Beaches	NA

Author(s)	Date	Title	Habitat Categories	Organism Categories
Rojek <i>et al.</i>	2007	Aircraft and vessel disturbances to common murres <i>Uria aalge</i> at breeding colonies in central California, 1997-1999	Rocky Shores	Birds
Roletto <i>et al.</i>	2003	Beached bird surveys and chronic oil pollution in central California	Beaches	Birds
Rose <i>et al.</i>	1991	Sexual behavior of male northern elephant seals: III. The mounting of weaned pups	Beaches Rocky Shores	Seals & Sea Lions
Rosenberger	2016	Variability of the internal tide on the southern Monterey Bay continental shelf and associated bottom boundary layer sediment transport	Deep Seafloor & Canyons Pelagic	NA
Rosenfeld <i>et al.</i>	1994	Bifurcated flow from an upwelling center: A cold water source for Monterey Bay	Deep Seafloor & Canyons Pelagic	NA
Rosevelt <i>et al.</i>	2013	Marine debris in central California: Quantifying type and abundance of beach litter in Monterey Bay, CA	Beaches	NA
Rosman <i>et al.</i>	2007	A field investigation into the effects of a kelp forest ( <i>Macrocystis pyrifera</i> ) on coastal hydrodynamics and transport	Kelp & Shallow Reef	Macroalgae
Ross & Brabb	1983	Petrography and structural relations of granitic basement rocks in the Monterey Bay area, California	Deep Seafloor & Canyons Rocky Shores	NA
Ross <i>et al.</i>	2001	Physiological (antioxidant) responses of estuarine fishes to variability in dissolved oxygen	Estuaries	Bony Fish
Rouse <i>et al.</i>	2004	<i>Osedax</i> : bone-eating marine worms with dwarf males	Deep Seafloor & Canyons	Invertebrates
Rumrill & Cameron	1982	Effects of gamma-aminobutyric acid on the settlement of larvae of the black chiton <i>Katharina tunicata</i>	Rocky Shores	Invertebrates
Russel & Hedgpeth	1990	Host utilization during ontogeny by two pycnogonid species ( <i>Tanystylum duospinum</i> and <i>Ammothaea hilgendorfi</i> ) parasitic on the hydroid <i>Eucopella everta</i> (Coelenterata: Campanulariidae)	Deep Seafloor & Canyons	Invertebrates
Russo	1984	Space partitioning within populations of sea anemones (genus: <i>Anthopleura</i> ) in the California intertidal zone	Rocky Shores	Invertebrates

Author(s)	Date	Title	Habitat Categories	Organism Categories
Ryan & Noble	2002	Sea level response to ENSO along the central California coast: how the 1997-1998 event compares with the historical record	NA	NA
Ryan & Noble	2005	Comparison of shelf currents off central California prior to and during the 1997-1998 El Niño	Deep Seafloor & Canyons	NA
Ryan <i>et al.</i>	2005	Physical-biological coupling in Monterey Bay, California: Topographic influences on phytoplankton ecology	Pelagic	Phytoplankton
Ryan <i>et al.</i>	2008	Phytoplankton thin layers caused by shear in frontal zones of a coastal upwelling system	Deep Seafloor & Canyons	Phytoplankton
Ryan <i>et al.</i>	2008	A coastal ocean extreme bloom incubator	Deep Seafloor & Canyons	Phytoplankton
Ryan <i>et al.</i>	2009	Influences of upwelling and downwelling winds on red tide bloom dynamics in Monterey Bay, California	Deep Seafloor & Canyons	Phytoplankton
Ryan <i>et al.</i>	2010	Interacting physical, chemical and biological forcing of phytoplankton thin-layer variability in Monterey Bay, California	Pelagic	Phytoplankton
Ryan <i>et al.</i>	2014	Application of the hyperspectral imager for the coastal ocean to phytoplankton ecology studies in Monterey Bay, CA, USA	Pelagic	Phytoplankton
Sagarin & Gaines	2002	Geographical abundance distributions of coastal invertebrates: Using one-dimensional ranges to test biogeographic hypotheses	Rocky Shores	Invertebrates
Sagarin & Somero	2006	Complex patterns of expression of heat-shock protein 70 across the southern biogeographical ranges of the intertidal mussel <i>Mytilus californianus</i> and snail <i>Nucella ostrina</i>	Rocky Shores	Invertebrates
Sagarin <i>et al.</i>	1999	Climate-related change in an intertidal community over short and long time scales	Rocky Shores	Invertebrates
Sandegren <i>et al.</i>	1973	Maternal behavior in the California sea otter	Deep Seafloor & Canyons Rocky Shores	Otters
Santora <i>et al.</i>	2011	Spatial organization of krill and seabirds in the central California Current	Pelagic	Birds

Author(s)	Date	Title	Habitat Categories	Organism Categories
Santora <i>et al.</i>	2012	Spatial ecology of krill, micronekton and top predators in the central California Current: Implications for defining ecologically important areas	Pelagic	Birds Bony Fish Whales & Dolphins Invertebrates Seals & Sea Lions
Sassaman	1974	Capacity for development of secondary manubria in <i>Eutonina indicans</i> medusae (Hydrozoa)	NA	Invertebrates
Sassaman & Rees	1978	The life cycle of <i>Corymorphida (=Euphsora) bigelowi</i> (Maas, 1905) and its significance in the systematics of corymorphid hydromedusae	NA	Invertebrates
Satchell & Farrell	1993	Effects of settlement density on spatial arrangement in four intertidal barnacles	Rocky Shores	Invertebrates
Satterthwaite <i>et al.</i>	2013	A comparison of temporal patterns in the ocean spatial distribution of California's Central Valley Chinook salmon runs	Estuaries	Bony Fish
Sayed	1963	The central nervous system of <i>Petrolisthes cinctipes</i> (Randall)	Rocky Shores	Invertebrates
Schew <i>et al.</i>	1994	Growth and breeding biology of Caspian terns ( <i>Sterna caspia</i> ) in two coastal California environments	Estuaries	Birds
Schiel	1985	A short-term demographic study of <i>Cystoseira osmundacea</i> (Fucales: Cystoseiraceae) in central California	Kelp & Shallow Reef	Macroalgae
Schiff <i>et al.</i>	2016	Near-coastal water quality at reference sites following storm events	Deep Seafloor & Canyons	NA
Schivell <i>et al.</i>	1997	Behavioral modes arise from a random process in the nudibranch <i>Melibe</i>	Kelp & Shallow Reef	Invertebrates
Schlining <i>et al.</i>	2013	Debris in the deep: Using a 22-year video annotation database to survey marine litter in Monterey Canyon, central California, USA	Deep Seafloor & Canyons	NA
Schnitzler <i>et al.</i>	2008	Spectral diversity of fluorescent proteins from the Anthozoan <i>Corynactis californica</i>	Rocky Shores	Invertebrates
Scholin <i>et al.</i>	1994	Ribosomal dna sequences discriminate among toxic and non-toxic <i>Pseudonitzschia</i> species	NA	Phytoplankton

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Scholin <i>et al.</i>	2000	Mortality of sea lions along the central California coast linked to a toxic diatom bloom	Rocky Shores	Seals & Sea Lions
Schroeder	1967	Morphogenesis of epitokous setae during normal and induced metamorphosis in the polychaete annelid <i>Nereis grubei</i> (Kinberg)	Kelp & Shallow Reef Sandy Seafloor	Invertebrates
Schroeder	1968	On the life history of <i>Nereis grubei</i> (Kinberg), a polychaete annelid from California	Deep Seafloor & Canyons	Invertebrates
Schultz <i>et al.</i>	2011	Climate-index response profiling indicates larval transport is driving population fluctuations in nudibranch gastropods from the northeast Pacific Ocean	Deep Seafloor & Canyons	Invertebrates
Schwab	1967	Overt responses of <i>Polychoerus carmelensis</i> (Turbellaria, Acoela) to abrupt changes in ambient water temperature	Deep Seafloor & Canyons	Invertebrates
Schwartz <i>et al.</i>	2005	The development of methods for immunophenotypic and lymphocyte function analyzes for assessment of southern sea otter ( <i>Enhydra lutris nereis</i> ) health	Deep Seafloor & Canyons	Otters
Schwing <i>et al.</i>	1991	Mesoscale oceanic response to wind events off central California in spring 1989: CTD surveys and AVHRR imagery	Deep Seafloor & Canyons	NA
Sevadjian <i>et al.</i>	2014	Across-shore variability in plankton layering and abundance associated with physical forcing in Monterey Bay, California	Deep Seafloor & Canyons	Phytoplankton
Sevadjian <i>et al.</i>	2015	Vertical convergence of resuspended sediment and subducted phytoplankton to a persistent detached layer over the southern shelf of Monterey Bay, California.	Deep Seafloor & Canyons	Phytoplankton
Sevigny <i>et al.</i>	2015	The mitochondrial genomes of the nudibranch mollusks, <i>Melibe leonina</i> and <i>Tritonia diomedea</i> , and their impact on gastropod phylogeny	Kelp & Shallow Reef	Invertebrates
Seymour <i>et al.</i>	1980	A sediment trapping experiment at Santa Cruz, CA	Beaches	NA
Shanks & Trent	1979	Marine snow: Microscale nutrient patches	Rocky Shores	Invertebrates
Shanks & Trent	1980	Marine snow: Sinking rates and potential role in vertical flux	Deep Seafloor & Canyons	NA
Shanks <i>et al.</i>	2014	Population structure, northern range limit, and recruitment variation in the intertidal limpet <i>Lottia scabra</i>	Deep Seafloor & Canyons	NA

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Shapiro <i>et al.</i>	2012	Temporal association between land-based runoff events and California sea otter ( <i>Enhydra lutris nereis</i> ) protozoal mortalities	Beaches Estuaries Kelp & Shallow Reef	Otters
Shapiro <i>et al.</i>	2013	Association of zoonotic pathogens with fresh, estuarine, and marine macroaggregates	Estuaries Pelagic	Microbial
Shea & Broenkow	1982	The role of internal tides in the nutrient enrichment of Monterey Bay, California	Deep Seafloor & Canyons	NA
Shepard	1966	Meander in valley crossing a deep-ocean fan	Deep Seafloor & Canyons	NA
Shimek & Monk	1977	Daily activity of sea otter off the Monterey Peninsula, California	Beaches Kelp & Shallow Reef	Otters
Shulman <i>et al.</i>	2002	High resolution modeling and data assimilation in the Monterey Bay area	Pelagic	NA
Shulman <i>et al.</i>	2013	Impact of remote forcing, model resolution and bathymetry on predictions of currents on the shelf	Deep Seafloor & Canyons	NA
Siebert <i>et al.</i>	2011	Differential gene expression in the siphonophore <i>Nanomia bijuga</i> (Cnidaria) assessed with multiple next-generation sequencing workflows	Pelagic	Invertebrates
Siebert <i>et al.</i>	2013	Re-evaluation of characters in Apolemidae (Siphonophora), with description of two new species from Monterey Bay, California	Deep Seafloor & Canyons	Invertebrates
Silguero & Robison	2000	Seasonal abundance and vertical distribution of mesopelagic calycophoran siphonophores in Monterey Bay, CA	Deep Seafloor & Canyons Pelagic	Invertebrates
Silver <i>et al.</i>	1998	Giant aggregates: Importance as microbial centers and agents of material flux in the mesopelagic zone	Pelagic	Invertebrates
Silver <i>et al.</i>	1998	Exploratory observations of marine aggregates at sub-euphotic depths	Deep Seafloor & Canyons	Phytoplankton
Simmons <i>et al.</i>	2007	Linking foraging behaviour of the northern elephant seal with oceanography and bathymetry at mesoscales	Pelagic	Seals & Sea Lions

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Sivasundar & Palumbi	2010	Life history, ecology and the biogeography of strong genetic breaks among 15 species of Pacific rockfish, <i>Sebastodes</i>	Deep Seafloor & Canyons	Bony Fish
Smith & Berry	1986	Recovery of photosynthesis after exposure of intertidal algae to osmotic and temperature stresses: Comparative studies of species with differing distributional limits	Kelp & Shallow Reef Rocky Shores	Macroalgae
Smith <i>et al.</i>	2005	Semiannual patterns of erosion and deposition in upper Monterey Canyon from serial multibeam bathymetry	Estuaries	Microbial
Smith <i>et al.</i>	2007	Twenty-nine months of geomorphic change in Upper Monterey Canyon (2002-2005)	Deep Seafloor & Canyons	NA
Smith <i>et al.</i>	2008	The impacts of human visitation on mussel bed communities along the California coast: Are regulatory Marine Reserves effective in protecting these communities?	NA	NA
Smith <i>et al.</i>	2015	Spatiotemporal relationships between the abundance, distribution, and potential activities of ammonia-oxidizing and denitrifying microorganisms in intertidal sediments	Rocky Shores	Invertebrates
Sorte & Hofmann	2004	Changes in latitudes, changes in aptitudes: <i>Nucella canaliculata</i> (Mollusca: Gastropoda) is more stressed at its range edge	Rocky Shores	Invertebrates
Sotka <i>et al.</i>	2004	Strong genetic clines and geographical variation in gene flow in the rocky intertidal barnacle <i>Balanus glandula</i>	Rocky Shores	Invertebrates
Spalding <i>et al.</i>	2003	Composition, distribution, and abundance of deep-water (>30 m) macroalgae in central California	Deep Seafloor & Canyons	Macroalgae
Stakes <i>et al.</i>	1999	Cold-seeps and authigenic carbonate formation in Monterey Bay, California	Deep Seafloor & Canyons	NA
Starr <i>et al.</i>	2000	Techniques for tagging and tracking deepwater rockfishes	Deep Seafloor & Canyons	Bony Fish
Starr <i>et al.</i>	2002	Movements of bocaccio ( <i>Sebastodes paucispinis</i> ) and greenspotted ( <i>S. chlorostictus</i> ) rockfishes in a Monterey Submarine Canyon: Implications for the design of marine reserves	Deep Seafloor & Canyons	Bony Fish
Starr <i>et al.</i>	2015	Variation in responses of fishes across multiple reserves within a network of marine protected areas in temperate waters	Kelp & Shallow Reef Pelagic	Bony Fish

Author(s)	Date	Title	Habitat Categories	Organism Categories
Stegmann <i>et al.</i>	2006	Integrating enhanced satellite data maps into coastal management	Beaches Rocky Shores	NA
Stein <i>et al.</i>	2006	Snailfishes of the central California coast: Video, photographic and morphological observations	Deep Seafloor & Canyons	Bony Fish
Steinberg	1985	Feeding preferences of <i>Tegula funebralis</i> and chemical defenses of marine brown algae	Rocky Shores	Invertebrates
Steinberg	1988	Effects of quantitative and qualitative variation in phenolic compounds on feeding in three species of marine invertebrate herbivores	Kelp & Shallow Reef Rocky Shores	Invertebrates
Steinberg	1995	Diet of copepods ( <i>Scopalatum vorax</i> ) associated with mesopelagic detritus (giant larvacean houses) in Monterey Bay, California	Deep Seafloor & Canyons	Invertebrates
Steinberg <i>et al.</i>	1994	Midwater zooplankton communities on pelagic detritus (giant larvacean houses) in Monterey Bay, California	Pelagic	Invertebrates Zooplankton
Steinberg <i>et al.</i>	1997	Role of mesopelagic zooplankton in the community metabolism of giant larvacean house detritus in Monterey Bay, California, USA	Pelagic	Invertebrates Zooplankton
Steinberg <i>et al.</i>	1998	Contribution of zooplankton associated with detritus to sediment trap 'swimmer' carbon in Monterey Bay, California, USA	Deep Seafloor & Canyons	Invertebrates Zooplankton
Stenseng <i>et al.</i>	2005	Evolutionary and acclimation-induced variation in the thermal limits of heart function in congeneric marine snails (genus <i>Tegula</i> ): Implications for vertical zonation	Rocky Shores	Invertebrates
Stephenson <i>et al.</i>	1995	Long-term trends in DDT, polychlorinated biphenyls, and chlordane in California mussels	Rocky Shores	Invertebrates
Stewart & Gilly	2005	Piscivorous behavior of a temperate cone snail, <i>Conus californicus</i>	Rocky Shores	Invertebrates
Stewart <i>et al.</i>	2013	Behavioral ecology of jumbo squid ( <i>Dosidicus gigas</i> ) in relation to oxygen minimum zones	Pelagic	Invertebrates
Stewart <i>et al.</i>	2014	Combined climate- and prey-mediated range expansion of Humboldt squid ( <i>Dosidicus gigas</i> ), a large marine predator in the California Current System	Deep Seafloor & Canyons	Invertebrates
Stokstad	2014	Death of the stars	Rocky Shores	Invertebrates

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Storlazzi & Griggs	2000	Influence of El Niño-Southern Oscillation (ENSO) events on the evolution of central California's shoreline	Beaches	NA
Storlazzi & Reid	2010	The influence of El Niño-Southern Oscillation (ENSO) cycles on wave-driven sea-floor sediment mobility along the central California continental margin	Deep Seafloor & Canyons	NA
Storlazzi <i>et al.</i>	2000	Sediment distribution and transport along a rocky, embayed coast: Monterey Peninsula and Carmel Bay, California	Beaches	NA
Storlazzi <i>et al.</i>	2000	Comparative impacts of the 1982-83 and 1997-98 El Niño winters on the central California coast	Deep Seafloor & Canyons	NA
Storlazzi <i>et al.</i>	2002	Flow and sediment suspension events on the inner shelf of central California	Deep Seafloor & Canyons	NA
Storlazzi <i>et al.</i>	2003	Long-term, high-frequency current and temperature measurements along central California: Insights into upwelling/relaxation and internal waves on the inner shelf	Pelagic	NA
Storlazzi <i>et al.</i>	2011	Sediment dynamics and the burial and exhumation of bedrock reefs along an emergent coastline as elucidated by repetitive sonar surveys: Northern Monterey Bay, CA	Sandy Seafloor	NA
Storlazzi <i>et al.</i>	2013	Burial and exhumation of temperate bedrock reefs as elucidated by repetitive high-resolution sea floor sonar surveys: Spatial patterns and impacts to species' richness and diversity	Deep Seafloor & Canyons	NA
Summers & Nybakken	2000	Brittle star distribution patterns and population densities on the continental slope off central California (Echinodermata: Ophiuroidea)	Deep Seafloor & Canyons Sandy Seafloor	Invertebrates
Sundar <i>et al.</i>	2008	Genetic diversity among sea otter isolates of <i>Toxoplasma gondii</i>	Deep Seafloor & Canyons	Otters
Swift <i>et al.</i>	2009	Feeding behavior of the ctenophore <i>Thalassocalyx inconstans</i> : Revision of anatomy of the order Thalassocalycida	Deep Seafloor & Canyons Pelagic	Invertebrates
Sydeman & Jarman	1998	Trace metals in seabirds, steller sea lion, and forage fish and zooplankton from central California	Pelagic	Birds Bony Fish Seals & Sea Lions Zooplankton

<b>Author(s)</b>	<b>Date</b>	<b>Title</b>	<b>Habitat Categories</b>	<b>Organism Categories</b>
Sydeman <i>et al.</i>	1997	Trophic relationships among seabirds in central California: Combined stable isotope and conventional dietary approach	Pelagic Rocky Shores	Seals & Sea Lions
Sydeman <i>et al.</i>	2013	Increasing variance in north Pacific climate relates to unprecedented ecosystem variability off California	Deep Seafloor & Canyons	Birds Bony Fish Invertebrates
Sydeman <i>et al.</i>	2014	Multivariate ocean-climate indicators (MOCI) for the central California Current: Environmental change, 1990–2010	Deep Seafloor & Canyons	Birds Invertebrates Phytoplankton Zooplankton
Szoboszlai <i>et al.</i>	2015	Forage species in predator diets: Synthesis of data from the California Current	Pelagic	Birds Bony Fish Cartilaginous Fishes Whales & Dolphins Seals & Sea Lions
Talent	1973	Albinism in embryo gray smoothhound sharks, <i>Mustelus californicus</i> , from Elkhorn Slough, Monterey Bay, California	Estuaries	Cartilaginous Fishes
Tamburri <i>et al.</i>	2000	A field study of the effects of CO <sub>2</sub> ocean disposal on mobile deep-sea animals	Deep Seafloor & Canyons	Bony Fish
Tarjan <i>et al.</i>	2016	Permissible home range estimation (PHRE) in restricted habitats: A new Algorithm and an evaluation for sea otters	Deep Seafloor & Canyons	Otters
Taylor <i>et al.</i>	2014	Deep-sea faunal communities associated with a lost intermodal shipping container in the Monterey Bay National Marine Sanctuary, CA	Deep Seafloor & Canyons	Bony Fish Invertebrates
Tepolt <i>et al.</i>	2009	European green crabs ( <i>Carcinus maenas</i> ) in the northeastern Pacific: Genetic evidence for high population connectivity and current-mediated expansion from a single introduced source population	Deep Seafloor & Canyons	Invertebrates
Terker <i>et al.</i>	2014	Observations of the internal tide on the California continental margin near Monterey Bay	Deep Seafloor & Canyons	NA

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Thistle <i>et al.</i>	2006	Simulated sequestration of industrial carbon dioxide at a deep-sea site: Effects on species of harpacticoid copepods	Deep Seafloor & Canyons	Zooplankton
Thomas & Strub	2001	Cross-shelf phytoplankton pigment variability in the California Current	Deep Seafloor & Canyons	Phytoplankton
Thomas <i>et al.</i>	2003	Effects of human activity on the foraging behavior of sanderlings <i>Calidris alba</i>	Beaches	Birds
Thompson & Harlett	1968	The effect of waves on the profile of a natural beach	Beaches	NA
Thompson <i>et al.</i>	1985	Alternative biofacies model for dysaerobic communities	Deep Seafloor & Canyons Sandy Seafloor	Invertebrates
Thompson <i>et al.</i>	2010	Population consequences of biomass loss due to commercial collection of the wild seaweed <i>Postelsia palmaeformis</i>	Kelp & Shallow Reef	Macroalgae
Thomsen <i>et al.</i>	1991	Choanoflagellates of the central California waters: Abundance and distribution	Deep Seafloor & Canyons	Zooplankton
Thornber <i>et al.</i>	2004	Population ecology of the invasive kelp <i>Undaria pinnatifida</i> in California: Environmental and biological controls on demography	Deep Seafloor & Canyons	Macroalgae
Thornton <i>et al.</i>	2006	Sand mining impacts on long-term dune erosion in southern Monterey Bay	Beaches	NA
Tillbrook & Karl	1995	Methane sources, distributions and sinks from California coastal waters to the oligotrophic north Pacific gyre	Pelagic	NA
Timmerman <i>et al.</i>	2014	Hidden thin layers of toxic diatoms in a coastal bay	Deep Seafloor & Canyons	Phytoplankton
Tinker	2016	Dramatic increase in sea otter mortality from white sharks in California	Beaches	Otters
Tinker <i>et al.</i>	2008	Food limitation leads to behavioral diversification and dietary specialization in sea otters	Deep Seafloor & Canyons	Otters
Tinker <i>et al.</i>	2012	Structure and mechanism of diet specialisation: Testing models of individual variation in resource use with sea otters	Pelagic	Otters

<b>Author(s)</b>	<b>Date</b>	<b>Title</b>	<b>Habitat Categories</b>	<b>Organism Categories</b>
Tisch <i>et al.</i>	1992	Observations of the geostrophic current and water mass characteristics off Point Sur, California, from May 1988 through November 1989	Deep Seafloor & Canyons	NA
Tomanek	2005	Two-dimensional gel analysis of the heat-shock response in marine snails (genus <i>Tegula</i> ): Interspecific variation in protein expression and acclimation ability	Rocky Shores	Invertebrates
Tomanek & Sanford	2003	Heat-shock protein 70 (Hsp70) as a biochemical stress indicator: An experimental field test in two congeneric intertidal gastropods	Rocky Shores	Invertebrates
Toomey <i>et al.</i>	1993	Multixenobiotic resistance in <i>Urechis caupo</i> embryos: Protection from environmental toxins	Sandy Seafloor	Invertebrates
Torres <i>et al.</i>	2001	Reconstructing the history of fluid flow at cold seep sites from Ba/Ca ratios in Vesicomyid clam shells	Deep Seafloor & Canyons	NA
Trason	1957	Larval structure and development of the oozooid in the ascidian <i>Euherdmania claviformis</i>	Rocky Shores	Invertebrates
Trent <i>et al.</i>	1978	<i>In situ</i> and laboratory measurements on macroscopic aggregates in Monterey Bay, California	Deep Seafloor & Canyons	NA
Tseng & Breaker	2007	Nonhydrostatic simulations of the regional circulation in the Monterey Bay area	Pelagic	NA
Tseng <i>et al.</i>	2005	Regional circulation of the Monterey Bay region: Hydrostatic versus nonhydrostatic modeling	Pelagic	NA
Tseng <i>et al.</i>	2012	Modeling air–land–sea interactions using the integrated regional model system in Monterey Bay, California	Pelagic	NA
Tucker & Giese	1959	Shell repair in chitons	Rocky Shores	Invertebrates
Turpen <i>et al.</i>	1994	Population structure, growth, and fecundity of the kelp mysid <i>Holmesimysis</i>	Kelp & Shallow Reef	Invertebrates
Urmy & Horne	2016	Multi-scale responses of scattering layers to environmental variability in Monterey Bay, California	Pelagic	NA
van de Werfhorst & Pearse	2007	Trampling in the rocky intertidal of central California: A follow-up study	Rocky Shores	Invertebrates

<b>Author(s)</b>	<b>Date</b>	<b>Title</b>	<b>Habitat Categories</b>	<b>Organism Categories</b>
Van Denburgh	1924	A fifth record of the Pacific leather-back turtle on the coast of California	Pelagic	Reptiles
Van Dyke & Wasson	2005	Historical ecology of a central California estuary: 150 years of habitat change	Estuaries	NA
Van Geen & Luoma	1993	Trace metals (Cd, Cu, Ni, and Zn) and nutrients in coastal waters adjacent to San Francisco Bay, California	Deep Seafloor & Canyons	NA
Van Wagenen <i>et al.</i>	1981	Sea otter predation on birds near Monterey, California	Kelp & Shallow Reef	Birds Otters
VanBlaricom & Jameson	1982	Lumber spill in central California waters: Implications for oil spills and sea otters	Pelagic Rocky Shores	Otters
Varoujean	1973	Magnificent frigatebirds in Monterey Bay, California	Estuaries	Birds
Venkatesan & Santiago	1989	Sterols in ocean sediments: Novel tracers to examine habitats of cetaceans, pinnipeds, penguins and humans	Deep Seafloor & Canyons	Birds Whales & Dolphins Seals & Sea Lions
Vetter <i>et al.</i>	1994	Depth zonation and metabolic adaptation in Dover sole, <i>Microstomus pacificus</i> , and other deep-living flatfishes: Factors that affect the sole	Deep Seafloor & Canyons	Bony Fish
Vigilant & Silver	2007	Domoic acid in benthic flatfish on the continental shelf of Monterey Bay, California, USA	Deep Seafloor & Canyons	Bony Fish Phytoplankton
Vokhsoori & McCarthy	2014	Compound-Specific $\delta^{15}\text{N}$ amino acid measurements in littoral mussels in the California upwelling ecosystem: A new approach to generating baseline $\delta^{15}\text{N}$ isoscapes for coastal ecosystems	Rocky Shores	Invertebrates
Voorhees <i>et al.</i>	2013	Hypersalinity toxicity thresholds for nine California ocean plan toxicity test protocols	Kelp & Shallow Reef Rocky Shores	Bony Fish Invertebrates Macroalgae
Wain <i>et al.</i>	2013	Propagation and dissipation of the internal tide in upper Monterey Canyon	Deep Seafloor & Canyons	NA
Wang <i>et al.</i>	2009	Modeling tides in Monterey Bay, California	Pelagic	NA

Author(s)	Date	Title	Habitat Categories	Organism Categories
Wankel <i>et al.</i>	2011	Spatial variability in nitrification rates and ammonia-oxidizing microbial communities in the agriculturally impacted Elkhorn Slough Estuary, California	Estuaries	Microbial
Ward	2005	Temporal variability in nitrification rates and related biogeochemical factors in Monterey Bay, California, USA	Estuaries Deep Seafloor & Canyons	Microbial
Ward & Cockcroft	1993	Immunofluorescence detection of the denitrifying strain <i>Pseudomonas stutzeri</i> (ATCC 14405) in seawater and intertidal sediment environments	Pelagic	Microbial
Wares & Castañeda	2005	Geographic range in <i>Chthamalus</i> along the west coast of North America	Rocky Shores	Invertebrates
Warner & Case	1980	The zoogeography and dietary induction of bioluminescence in the midshipman fish, <i>Porichthys notatus</i>	Deep Seafloor & Canyons	Bony Fish
Warriner <i>et al.</i>	1986	Mating system and reproductive success of a small population of polygamous snowy plovers	Beaches	Birds
Wasson & Woolfolk	2011	Salt marsh-upland ecotones in central California: Vulnerability to invasions and anthropogenic stressors	Estuaries	Seagrasses & Marsh Plants
Wasson <i>et al.</i>	2001	Biological invasions of estuaries without international shipping: The importance of intraregional transport	Estuaries	Invertebrates
Wasson <i>et al.</i>	2005	Habitat differences in marine invasions of central California	Estuaries	Invertebrates
Wasson <i>et al.</i>	2013	Ecotones as indicators of changing environmental conditions: Rapid migration of salt marsh-upland boundaries	Estuaries	NA
Watanabe	1983	Anti-predator defenses of three kelp forest gastropods: Contrasting adaptations of closely-related prey species	Kelp & Shallow Reef	Invertebrates
Watanabe	1984	The influence of recruitment, competition, and benthic predation on spatial distributions of three species of kelp forest gastropods (Trochidae: <i>Tegula</i> )	Kelp & Shallow Reef	Invertebrates
Watanabe & Harrold	1991	Destructive grazing by sea urchins <i>Strongylocentrotus spp.</i> in a central California kelp forest: Potential roles of recruitment, depth, and predation	Kelp & Shallow Reef	Invertebrates Macroalgae

<b>Author(s)</b>	<b>Date</b>	<b>Title</b>	<b>Habitat Categories</b>	<b>Organism Categories</b>
Watanabe <i>et al.</i>	1992	Physiological response of the stipitate understory kelp, <i>Pterygophora californica</i> Ruprecht, to shading by the giant kelp	Kelp & Shallow Reef	Macroalgae
Watson <i>et al.</i>	2011	Applications from paleoecology to environmental management and restoration in a dynamic coastal environment	Estuaries	NA
Watters <i>et al.</i>	2010	Assessing marine debris in deep seafloor habitats off California	Deep Seafloor & Canyons	NA
Webb & Harvey	2015	Diet of a piscivorous seabird reveals spatiotemporal variation in abundance of forage fishes in the Monterey Bay region	Pelagic	Birds Bony Fish
Webb <i>et al.</i>	1998	Heart rate and oxygen consumption of northern elephant seals during diving in the laboratory	Beaches Pelagic	Seals & Sea Lions
Webb <i>et al.</i>	1998	Effects of buoyancy on the diving behavior of northern elephant seals	Pelagic	Seals & Sea Lions
Webber & Giese	1969	Reproductive cycle and gametogenesis in the black abalone <i>Haliotis cracherodii</i> (Gastropoda, Prosobranchiata)	Deep Seafloor & Canyons	Invertebrates
Wedding & Yoklavich	2015	Habitat-based predictive mapping of rockfish density and biomass off the central California coast	Kelp & Shallow Reef	Bony Fish
Wedi & Dunn	1983	Gametogenesis and reproductive periodicity of the subtidal sea anemone <i>Urticina lofotensis</i> (Coelenterata: Actiniaria)	Deep Seafloor & Canyons	Invertebrates
Weeks & Lattimore	1971	Continental terrace and deep plain offshore central California	Deep Seafloor & Canyons Pelagic	NA
Weise <i>et al.</i>	2005	Impact of the California sea lion ( <i>Zalophus californianus</i> ) on salmon fisheries in Monterey Bay, California	Pelagic	Bony Fish Seals & Sea Lions
Weise <i>et al.</i>	2006	Movement and diving behavior of male California sea lion ( <i>Zalophus californianus</i> ) during anomalous oceanographic conditions of 2005 compared to those of 2004	Rocky Shores	Seals & Sea Lions
Weiss-Penzias <i>et al.</i>	2012	Total and monomethyl mercury in fog water from the central California coast	Beaches	NA

Author(s)	Date	Title	Habitat Categories	Organism Categories
Wekell <i>et al.</i>	1994	The occurrence of domoic acid in razor clams ( <i>Siliqua patula</i> ), dungeness crab ( <i>Cancer magister</i> ), and anchovies ( <i>Engraulis mordax</i> )	Beaches	Bony Fish Invertebrates
Wells <i>et al.</i>	2012	Population dynamics of Chinook salmon <i>Oncorhynchus tshawytscha</i> relative to prey availability in the central California coastal region	Deep Seafloor & Canyons Pelagic	Bony Fish
Weng <i>et al.</i>	2005	Satellite tagging and cardiac physiology reveal niche expansion in salmon sharks	Pelagic	Cartilaginous Fishes
Weng <i>et al.</i>	2007	Migration and habitat of white sharks ( <i>Carcharodon carcharias</i> ) in the eastern Pacific Ocean	Deep Seafloor & Canyons Pelagic	Cartilaginous Fishes
Wenner <i>et al.</i>	2004	Variability in dissolved oxygen and other water-quality variables within the National Estuarine Research Reserve System	Estuaries	NA
West	1986	Intertidal variation in prey selection by the snail <i>Nucella</i> (=Thais) <i>emarginata</i>	Rocky Shores	Invertebrates
Whitaker & Byrd	2012	Boat-based foraging and discontinuous prehistoric red abalone exploitation along the California coast	Rocky Shores	Invertebrates
Whitaker & Clancy	1937	The effect of salinity upon the growth of eggs of <i>Fucus furcatus</i>	Kelp & Shallow Reef	Macroalgae
Wicksten	1979	Decorating behavior in <i>Loxorhynchus crispatus</i> Stimpson and <i>Loxorhynchus grandis</i> Stimpson, (Brachyura, Majidae)	Kelp & Shallow Reef	Invertebrates
Widder <i>et al.</i>	1989	Bioluminescence in the Monterey Submarine Canyon: Image analysis of video recordings from a midwater submersible	Deep Seafloor & Canyons	Invertebrates
Wilcox & Pomeroy	2003	Do commercial fishers aggregate around marine reserves? Evidence from Big Creek Marine Ecological Reserve, central California	Deep Seafloor & Canyons	Bony Fish
Wilkerson <i>et al.</i>	2000	Biomass and productivity in Monterey Bay, California: Contribution of the large phytoplankton	Pelagic	Phytoplankton
Willason & Cox	1987	Diel feeding, laminarinase activity and phytoplankton consumption by euphausiids	Pelagic	Invertebrates Phytoplankton
Williams	1942	Display and sexual behavior of the Brandt cormorant	Rocky Shores	Birds

Author(s)	Date	Title	Habitat Categories	Organism Categories
Williams & Lundsten	2009	The nephtheid soft coral genus <i>Gersemia</i> Marenzeller, 1878, with the description of a new species from the northeast Pacific and a review of two additional species (Octocorallia: Alcyonacea)	Deep Seafloor & Canyons	Invertebrates
Williams <i>et al.</i>	1980	Twinning in a California sea otter	Pelagic	Whales & Dolphins Seals & Sea Lions
Williams <i>et al.</i>	1981	Fentanyl and azaperone produced neuroleptanalgesia in the sea otter ( <i>Enhydra lutris</i> )	Kelp & Shallow Reef	Otters
Williams <i>et al.</i>	2000	Sink or swim: Strategies for cost-efficient diving by marine mammals	Kelp & Shallow Reef	Otters
Wilson	1970	Osmoregulatory capabilities in isopods, <i>Ligia occidentalis</i> and <i>Ligia pallasii</i>	Beaches Rocky Shores	Invertebrates
Wilson <i>et al.</i>	1985	Measurements of acoustic ambient noise in shallow water due to breaking surf	Deep Seafloor & Canyons Sandy Seafloor Rocky Shores	NA
Wilson <i>et al.</i>	2008	Recruitment of coastal fishes and oceanographic variability in central California	Kelp & Shallow Reef	Bony Fish
Wilson <i>et al.</i>	2012	Observations and impacts from the 2010 Chilean and 2011 Japanese tsunamis in California (USA)	NA	NA
Wing <i>et al.</i>	1993	A dynamic model for wave-induced light fluctuations in a kelp forest	Kelp & Shallow Reef	Macroalgae
Wingfield & Storlazzi	2007	Spatial and temporal variability in oceanographic and meteorologic forcing along central California and its implications on nearshore processes	Pelagic	NA
Winstead <i>et al.</i>	1991	Ovarian mycosis in the topsmelt <i>Atherinops affinis</i>	Estuaries	Bony Fish
Wobber	1975	Agonism in asteroids	Kelp & Shallow Reef Rocky Shores	Invertebrates
Wolf	1970	Coastal currents and mass transport of surface sediments over the shelf regions of Monterey Bay, California	Deep Seafloor & Canyons	NA

Author(s)	Date	Title	Habitat Categories	Organism Categories
Wolfe & Pattengill-Semmens	2013	Fish population fluctuation estimates based on fifteen years of reef volunteer diver data for the Monterey Peninsula, California	Kelp & Shallow Reef	Bony Fish
Wong & Eittreim	2002	Continental shelf GIS for the Monterey Bay National Marine Sanctuary	Deep Seafloor & Canyons	NA
Woodson <i>et al.</i>	2007	Local diurnal upwelling driven by sea breezes in northern Monterey Bay	Deep Seafloor & Canyons	NA
Woodson <i>et al.</i>	2009	northern Monterey Bay upwelling shadow front: Observations of a coastally and surface-trapped buoyant plume	Deep Seafloor & Canyons	NA
Woodson <i>et al.</i>	2011	Observations of internal wave packets propagating along-shelf in northern Monterey Bay	Deep Seafloor & Canyons	NA
Work <i>et al.</i>	1993	Epidemiology of domoic acid poisoning in brown pelicans ( <i>Pelecanus occidentalis</i> ) and Brandt's cormorants ( <i>Phalacrocorax penicillatus</i> ) in California	Deep Seafloor & Canyons	Birds
Worthy & Edwards	1990	Morphometric and biochemical factors affecting heat loss in a small temperate cetacean ( <i>Phocoena phocoena</i> ) and a small tropical cetacean ( <i>Stenella attenuata</i> )	Deep Seafloor & Canyons	Whales & Dolphins
Worthy <i>et al.</i>	1992	Moult energetics of the northern elephant seal ( <i>Mirounga angustirostris</i> )	Rocky Shores	Seals & Sea Lions
Wright & Raymond	1978	Air-breathing in a California sculpin	Rocky Shores	Bony Fish
Wyrtki	1965	The annual and semiannual variation of sea surface temperature in the north Pacific Ocean	Pelagic	NA
Xu	2010	Normalized velocity profiles of field-measured turbidity currents	Pelagic	NA
Xu <i>et al.</i>	2002	Suspended sediment transport on the continental shelf near Davenport, California	Deep Seafloor & Canyons	NA
Xu <i>et al.</i>	2002	Distribution and transport of suspended particulate matter in Monterey Canyon, California	Deep Seafloor & Canyons	NA
Xu <i>et al.</i>	2004	<i>In-situ</i> measurements of velocity structure within turbidity currents	Deep Seafloor & Canyons	NA
Xu <i>et al.</i>	2008	Sandwave migration in Monterey Submarine Canyon, central California	Deep Seafloor & Canyons	NA

Author(s)	Date	Title	Habitat Categories	Organism Categories
Xu <i>et al.</i>	2014	Sediment concentrations, flow conditions, and downstream evolution of two turbidity currents, Monterey Canyon, USA	Pelagic	NA
Yamahara <i>et al.</i>	2007	Beach sands along the California coast are diffuse sources of fecal bacteria to coastal waters	Beaches	Microbial
Yang <i>et al.</i>	1986	Growth, behavior, and sexual maturation of the market squid, <i>Loligo Opalescens</i> , cultured through the life cycle	Pelagic	Invertebrates
Yarberry	1965	Osteology of the Zoarcid fish <i>Melanostigma pammelas</i>	Sandy Seafloor	Bony Fish
Yasso	1965	Plan geometry of Headland-Bay beaches	Beaches	NA
Yeates <i>et al.</i>	2007	Diving and foraging energetics of the smallest marine mammal, the sea otter ( <i>Enhydra lutris</i> )	Deep Seafloor & Canyons	Otters
Yen <i>et al.</i>	2004	Marine bird and cetacean associations with bathymetric habitats and shallow-water topographies: Implications for trophic transfer and conservation	Deep Seafloor & Canyons Pelagic Seamounts & Ridges	Birds Whales & Dolphins
Ylitalo <i>et al.</i>	2005	The role of organochlorines in cancer-associated mortality in California sea lions ( <i>Zalophus californianus</i> )	Beaches	Seals & Sea Lions
Yoklavich & Grimes	2003	Using laser line scan imaging technology to assess deepwater seafloor habitats in the Monterey Bay National Marine Sanctuary	NA	NA
Yoklavich <i>et al.</i>	1991	Temporal and spatial patterns in abundance and diversity of fish assemblages in Elkhorn Slough, California	Estuaries	Bony Fish Cartilaginous Fishes
Yoklavich <i>et al.</i>	1992	Seasonal and spatial patterns of ichthyoplankton abundance in Elkhorn Slough, California	Estuaries	Bony Fish Zooplankton
Yoklavich <i>et al.</i>	2002	Deepwater habitat and fish resources associated with the Big Creek Marine Ecological Reserve	Kelp & Shallow Reef Sandy Seafloor	Bony Fish Cartilaginous Fishes
Yoshiyama	1981	Distribution and abundance patterns of rocky intertidal fishes in central California	Rocky Shores	Bony Fish
Yoshiyama & Sassaman	1983	Morphological and allozymic variation in the Stichaeid fish <i>Anoplarchus purpurescens</i>	Sandy Seafloor	Bony Fish

Author(s)	Date	Title	Habitat Categories	Organism Categories
Yoshiyama <i>et al.</i>	1986	Rocky intertidal fish communities of California: Temporal and spatial variation	Rocky Shores	Bony Fish
Young & Carr	2015	Application of species distribution models to explain and predict the distribution, abundance and assemblage structure of nearshore temperate reef fishes	NA	NA
Young & Carr	2015	Assessment of habitat representation across a network of marine protected areas with implications for the spatial design of monitoring	Kelp & Shallow Reef	Bony Fish
Young <i>et al.</i>	2011	Seafloor mapping and landscape ecology analyses used to monitor variations in spawning site preference and benthic egg mop abundance for the California market squid ( <i>Doryteuthis opalescens</i> )	Deep Seafloor & Canyons	Invertebrates
Young <i>et al.</i>	2016	Environmental controls on spatial patterns in the long-term persistence of giant kelp in central California	Kelp & Shallow Reef	Macroalgae
Zabin <i>et al.</i>	2013	A comparison of intertidal species richness and composition between Central California and Oahu, Hawaii	Rocky Shores	Invertebrates
Zacherl <i>et al.</i>	2003	The limits to biogeographical distributions: Insights from the northward range extension of the marine snail, <i>Kelletia kelletii</i> (Forbes, 1852)	Deep Seafloor & Canyons	Invertebrates
Zeidberg <i>et al.</i>	2007	Invasive range expansion by the Humboldt squid, <i>Dosidicus gigas</i> , in the eastern North Pacific	Deep Seafloor & Canyons	Invertebrates
Zhang <i>et al.</i>	2016	Using robust correlation matching to estimate sand-wave migration in Monterey Submarine Canyon, California	Deep Seafloor & Canyons	NA
Zimmerman	2003	A biooptical model of irradiance distribution and photosynthesis in seagrass canopies	Estuaries	Seagrasses & Marsh Plants
Zimmerman <i>et al.</i>	2001	Top-down impact through a bottom-up mechanism. <i>In situ</i> effects of limpet grazing on growth, light requirements and survival of the eelgrass <i>Zostera marina</i>	Estuaries	Seagrasses & Marsh Plants

**Appendix B.** Study counts used in the chi-squared tests to analyze representation of habitat and organism categories within the database. Studies that fell under either “No Category” or “Multiple Categories” were excluded from analysis.

<i>Organism Categories</i>	Occurrence	<i>Habitat Categories</i>	Occurrence
Birds	47	Beaches	94
Bony Fish	133	Deep Seafloor & Canyons	313
Cartilaginous Fish	27	Estuaries	75
Cetaceans	18	Kelp & Shallow Reef	102
Invertebrates	285	Pelagic	181
Macroalgae	71	Rocky Shores	234
Microbial	18	Sandy Seafloor	16
Otters	55	Seamounts & Ridges	16
Phytoplankton	47	No Category	48
Pinnipeds	79	Multiple Categories	107
Reptiles	7	<b>Total</b>	1186
Seagrasses & Marsh Plants	7		
Zooplankton	14		
No Category	273		
Multiple Categories	105		
<b>Total</b>	1186		



AMERICA'S UNDERWATER TREASURES