Distribution Mapping and Analysis Portal (DisMAP)

INTRODUCTION

1. Background

Understanding how species are distributed in space and time and the factors which drive spatial patterns in distribution and abundance are central questions in ecology and important for species conservation and management. In fisheries stock assessments species distribution knowledge is used to identify stock structure and boundaries. Species distribution information also comes into play when making large scale marine spatial planning decisions, such as Marine Protected Area designations, or locations of human activities such as off-shore wind-farms or shipping lanes. However, as climatic and environmental conditions change, fish species may see changes in their productivity or their preferred locale (Pinsky et al. 2013, Poloczanska et al. 2016, Barange et al. 2018). Shifts in species distributions are already occurring at alarming rates, with one estimate placing it at 72 km/decade on average (Poloczanska et al. 2013). Well known examples of these shifts include mackerel in the eastern Atlantic and blueline tilefish and black sea bass in the western Atlantic which have all seen northward shifts in their distributions.

These shifts in distribution pose a central challenge to fisheries managers (Karp et al. 2019) as they can and already are having significant impacts on key management decisions. For instance, if a species moves out of its historical range, it may not be adequately sampled by research surveys, leading to biases in the index of abundance obtained from the survey data. Another complication can occur when a species shifts across management boundaries. This can be particularly challenging when the species is new to the management area into which it is shifting, and therefore no management regime is in place for it. Allocation also becomes an issue when species shift across management boundaries, as the fishermen in the species' historic range may want to maintain their historical allocation, and the fishermen in the area into which it has moved may also wish to be allocated some quota.

Given the potential impacts of shifting distributions on sustainable fisheries management, marine spatial planning and the cross-jurisdictional nature of the issue, it is crucial that scientists and managers have access to information on historic and projected stock distributions for use in decision-making. In a 2016 questionnaire, information on shifts in fish distributions ranked in the top two most important information needs among both fishers and non-fishers (MAFAC 2017). Although NMFS and partners collect extensive information on the distribution of species through surveys, and are increasingly conducting research into the distributions of fish stocks, this information is not currently available in a consistent, useful, easy to access format across regions. Species distribution modeling (SDM) analysis is done within a region on an ad hoc basis for specific stocks, generally relying on data from surveys from within that region. The primary public outlet for much of this SDM research is through peer-reviewed publications, ecosystem status reports, and/or stock assessment reports. However, there are several examples of online platforms which present species distribution modeling results to the public and resource managers, such as OceanAdapt and Mid-Atlantic Ocean Data Portal. These portals have shown promise as decision support tools for fisheries managers, however these existing platforms and outlets do not enable easy

comparison between stocks within and across regions, or for the interactive exploration of results. Additionally, the SDM results and information are scattered between these various outlets making it challenging to find and compare information across stocks and regions.

Considering the large amounts of research on understanding species distributions, advancements in species distribution modeling, the clear management implications of shifting distributions, and the cross-jurisdictional nature of the issue, NMFS initiated development of a new portal building off of existing platforms to pull together the wealth of information on species distributions and provide robust information on marine species distributions to support science and management spanning across regions. The goal of the portal is to enable improved data integration, access to model results, and knowledge sharing across regions, to enhance not only NMFS ability to track species distribution shifts as they move across management boundaries or out of or into survey domains, but to also track NMFS progress and efforts to understand and account for these shifts.

This NMFS Technical Memorandum summarizing the data processing, quality control, analyses, and content of the DisMAP as of July 25th 2025.

2. Revision History

March 2022: Portal published.

December 2022: Hawaii Deep 7 distribution products and BFISH survey data added to portal April 2023: Annual data update; Addition of Northern Bering Sea region; change in species

filtering criteria to also have to be present in >5% of hauls each year as well as

present in at least 3/4th of survey years

June 2024: Annual data update. Fixed several issues with the GMEX code including: (1) issues

with merging of Tow (invrec) and bio (bgsrec) tables, (2) taxonomic coding issues – used a new biocodes table, (3) problematic taxa with known identification issues

in the field.

June 2025: Addition of Species Persistence module; includes analyses for annual biomass

percentile and persistence trends. Additional fixes to the GMEX compile script.

July 2025: Annual data update. Addition of haul frequency metric to Species Persistence

module (beta version).

SPECIES DISTRIBUTION PRODUCTS

3. Data Sources and Data Processing

In this latest version of the portal, species distribution products are derived from regional fishery-independent survey data. For the continental U.S., the survey data comes from regional fishery-independent bottom-trawl surveys. Survey data for Hawai'i is for the Deep-7 species complex only and comes from the Bottomfish Fishery-independent Survey in Hawai'i (a.k.a., BFISH). When more than one survey is conducted in a region (e.g. spring, summer, and fall) we analyze each season separately.

These survey data can be accessed through regional databases (see Table 1) or through reaching out to survey leads and exist in many different tables and formats. The first step in making these data available in DisMAP and in a format which can be used to develop the subsequent species distribution products, is compiling and processing the data into a standard format with common data structure and variable names.

Region	Season	Duration	Taxa >= 2 of years	Taxa >= 3/4 of years	Core species	Data filtering notes	Data Source
Aleutian Islands	Summer	1991-2024	56	37	24	none	
Eastern Bering Sea	Summer	1982-2024	77	43	29	remove years 1982, 1983, 1984, 1985, 1986	https://www.fisheries.noaa.gov/foss/f?p
Gulf of Alaska	Summer	1993-2023	75	50	31	remove year 2001; strata >= 11 years	=215:28:11659615688681:::::
Northern Bering Sea	Summer	2010, 2017-2023	56	48	43	none	
West Coast Triennial	Summer	1977-2004	66	43	33	keep only strata sampled all 10 years of survey	https://www.webapps.nwfsc.noaa.gov/
West Coast Annual	Summer	2003-2024	123	83	61	Keep only strata sampled in >= 20 years	data/map
Gulf of Mexico	Summer	1982-2024	205	126	88	keep years >= 2008, drop 2022; keep strata sampled 13 of years 2008-2021	https://seamap.gsmfc.org/
	Fall	1989-2024	110	59	35	Keep only strata sampled >31 years	
Southeast U.S. Shelf	Spring	1989-2024	108	52	27	keep only strata sampled >= 29 years of survey	http://www.seamap.org/datapage.html
	Summer	1989-2024	108	59	36	Remove year 2021 (poorly sampled)	
Northeast	Fall	1963-2024	92	47	23	keep years > 1973, dropped 2017; keep strata sampled all but 2 years	https://www.fisheries.noaa.gov/inport/i tem/22560
U.S. Shelf	Spring	1968-2024	67	42	25	keep years > 1973, drop 2023, 2020, 2014, 1975; keep strata sampled all but 2 years	https://www.fisheries.noaa.gov/inport/i tem/22561
Hawai'i Islands	Fall	2016-2023	7	7	7	none	https://www.fisheries.noaa.gov/inport/i tem/20969

Table 1: NOAA Fisheries fishery-independent surveys compiled for this analysis, including season of the survey, duration, number of taxa sampled in at least 5% of tows in a year in at least 2 of the survey years, at least 3/4th of the survey years, or all of the survey years (core species), notes on which strata and years were kept or removed through the data processing, and links to the original data source for each survey.

This was carried out using an R script originally developed by the Ocean Adapt team at Rutgers University (OceanAdapt 2021) and modified to meet the needs of DisMAP. The code combines the various tables for each region, removes unnecessary columns, and renames columns as necessary to have standard column names across the regions. Additionally, for three regions (Southeast, West Coast (annual and triennial), and Gulf of Mexico) the wtcpue is not reported and therefore is calculated in the R script. This involves calculating the area swept for each haul associated with each weight, and then dividing the weight by the calculated area swept, to get the weight per unit effort (kg per ha). To ensure that changes in survey extent over time do not impact the estimate of distribution shifts, we also standardize each survey to a consistent spatial footprint by removing strata which have poor temporal coverage. Years with poor sampling coverage are also removed from the dataset used for analysis (see Table 1 for notes on data filtering in each region). In Alaska and the West Coast, we combine some species into species complexes due to difficulty in distinguishing them to the species level and/or to keep consistency with how they are assessed for management purposes.

After this data cleaning process, the following standard set of columns are selected for each region: region, sampleid, year, lat, lon, stratum, stratumarea, depth, spp, wtcpue. At this point the cleaned and filtered regional datasets are combined into one table, and a final taxonomic QA/QC is conducted. This QA/QC involves removing higher taxon codes (such as family or order level classifications), which are generally used as a 'catch all' for hard to identify specimens within those families or orders, and species that are poorly sampled by the trawl gear (see Appendix II for list of taxon removed). These higher order categories are retained only when there was an explicit decision to lump species together into species complexes (e.g., Bathryaja sp. or Doryteuthis sp).

Following the taxanomic QA/QC, the data is further trimmed to include or exclude species for analysis in each of the three moduless. The dataset is expanded to include zeros for when a species that is found in the region is not caught in a particular trawl. Then, we identify species that are caught in at least 5% of tows per year in at least 2 years in each region for analysis in the Species Persistence module. For analysis in the Single Species Shift module, we identify species that are caught in at least 5% of tows in at least 3/4th of the survey years in each region. Finally, species that are caught in at least 5% of tows for all survey years in a survey region are captured for the Regional Shift Summary module (see Appendix I for the list of all species included in the modules).

4. Bubble Plot

Each raw observation of wtcpue for a species from the compiled dataset is provided and can be plotted as a circle on the map, where the circle size is proportional to the wtcpue (kg per ha).

5. Interpolated Biomass Distributions

The distribution surface is generated by using the inverse distance weighting (IDW) interpolation method in a Python script. The IDW approach is used as it is a simple, relatively easy approach to apply across the large number of species collected in the surveys. The approach makes it possible to predict and interpolate unobserved densities at any location in the survey area. For this approach the wtcpue data from the compiled dataset described in section 3 is cube-root transformed prior to interpolation, and

transformed back to original units (cubed back to kg/ha (wtcpue) values) for all further analysis described below. However, the raster displayed on the map is the cubed root values for improved visualization. Interpolation weights in IDW are computed as a function of the distance between observed sample sites and the site at which the prediction is to be made, with the weight being the inverse distance raised to the power of 2. The search radius used with IDW was 200,000 m (200 km), with 10 being the minimum and 15 being the maximum number of sampling sites included in the interpolation.

In addition to spatial weighting, the IDW approach used here includes temporal weighting. A five year window of data is used, with data from the mapped year having the highest weight in the interpolation and data from 2 years prior to and after the mapped year having much lower weights. This weighting is determined as follows:

YearWeights=3-(abs(Tc-Ti))

where Tc is the year being mapped Ti is the year of the samples. This year weighting is then applied to the weighting scheme by multiplying the year weighting by the distance weighting in the mapping. Note for surveys that don't sample annually (e.g. West Coast Tri-annual, Aleutian islands, Gulf of Alaska) this weighting results in the use of only the data for the year being mapped, as the other years are further than 2 years out on either side of the year being mapped so are given a weight of zero. The interpolation is carried out using a 2km x 2km grid cell size for the bottom trawl survey data and a 500m x 500m grid cell size for the BFISH survey. The interpolation boundaries were either provided by regional survey subject matter experts, or when not available, were determined by examination of the full survey footprint and the available observations from the trimmed dataset (e.g. in some regions the full survey footprint is trimmed to account for the removal of certain strata from the dataset due to poor temporal coverage in those strata). It is important to note that the choices of weighting, transformation, and pixel cell size, can have significant impacts on the resulting interpolation surfaces.

6. Species Persistence

6.1. Annual biomass percentile

The annual biomass percentile is evaluated by calculating percentile of biomass of a specific species and categorizing the percentile value into one of six bins. First, total biomass is calculated for each species in each year for each survey. Then, percentiles are calculated relative to all the species biomass in that survey region across survey years. Species that have zero biomass in a survey region for a survey year will have a percentile value of zero. Any species that has a survey biomass greater than zero for a survey year will have a rank-based percentile value, in comparison to all the biomass values in that survey region across all survey years. The percentile values are then binned as being "Absent" (biomass and percentile of 0), "Rare" (< 10th percentile), "Less Common" (10th - 25th percentile), "Common" (25th - 75th percentile), "Abundant" (75th - 90th percentile), or "Highly Abundant" (> 90th percentile).

6.2. Persistence trends

We examined changes in the presence and absence patterns of each species in each survey. A species is marked as present in a survey year when its recorded total biomass is greater than zero and absent if its biomass is zero. Based on the trend of species presences and absences during the survey years, each species is assigned to one of seven Trend Categories (see Table 2 for Trend Category descriptions).

Table 2: Descriptions of trend categories applied in Species Persistence analysis.

Trend Category	Definition	Metrics
Persistently Present	Consistently observed in surveys	Observed in >=85% of survey years
Emerged	species previously wasn't observed in surveys and now is consistently observed in surveys	Observed in >=50% of years, observed more in the second half of the survey years (compared to the first half of survey years), observed in >= 75% of the second half of survey years, and observed in at least nine (presence >= 9) of the final ten survey years
Potentially Emerging	Species previously wasn't consistently observed in surveys and now consistently observed in surveys	Observed in <= 50% of years in the first half of survey years and observed in at least four (presence >= 4) of the final five survey years, or has one switch from not being observed to being observed (referred to as a "colonizing event") and has zero switches from being observed to not being observed (referred to as a leaving event)
Potentially Disappearing	Species was previously observed in surveys but is potentially shifting towards being consistently not observed in surveys	Observed in >= 50% of years in the first half of survey years and observed in at most one (presence <= 1) of the final five survey years, or has one switch from being observed to not being observed (leaving event) and has zero switches from not being observed to being observed (colonizing event)
Disappeared	Species was previously observed in surveys but now is consistently not observed in surveys	Observed in <=50% of years, observed more in the first half of the survey years (compared to the second half of survey years), observed in <= 25% of the second half of survey years, and observed in at most one (presence <= 1) of the final ten survey years
Sporadic – Primarily Present	Species is observed in over half of surveys but observations in surveys are inconsistent	Observed in >=50% of years
Sporadic – Primarily Absent	Species is observed in less than half of surveys and observations in surveys are inconsistent	Observed in <50% of years

7. Single Species Shift

7.1. Latitudinal center of gravity

The latitudinal center of gravity is the center of a population's distribution as indicated by the average latitude weighted by the biomass at each latitude within the survey domain. It is the geographic center of

$$COG_{year} = \frac{\sum_{i=1}^{k} (d_i \times t_i)}{\sum_{i=1}^{k} t_i}$$

the total weight of the entire population. This metric is calculated using a Python script after the interpolated distribution surface is generated. The latitudinal center of gravity is the mean latitude of the species distribution, where each raster cell latitude is weighted by the value of wtcpue for that cell. This is shown in the formula below:

where d_i is a value of latitude associated with a raster (estimation) grid cell i. t_i denotes predicted (interpolated) who we value at each raster (estimation) grid i. k is the total number of estimation grid cells in the study area. The result is one COG value for each year in the time series, for each species.

7.2. Range Limits

The species range limits are the geographic boundary beyond which a species does not occur. This can also be thought of as a measure of the location of the leading and trailing edges of a species' range. This metric is calculated based on the interpolated biomass raster layers. The min latitude (southern range limit) is the latitude where 95% of the species distribution/biomass (or latitudes where wtcpue >0) are north or this value (so it's the 5th percentile), and the max latitude (northern range limit) is the lat where 95% of the species biomass is south of (below) this latitude.

7.3. Depth center of gravity

This metric is similar to the latitudinal center of gravity, but instead of being the average latitude weighted by biomass, it is the average depth weighted by biomass. This metric is calculated in Python after the interpolated distribution surface is generated. It is the mean depth where each raster cell depth, taken from bathymetry values within each 2 km grid cell, is weighted by the value of wtcpue for that cell, and follows the same formulation as Lat COG, but the di value is the depth of the grid cell, instead of lat. The result is one depth value for each year in the time series, for each species. Bathymetry data was obtained for the Aelution Islands, Eastern Bering Sea, and the Gulf of Alaska from the Alaska Fisheries Science Center, for BFISH from the Pacific Islands Fisheries Science Center for the BFISH data, and for the remaining regions from GEBCO (GEBCO 2021).

7.4. Area Analysis

This analysis is conducted based on the interpolated distribution surface layers, and is done in real-time based on user selected species and either selected or drawn area of interest. Two area analysis are calculated as:

- a. the proportion of the selected area where the species is present (i.e., wtcpue > 0 (or some other threshold?). Area of grid cells within selected area where wtcpue > 0 divided by total area of selected area (in km2).
 - $= A_{area,species}/A_{area}$
- b. the proportion of the species biomass distribution found in (or covered by) the area of interest. This is calculated by summing the biomass for grid cells found within the area of interest, and dividing by the total biomass of the species in each year.
 - = Biomass_{area,species}/Biomass_{species}

8. Regional Shift Summary

8.1. Species Richness Maps

Species richness maps are calculated for each region separately, and display the number of species present in each raster cell within a given region's survey domain. These maps are calculated by stacking each individual species' IDW biomass raster layers and counting the total number of species present in each cell. A species is considered present in a cell if the wtcpue > 0. It's important to note that these maps provide the predicted species richness, or number of species expected to encounter in the trawl survey at a given location, and do not reflect the species richness for the ecosystem as a whole.

8.2. Distribution Metric Regional Averages

For each region the average change in center of biomass is calculated (in terms of both Latitude and Depth) of a core set of species, defined as species that are caught every year in the survey. This is done by calculating the 'offset' or difference between each year's center of gravity and that of the starting year. Thus the first year is standardized to zero and all other years are calculated as the difference from that starting year. The annual average of these individual species offsets is then calculated for the core set of species in each region, and then plotted on a time-series graph to enable evaluation of the overall change in center of biomass of species for a given region.

FUTURE DIRECTIONS

9. Additional Data Types

This first release focuses on fisheries-independent survey data in the US, but future iterations of the portal will seek to include additional survey data and model outputs both within the US regions and Canada. We will build off existing partnerships between the Ocean Adapt team and Canadian researchers in the Department of Fish and Oceanography (DFO) to explore ways to incorporate Canadian survey data and models into the portal. In addition to expanding the surveys covered in this portal, we will also be exploring ways to bring in results of environmentally-linked species distribution models for display within the portal. Incorporating these model outputs not only will serve to improve access to and sharing of model code and results, but will also enable us to present predicted future shifts in distributions.

Our goal with working to incorporate these additional data sources and types is to help advance a community of practice among researchers and managers from around the U.S. and internationally who deal with the issue of shifting species distributions.

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APPENDIX I: LIST OF THE 625 UNIQUE SPECIES RETAINED AND PRESENTED ON DISMAP

Species Name	Common Name	Region
Acantholumpenus mackayi	Pighead prickleback	Northern Bering Sea
Acanthostracion quadricornis	Scrawled cowfish	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Achelous gibbesii	Iridescent swimming crab	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Achelous ordwayi	Silvery-clawed swimming crab	Gulf of Mexico
Achelous spinicarpus	Longspine swimming crab	Gulf of Mexico
Achelous spinimanus	Blotched swimming crab	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Actinauge verrillii	Reticulate anemone	West Coast Annual
Actinostola faeculenta	Hobnail vase anemone	West Coast Annual
Aetobatus narinari	Spotted eagle ray	Southeast US Fall, Southeast US Spring
Albatrossia pectoralis	Giant grenadier	Aleutian Islands, Gulf of Alaska, West Coast Annual
Alectis ciliaris	African pompano	Southeast US Summer
Alepocephalus tenebrosus	California slickhead	West Coast Annual
Alosa aestivalis	Blueback herring	Northeast US Fall, Northeast US Spring, Southeast US Fall, Southeast US Spring, Southeast US Summer
Alosa pseudoharengus	Alewife	Northeast US Fall, Northeast US Spring
Alosa sapidissima	American shad	Northeast US Fall, Northeast US Spring, West Coast Annual, West Coast Triennial
Aluterus heudelotii	Dotterel filefish	Gulf of Mexico
Aluterus schoepfii	Orange filefish	Gulf of Mexico, Southeast US Fall, Southeast US Summer
Amblyraja radiata	Thorny skate	Northeast US Fall, Northeast US Spring
Ammodytes dubius	Northern sand lance	Northeast US Fall, Northeast US Spring
Ampheraster marianus	Mariana's island star	West Coast Annual
Anadara secernenda	Skewed ark	Gulf of Mexico
Anarhichas lupus	Atlantic wolffish	Northeast US Spring, Northeast US Fall
Anasimus latus	Stilt spider crab	Gulf of Mexico

Anchoa hepsetus	Striped anchovy	Gulf of Mexico, Northeast US Fall
Anchoa mitchilli	Bay anchovy	Gulf of Mexico, Northeast US Fall
Anchoa spp.	Anchovies	Southeast US Fall, Southeast US Spring, Southeast US Summer
Ancylopsetta dilecta	Three-eye flounder	Gulf of Mexico
Ancylopsetta quadrocellata	Ocellated flounder	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Anoplopoma fimbria	Sablefish	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska, West Coast Annual, West Coast Triennial
Anthopleura xanthogrammica	Giant green anemone	West Coast Annual
Anthoptilum grandiflorum	Feather boa sea pen	West Coast Annual
Antigonia capros	Deepbody boarfish	Northeast US Fall
Antimora microlepis	Finescale mora	West Coast Annual
Aphrocallistes vastus	Cloud sponge	West Coast Annual
Apogon pseudomaculatus	Twospot cardinalfish	Gulf of Mexico
Apogon quadrisquamatus	Sawcheek cardinalfish	Gulf of Mexico
Apostichopus californicus	Giant california sea cucumber	West Coast Annual
Apostichopus leukothele	White-knobbed sea cucumber	West Coast Annual, West Coast Triennial
Apristurus brunneus	Brown catshark	West Coast Annual, West Coast Triennial
Aptocyclus ventricosus	Smooth lumpsucker	Aleutian Islands
Arbacia punctulata	Purple-spined sea urchin	Gulf of Mexico
Archosargus probatocephalus	Sheepshead	Southeast US Fall, Southeast US Spring
Arctoraja parmifera	Alaska skate	Aleutian Islands, Eastern Bering Sea, Northern Bering Sea
Arenaeus cribrarius	Speckled swimming crab	Southeast US Fall, Southeast US Spring, Southeast US Summer
Argentina sialis	Pacific argentine	West Coast Triennial
Argopecten gibbus	Calico scallop	Gulf of Mexico
Ariomma bondi	Silver rag driftfish	Northeast US Fall
Ariopsis felis	Hardhead catfish	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Aspidophoroides	Alligatorfish	Eastern Bering Sea, Northeast
monopterygius	A ratio allicatorfich	US Fall, Northeast US Spring
Aspidophoroides olrikii	Arctic alligatorfish	Northern Bering Sea
Asterias amurensis	North pacific seastar	Eastern Bering Sea, Northern Bering Sea
Astropecten articulatus	Royal sea star	Gulf of Mexico
Astropecten californicus	California sand star	West Coast Annual

Astropecten cingulatus	NA	Gulf of Mexico
Astropecten duplicatus	Two-spined star fish	Gulf of Mexico
Astropecten karankawai	NA NA	Gulf of Mexico
Astropecten mcedwardi	NA	Gulf of Mexico
Atheresthes stomias	Arrowtooth flounder	Gulf of Alaska, West Coast
1 111101 0011100 010111100	1 1110 (100 0 011 110 0110 01	Annual, West Coast Triennial
Atheresthes stomias and A.	Arrowtooth and kamchatka	Aleutian Islands, Eastern Bering
evermanni	flounders	Sea, Northern Bering Sea
Atlantopandalus propinqvus	Similar shrimp	Northeast US Fall, Northeast US
		Spring
Aulacofusus herendeeni	Thin-ribbed whelk	Eastern Bering Sea
Bagre marinus	Gafftopsail catfish	Southeast US Fall, Southeast US Spring, Southeast US Summer
Bairdiella chrysoura	Silver perch	Southeast US Fall, Southeast US
	Shire peren	Spring, Southeast US Summer
Balistes capriscus	Gray triggerfish	Gulf of Mexico
Bathyagonus nigripinnis	Blackfin poacher	West Coast Annual
Bathybembix bairdii	NA	West Coast Annual
Bathymaster signatus	Searcher	Aleutian Islands, Eastern Bering
, 8		Sea, Gulf of Alaska
Bathypolypus arcticus	North atlantic octopus	Northeast US Fall, Northeast US
	_	Spring
Bathyraja spp.	Skate complex	Aleutian Islands, Eastern Bering
		Sea, Gulf of Alaska, West Coast
D.d. d.	D. 1. II.	Annual, West Coast Triennial
Bathytoshia centroura	Roughtail stingray	Northeast US Fall, Southeast US
Bellator militaris	Horned searobin	Fall, Southeast US Spring Gulf of Mexico
Beringraja binoculata		Gulf of Alaska, West Coast
Beringraja omoculata	Big skate	Annual, West Coast Triennial
Beringraja inornata	California skate	West Coast Annual, West Coast
Bernigraja memata	Cumoma skate	Triennial
Beringraja rhina	Longnose skate	Gulf of Alaska, West Coast
		Annual, West Coast Triennial
Beringraja stellulata	Starry skate	West Coast Annual
Berryteuthis magister	Magister armhook squid	Aleutian Islands, Gulf of Alaska
Bollmannia communis	Ragged goby	Gulf of Mexico
Boreogadus saida	Arctic cod	Eastern Bering Sea, Northern
		Bering Sea
Bothrocara brunneum	Twoline eelpout	West Coast Annual
Bothus robinsi	Twospot flounder	Gulf of Mexico
Brevoortia patronus	Gulf menhaden	Gulf of Mexico
Brevoortia smithi	Yellowfin menhaden	Southeast US Fall, Southeast US
Provocatio tyronous	Atlantic menhaden	Spring, Southeast US Summer Southeast US Fall, Southeast US
Brevoortia tyrannus	Attailue memiaden	Spring, Southeast US Summer
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Brisaster latifrons	Northern heart urchin	West Coast Annual, West Coast Triennial
Brissopsis pacifica	Pacific heart urchin	West Coast Annual
Brosme brosme	Cusk	Northeast US Fall, Northeast US Spring
Brotula barbata	Bearded brotula	Gulf of Mexico
Calamus arctifrons	Grass porgy	Gulf of Mexico
Calamus leucosteus	Whitebone porgy	Southeast US Fall, Southeast US Summer
Calamus nodosus	Knobbed porgy	Gulf of Mexico
Calamus proridens	Littlehead porgy	Gulf of Mexico
Calappa flammea	Flame box crab	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Calappa sulcata	Yellow box crab	Gulf of Mexico
Callinectes ornatus	Shelling crab	Southeast US Fall, Southeast US Spring, Southeast US Summer
Callinectes sapidus	Blue crab	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Callinectes similis	Lesser blue crab	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Cancer borealis	Jonah crab	Northeast US Fall, Northeast US Spring
Cancer irroratus	Atlantic rock crab	Northeast US Fall, Northeast US Spring, Southeast US Spring
Cancer productus	Red rock crab	West Coast Annual
Caranx crysos	Blue runner	Gulf of Mexico, Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer
Caranx hippos	Crevalle jack	Southeast US Fall, Southeast US Spring
Carcharhinus acronotus	Blacknose shark	Southeast US Fall, Southeast US Spring, Southeast US Summer
Carcharhinus brevipinna	Spinner shark	Southeast US Summer
Carcharhinus limbatus	Blacktip shark	Southeast US Fall, Southeast US Spring, Southeast US Summer
Careproctus melanurus	Blacktail snailfish	West Coast Annual
Centropristis ocyurus	Bank sea bass	Gulf of Mexico
Centropristis philadelphica	Rock sea bass	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Centropristis striata	Black sea bass	Northeast US Fall, Northeast US Spring, Southeast US Fall, Southeast US Spring, Southeast US Summer

Ceramaster japonicus	Red cookie star	Aleutian Islands
Ceramaster patagonicus	Cookie star	Aleutian Islands, Gulf of Alaska
Chaceon quinquedens	Red deepsea crab	Northeast US Spring, Northeast US Fall
Chaetodipterus faber	Atlantic spadefish	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Chaetodon ocellatus	Spotfin butterflyfish	Gulf of Mexico
Chaetodon sedentarius	Reef butterflyfish	Gulf of Mexico
Chauliodus macouni	Pacific viperfish	West Coast Annual
Cheiraster (Luidiaster) dawsoni	NA	Aleutian Islands, Gulf of Alaska
Chilara taylori	Spotted cusk-eel	West Coast Triennial
Chilomycterus schoepfii	Striped burrfish	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Chionoecetes bairdi	Tanner crab	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska
Chionoecetes opilio	Snow crab	Eastern Bering Sea, Northern Bering Sea
Chionoecetes tanneri	Grooved tanner crab	West Coast Annual
Chlorophthalmus agassizi	Shortnose greeneye	Northeast US Fall, Northeast US Spring
Chloroscombrus chrysurus	Atlantic bumper	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Chorilia longipes	Longhorn decorator crab	West Coast Annual
Chrysaora quinquecirrha	Sea nettle	Gulf of Mexico
Ciliatocardium ciliatum	Hairy cockle	Eastern Bering Sea
Citharichthys arctifrons	Gulf stream flounder	Northeast US Fall, Northeast US Spring
Citharichthys macrops	Spotted whiff	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Citharichthys sordidus	Pacific sanddab	West Coast Annual, West Coast Triennial
Citharichthys spilopterus	Bay whiff	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Clupea harengus	Atlantic herring	Northeast US Fall, Northeast US Spring
Clupea pallasii	Pacific herring	Eastern Bering Sea, Gulf of Alaska, Northern Bering Sea, West Coast Annual, West Coast Triennial
Coryphaenoides acrolepis	Pacific grenadier	West Coast Annual
Coryrhynchus sidneyi	Shortfinger neck crab	Gulf of Mexico

Crangon septemspinosa	Sevenspine bay shrimp	Northeast US Spring
Crossaster borealis	Grooved sun star	West Coast Annual
Crossaster papposus	Common sunstar	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska, Northern Bering Sea
Cryptacanthodes maculatus	Wrymouth	Northeast US Fall
Ctenodiscus crispatus	Mud star	Eastern Bering Sea, Gulf of Alaska
Cyclopsetta chittendeni	Mexican flounder	Gulf of Mexico
Cyclopsetta fimbriata	Spotfin flounder	Gulf of Mexico
Cynoscion arenarius	Sand weakfish	Gulf of Mexico
Cynoscion nebulosus	Spotted weakfish	Southeast US Fall
Cynoscion nothus	Silver seatrout	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Cynoscion regalis	Weakfish	Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer
Dasycottus setiger	Spinyhead sculpin	Eastern Bering Sea, Gulf of Alaska
Decapterus punctatus	Round scad	Gulf of Mexico, Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer
Dichelopandalus leptocerus	Bristled longbeak	Northeast US Fall, Northeast US Spring
Diplectrum bivittatum	Dwarf sand perch	Gulf of Mexico
Diplectrum formosum	Sand perch	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Diplopteraster multipes	Pincushion star	Aleutian Islands
Dipsacaster borealis	Northern sand star	Gulf of Alaska
Dipsacaster eximius	Extraordinary sand star	West Coast Annual
Dipturus laevis	Barndoor skate	Northeast US Fall, Northeast US Spring
Doryteuthis opalescens	California market squid	West Coast Annual, West Coast Triennial
Doryteuthis pealeii	Longfin inshore squid	Northeast US Fall, Northeast US Spring
Doryteuthis sp	Inshore Squid sp.	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Dromalia alexandri	Sea dandelion	West Coast Annual
Echeneis naucrates	Sharksucker	Southeast US Fall, Southeast US Spring, Southeast US Summer
Echidnocerus foraminatus	Brown box crab	West Coast Annual, West Coast Triennial

Echinarachnius parma	Common sand dollar	Eastern Bering Sea, Northern Bering Sea
Echiophis intertinctus	Spotted spoon-nose eel	Gulf of Mexico
Elassochirus cavimanus	Purple hermit	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska
Elassochirus tenuimanus	Widehand hermit	Aleutian Islands, Gulf of Alaska
Eleginus gracilis	Saffron cod	Eastern Bering Sea, Northern Bering Sea
Enchelyopus cimbrius	Fourbeard rockling	Northeast US Fall, Northeast US Spring
Encope aberrans	NA	Gulf of Mexico
Engyophrys senta	Spiny flounder	Gulf of Mexico
Enophrys diceraus	Antlered sculpin	Northern Bering Sea
Enteroctopus dofleini	North pacific giant octopus	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska
Eopsetta jordani	Petrale sole	West Coast Annual, West Coast Triennial
Epinephelus morio	Red grouper	Gulf of Mexico
Eptatretus deani	Black hagfish	West Coast Annual
Eptatretus stoutii	Pacific hagfish	West Coast Annual
Eques lanceolatus	Jackknife-fish	Gulf of Mexico
Erimacrus isenbeckii	Hair crab	Aleutian Islands, Eastern Bering Sea, Northern Bering Sea
Etropus crossotus	Fringed flounder	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Etropus cyclosquamus	Shelf flounder	Southeast US Fall, Southeast US Spring, Southeast US Summer
Etropus microstomus	Smallmouth flounder	Northeast US Spring
Etropus rimosus	Gray flounder	Gulf of Mexico
Etrumeus sadina	Round herring	Northeast US Fall, Southeast US Spring, Southeast US Summer
Eualus macrophthalmus	Big eyed shrimp	West Coast Annual
Eucidaris tribuloides	Slate pencil urchin	Gulf of Mexico
Eucinostomus gula	Silver jenny	Gulf of Mexico
Eucinostomus harengulus	Tidewater mojarra	Gulf of Mexico
Eucinostomus spp.	Mojarras	Southeast US Fall, Southeast US Spring, Southeast US Summer
Eumicrotremus orbis	Pacific spiny lumpsucker	Aleutian Islands
Euphrosynoplax clausa	Craggy bathyal crab	Gulf of Mexico
Euvola marensis	Paper scallop	Gulf of Mexico
Euvola raveneli	Round rib scallop	Gulf of Mexico
Evasterias echinosoma	Giant sea star	Eastern Bering Sea, Northern Bering Sea
Fowlerichthys radiosus	Singlespot frogfish	Gulf of Mexico

Gadus chalcogrammus	Walleye pollock	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska, Northern Bering Sea, West Coast Triennial
Gadus macrocephalus	Pacific cod	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska, Northern Bering Sea, West Coast Annual, West Coast Triennial
Gadus morhua	Atlantic cod	Northeast US Fall, Northeast US Spring
Gastropsetta frontalis	Shrimp flounder	Gulf of Mexico
Genyonemus lineatus	White croaker	West Coast Annual, West Coast Triennial
Gibbesia neglecta	Lesser mantis shrimp	Southeast US Fall, Southeast US Spring, Southeast US Summer
Glebocarcinus oregonensis	Pygmy rock crab	Eastern Bering Sea
Glyptocephalus cynoglossus	Witch flounder	Northeast US Fall, Northeast US Spring
Glyptocephalus zachirus	Rex sole	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska, West Coast Annual, West Coast Triennial
Gobiosoma bosc	Naked goby	Southeast US Summer
Gonatus onyx	Clawed armhook squid	West Coast Annual
Gorgonocephalus eucnemis	Basket star	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska, Northern Bering Sea, West Coast Annual, West Coast Triennial
Grimothea planipes	Pelagic red crab	West Coast Annual
Gymnachirus melas	Naked sole	Southeast US Fall
Gymnocanthus galeatus	Armorhead sculpin	Aleutian Islands, Eastern Bering Sea
Gymnocanthus pistilliger	Threaded sculpin	Eastern Bering Sea, Northern Bering Sea
Gymnocanthus tricuspis	Arctic staghorn sculpin	Northern Bering Sea
Gymnothorax saxicola	Honeycomb moray	Gulf of Mexico
Gymnura altavela	Spiny butterfly ray	Southeast US Fall, Southeast US Spring
Gymnura micrura	Smooth butterfly ray	Southeast US Fall, Southeast US Spring, Southeast US Summer
Haemulon aurolineatum	Tomtate grunt	Gulf of Mexico, Southeast US Summer
Haemulon plumierii	White grunt	Gulf of Mexico
Halieutichthys sp	Batfishes	Gulf of Mexico
Harengula jaguana	Scaled sardine	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Helicolenus dactylopterus	Blackbelly rosefish	Northeast US Fall, Northeast US Spring

Hemilepidotus jordani	Yellow irish lord	Aleutian Islands, Eastern Bering
Hemilepidotus papilio	Butterfly sculpin	Sea, Gulf of Alaska Eastern Bering Sea, Northern
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Hemilepidotus zapus	Longfin irish lord	Aleutian Islands
Hemitripterus americanus	Sea raven	Northeast US Fall, Northeast US Spring
Hemitripterus bolini	Bigmouth sculpin	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska
Hepatus epheliticus	Calico box crab	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Heterozonias alternatus	Canonball sun star	West Coast Annual
Hexagrammos decagrammus	Kelp greenling	Gulf of Alaska
Hexagrammos stelleri	Whitespotted greenling	Eastern Bering Sea, Northern Bering Sea
Hippasteria californica	Californian spiny star	West Coast Annual
Hippasteria phrygiana	Arctic cushion star	Aleutian Islands, West Coast Annual, West Coast Triennial
Hippocampus erectus	Lined seahorse	Gulf of Mexico, Southeast US Fall, Southeast US Summer
Hippoglossina oblonga	American fourspot flounder	Northeast US Fall, Northeast US Spring
Hippoglossina stomata	Bigmouth flounder	West Coast Annual
Hippoglossoides elassodon	Flathead sole	Aleutian Islands, Gulf of Alaska, West Coast Annual, West Coast Triennial
Hippoglossoides elassodon and H. robustus	Flathead sole-bering flounder	Eastern Bering Sea, Northern Bering Sea
Hippoglossoides platessoides	American plaice	Northeast US Fall, Northeast US Spring
Hippoglossus hippoglossus	Atlantic halibut	Northeast US Fall, Northeast US Spring
Hippoglossus stenolepis	Pacific halibut	Spring Aleutian Islands, Eastern Bering Sea, Gulf of Alaska, Northern Bering Sea, West Coast Annual, West Coast Triennial
Histioteuthis heteropsis	NA	West Coast Annual
Holacanthus bermudensis	Blue angelfish	Gulf of Mexico
Homarus americanus	American lobster	Northeast US Fall, Northeast US Spring
Hyas coarctatus	Arctic lyre crab	Eastern Bering Sea, Northern Bering Sea
Hyas lyratus	Pacific lyre crab	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska
Hydrolagus colliei	Spotted ratfish	Gulf of Alaska, West Coast Annual, West Coast Triennial

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Southern stingray	Southeast US Fall, Southeast US Spring, Southeast US Summer
Atlantic stingray	Southeast US Fall, Southeast US Spring
Bluntnose stingray	Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer
Crested blenny	Southeast US Summer
Threadfin sculpin	West Coast Annual, West Coast Triennial
Spatulate sculpin	Eastern Bering Sea
Thorny sculpin	Eastern Bering Sea
NA	Gulf of Mexico
Northern shortfin squid	Northeast US Fall, Northeast US Spring
Butter sole	Eastern Bering Sea, Gulf of Alaska
Lancer stargazer	Gulf of Mexico
Splendid hermit	Eastern Bering Sea, Northern Bering Sea
Yellow eggcockle	Gulf of Mexico
Smooth puffer	Gulf of Mexico, Southeast US Fall, Southeast US Summer
Pinfish	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Banded drum	Gulf of Mexico, Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer
Polar lebbeid	Northeast US Spring
White elbow crab	Gulf of Mexico
Spot	Gulf of Mexico, Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer
Rock soles	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska, Northern Bering Sea, West Coast Annual, West Coast Triennial
Blackedge cusk-eel	Gulf of Mexico
Mottled cusk-eel	Gulf of Mexico
Fawn cusk-eel	Northeast US Fall, Northeast US Spring
Polar six-rayed star	Eastern Bering Sea, Northern Bering Sea
Arctic star	Eastern Bering Sea, Northern Bering Sea
	Bluntnose stingray Crested blenny Threadfin sculpin Spatulate sculpin Thorny sculpin NA Northern shortfin squid Butter sole Lancer stargazer Splendid hermit Yellow eggcockle Smooth puffer Pinfish Banded drum Polar lebbeid White elbow crab Spot Rock soles Blackedge cusk-eel Mottled cusk-eel Fawn cusk-eel Polar six-rayed star

Leptasterias coei truculenta	Giant Aleutian six-rayed star	Aleutian Islands
Leptasterias groenlandica	Greenland star	Eastern Bering Sea, Northern Bering Sea
Leptoclinus maculatus	Daubed shanny	Eastern Bering Sea
Leptychaster anomalus	Pentagonal sand star	Eastern Bering Sea
Lethasterias nanimensis	Black spined sea star	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska, Northern Bering Sea
Lethotremus muticus	Docked snailfish	Aleutian Islands
Leucoraja erinaceus	Little skate	Northeast US Fall, Northeast US Spring
Leucoraja garmani	Rosette skate	Northeast US Fall, Northeast US Spring
Leucoraja ocellata	Winter skate	Northeast US Fall, Northeast US Spring
Limanda aspera	Yellowfin sole	Eastern Bering Sea, Gulf of Alaska, Northern Bering Sea
Limanda sakhalinensis	Sakhalin sole	Eastern Bering Sea, Northern Bering Sea
Limulus polyphemus	Horseshoe crab	Northeast US Fall, Northeast US Spring, Southeast US Fall, Southeast US Spring, Southeast US Summer
Liponema brevicorne	Tentacle shedding anemone	West Coast Annual, West Coast Triennial
Lithodes aequispinus	Golden king crab	Aleutian Islands
Lithodes couesi	Scarlet king crab	West Coast Annual
Lithodes maja	Norway king crab	Northeast US Fall
Lolliguncula brevis	Atlantic brief squid	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Lophius americanus	Monkfish	Northeast US Fall, Northeast US Spring
Luidia alternata	Banded sea star	Gulf of Mexico
Luidia clathrata	Lined sea star	Gulf of Mexico
Luidia foliolata	Gray sand star	West Coast Annual, West Coast Triennial
Luidia lawrencei	NA	Gulf of Mexico
Lumpenus fabricii	Slender eelblenny	Northern Bering Sea
Lumpenus sagitta	Snake prickleback	Eastern Bering Sea, Northern Bering Sea
Lutjanus campechanus	Red snapper	Gulf of Mexico, Southeast US Fall
Lutjanus griseus	Gray snapper	Gulf of Mexico
Lutjanus synagris	Lane snapper	Gulf of Mexico, Southeast US Fall
Lycenchelys crotalinus	Snakehead eelpout	West Coast Annual

Lycodes brevipes	Shortfin eelpout	Eastern Bering Sea, Gulf of Alaska
Lycodes concolor	Ebony eelpout	Aleutian Islands
Lycodes cortezianus	Bigfin eelpout	West Coast Annual, West Coast Triennial
Lycodes diapterus	Black eelpout	West Coast Annual, West Coast Triennial
Lycodes pacificus	Blackbelly eelpout	West Coast Annual, West Coast Triennial
Lycodes palearis	Wattled eelpout	Eastern Bering Sea, Gulf of Alaska, Northern Bering Sea
Lycodes raridens	Marbled eelpout	Eastern Bering Sea, Northern Bering Sea
Lycodes turneri	Polar eelpout	Northern Bering Sea
Lyopsetta exilis	Slender sole	Gulf of Alaska, West Coast Annual, West Coast Triennial
Lytechinus variegatus	Variegated sea urchin	Gulf of Mexico
Lytechinus variegatus carolinus	NA	Gulf of Mexico
Malacocottus zonurus	Darkfin sculpin	Aleutian Islands, Gulf of Alaska
Malacoraja senta	Smooth skate	Northeast US Fall, Northeast US Spring
Mallotus villosus	Capelin	Eastern Bering Sea, Gulf of Alaska, Northern Bering Sea
Maurolicus weitzmani	Atlantic pearlside	Northeast US Fall, Northeast US Spring
Mediaster aequalis	Vermillion star	West Coast Annual, West Coast Triennial
Megangulus luteus	Alaskan great tellin	Eastern Bering Sea
Melanogrammus aeglefinus	Haddock	Northeast US Fall, Northeast US Spring
Menidia menidia	Atlantic silverside	Northeast US Spring
Menippe mercenaria	Florida stone crab	Southeast US Fall, Southeast US Spring, Southeast US Summer
Menticirrhus americanus	Southern kingfish	Gulf of Mexico, Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer
Menticirrhus littoralis	Gulf kingfish	Southeast US Fall, Southeast US Spring, Southeast US Summer
Menticirrhus saxatilis	Northern kingfish	Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer
Merluccius albidus	Offshore hake	Northeast US Fall, Northeast US Spring
Merluccius bilinearis	Silver hake	Northeast US Fall, Northeast US Spring
Merluccius productus	Pacific hake	Gulf of Alaska, West Coast Annual, West Coast Triennial

Metacarcinus magister	Dungeness crab	West Coast Annual, West Coast Triennial
Metapenaeopsis goodei	Caribbean velvet shrimp	Gulf of Mexico
Metridium farcimen	Giant plumose anemone	West Coast Annual, West Coast Triennial
Microgadus proximus	Pacific tomcod	West Coast Annual, West Coast Triennial
Micropogonias undulatus	Atlantic croaker	Gulf of Mexico, Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer, Northeast US Spring
Microstomus bathybius	Deep-sea sole	West Coast Annual
Microstomus pacificus	Dover sole	Aleutian Islands, Gulf of Alaska, West Coast Annual, West Coast Triennial
Mithrax pleuracanthus	Shaggy clinging crab	Gulf of Mexico
Mobula hypostoma	Devil ray	Southeast US Fall, Southeast US Spring, Southeast US Summer
Modiolus modiolus	Northern horsemussel	Aleutian Islands, Gulf of Alaska, Northern Bering Sea
Molpadia intermedia	Sweet potato sea cucumber	West Coast Annual
Monacanthus ciliatus	Fringed filefish	Gulf of Mexico
Moreiradromia antillensis	Hairy sponge crab	Gulf of Mexico
Mugil curema	White mullet	Southeast US Fall
Mullus auratus	Red goatfish	Gulf of Mexico
Mustelus canis	Smooth dogfish	Northeast US Fall, Northeast US Spring, Southeast US Spring, Southeast US Summer
Myliobatis freminvillei	Bullnose eagle ray	Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer
Myoxocephalus jaok	Plain sculpin	Eastern Bering Sea, Northern Bering Sea
Myoxocephalus octodecemspinosus	Longhorn sculpin	Northeast US Fall, Northeast US Spring
Myoxocephalus polyacanthocephalus	Great sculpin	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska, Northern Bering Sea
Myoxocephalus scorpius	Shorthorn sculpin	Eastern Bering Sea, Northern Bering Sea
Myropsis quinquespinosa	Fivespine purse crab	Gulf of Mexico
Myxine glutinosa	Atlantic hagfish	Northeast US Fall, Northeast US Spring
Myxoderma platyacanthum	NA	West Coast Annual
Myxoderma sacculatum	Giant slimy star	West Coast Annual
Myzopsetta ferruginea	Yellowtail flounder	Northeast US Fall, Northeast US Spring

Myzopsetta proboscidea	Longhead dab	Eastern Bering Sea, Northern Bering Sea
Narcine brasiliensis	Brazilian electric ray	Southeast US Spring, Southeast US Summer
Nautichthys pribilovius	Eyeshade sculpin	Northern Bering Sea
Nearchaster (Nearchaster) aciculosus	Needle spined fragile star	West Coast Annual
Neocrangon communis	Gray shrimp	Eastern Bering Sea
Neptunea amianta	White neptune	West Coast Annual
Nezumia liolepis	Smooth grenadier	West Coast Annual
Nezumia stelgidolepis	California grenadier	West Coast Annual
Nicholsina usta	Emerald parrotfish	Gulf of Mexico
Occella dodecaedron	Bering poacher	Eastern Bering Sea, Northern Bering Sea
Octopoteuthis deletron	Octopus squid	West Coast Annual
Octopus californicus	North pacific bigeye octopus	West Coast Annual
Octopus joubini	Atlantic pygmy octopus	Gulf of Mexico
Octopus vulgaris	Common octopus	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Ogcocephalus corniger	Longnose batfish	Gulf of Mexico
Ogcocephalus cubifrons	NA	Gulf of Mexico, Southeast US Fall
Ogcocephalus declivirostris	Slantbrow batfish	Gulf of Mexico
Ogcocephalus pantostictus	Spotted batfish	Gulf of Mexico
Ogcocephalus parvus	Roughback batfish	Gulf of Mexico
Ogcocephalus radiatus	Polka-dot batfish	Gulf of Mexico
Ogcocephalus rostellum	Palefin batfish	Southeast US Fall
Oligoplites saurus	Leatherjacket	Southeast US Spring
Oncorhynchus keta	Chum salmon	Gulf of Alaska
Oncorhynchus tshawytscha	Chinook salmon	Gulf of Alaska, West Coast Triennial
Ophidion antipholus	Longnose cusk-eel	Gulf of Mexico
Ophidion holbrookii	Bank cusk-eel	Gulf of Mexico
Ophidion marginatum	Striped cusk-eel	Southeast US Spring
Ophiodon elongatus	Lingcod	Gulf of Alaska, West Coast Annual, West Coast Triennial
Ophiolepis elegans	Elegant brittle star	Gulf of Mexico
Ophiothrix (Ophiothrix) angulata	Angular brittle star	Gulf of Mexico
Ophiura sarsii	Notched brittle star	West Coast Annual, West Coast Triennial
Opisthonema oglinum	Atlantic thread herring	Gulf of Mexico, Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer

Opisthoteuthis californiana	Flapjack octopus	West Coast Annual
Opsanus tau	Oyster toadfish	Southeast US Summer
Oregonia gracilis	Graceful decorator crab	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska
Orthasterias koehleri	Rainbow star	Gulf of Alaska
Orthopristis chrysoptera	Pigfish	Gulf of Mexico, Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer
Osmerus mordax	Rainbow smelt	Northern Bering Sea
Ovalipes floridanus	Florida lady crab	Gulf of Mexico
Ovalipes ocellatus	Ocellate lady crab	Northeast US Fall, Northeast US Spring, Southeast US Fall, Southeast US Spring, Southeast US Summer
Ovalipes stephensoni	Coarsehand lady crab	Northeast US Fall, Northeast US Spring, Southeast US Fall, Southeast US Spring, Southeast US Summer
Pagrus pagrus	Red porgy	Gulf of Mexico
Paguristes sericeus	Blue-eyed hermit	Gulf of Mexico
Pagurus aleuticus	Aleutian hermit	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska
Pagurus brandti	Sponge hermit	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska
Pagurus capillatus	Hairy hermit crab	Eastern Bering Sea, Gulf of Alaska, Northern Bering Sea
Pagurus confragosus	Knobbyhand hermit	Eastern Bering Sea, Gulf of Alaska
Pagurus kennerlyi	Bluespine hermit	Gulf of Alaska
Pagurus longicarpus	Longwrist hermit crab	Southeast US Fall, Southeast US Spring, Southeast US Summer
Pagurus ochotensis	Alaskan hermit crab	Eastern Bering Sea, Gulf of Alaska, Northern Bering Sea
Pagurus pollicaris	Gray hermit crab	Southeast US Fall, Southeast US Spring, Southeast US Summer
Pagurus rathbuni	Longfinger hermit	Eastern Bering Sea, Northern Bering Sea
Pagurus trigonocheirus	Fuzzy hermit	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska, Northern Bering Sea
Pallasina barbata	Tubenose poacher	Northern Bering Sea
Pandalus amplus	Deepwater bigeye	West Coast Annual
Pandalus borealis	Atlantic northern shrimp	Northeast US Fall, Northeast US Spring
Pandalus dispar	Sidestripe shrimp	West Coast Triennial
Pandalus jordani	Ocean shrimp	West Coast Annual, West Coast Triennial

Pandalus montagui	Aesop shrimp	Northeast US Fall, Northeast US Spring
Pandalus platyceros	Spot shrimp	West Coast Annual, West Coast Triennial
Pannychia moseleyi	Deep sea papillate cucumber	West Coast Annual
Paralichthys albigutta	Gulf flounder	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Paralichthys dentatus	Summer flounder	Northeast US Fall, Northeast US Spring, Southeast US Fall, Southeast US Spring, Southeast US Summer
Paralichthys lethostigma	Southern flounder	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Paralichthys squamilentus	Broad flounder	Southeast US Summer
Paralithodes camtschaticus	Red king crab	Eastern Bering Sea, Northern Bering Sea
Paralithodes platypus	Blue king crab	Eastern Bering Sea, Northern Bering Sea
Paralomis multispina	Many spine spider crab	West Coast Annual
Parapenaeus politus	Rose shrimp	Gulf of Mexico
Pareques umbrosus	Cubbyu	Gulf of Mexico
Parmaturus xaniurus	Filetail catshark	West Coast Annual
Parophrys vetulus	English sole	Gulf of Alaska, West Coast Annual, West Coast Triennial
Pasiphaea multidentata	Pink glass shrimp	Northeast US Fall, Northeast US Spring
Pasiphaea pacifica	Pacific glass shrimp	Gulf of Alaska, West Coast Annual
Pasiphaea tarda	Crimson pasiphaeid	West Coast Annual
Patinopecten caurinus	Weathervane scallop	Eastern Bering Sea
Penaeus aztecus	Brown shrimp	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Penaeus duorarum	Pink shrimp	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Penaeus setiferus	Northern white shrimp	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Peprilus burti	Gulf butterfish	Gulf of Mexico
Peprilus paru	Harvestfish	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Peprilus simillimus	Pacific pompano	West Coast Annual, West Coast Triennial

Peprilus triacanthus	American butterfish	Northeast US Fall, Northeast US Spring, Southeast US Fall, Southeast US Spring, Southeast US Summer
Periphylla periphylla	Merchant cap	West Coast Annual
Peristedion miniatum	Armored searobin	Northeast US Fall, Northeast US Spring
Persephona mediterranea	Mottled purse crab	Southeast US Fall, Southeast US Spring, Southeast US Summer
Petrochirus diogenes	Giant hermit	Southeast US Summer
Phycis chesteri	Longfin hake	Northeast US Fall, Northeast US Spring
Pilumnus sayi	Spineback hairy crab	Southeast US Fall, Southeast US Spring, Southeast US Summer
Pisaster brevispinus	Giant pink sea star	West Coast Annual
Pitarenus cordatus	Corded pitar	Gulf of Mexico
Placopecten magellanicus	Atlantic sea scallop	Northeast US Fall, Northeast US Spring
Platichthys stellatus	Starry flounder	Eastern Bering Sea, Gulf of Alaska, Northern Bering Sea
Platylambrus granulatus	Bladetooth elbow crab	Gulf of Mexico
Platymera gaudichaudii	Armed box crab	West Coast Annual
Pleurobranchaea californica	NA	West Coast Annual
Pleurogrammus monopterygius	Atka mackerel	Aleutian Islands, Gulf of Alaska
Pleuronectes quadrituberculatus	Alaska plaice	Eastern Bering Sea, Gulf of Alaska, Northern Bering Sea
Pleuronichthys decurrens	Curlfin sole	West Coast Annual, West Coast Triennial
Pleuronichthys verticalis	Hornyhead turbot	West Coast Annual
Podothecus accipenserinus	Sturgeon poacher	Aleutian Islands, Eastern Bering Sea, Gulf of Alaska, Northern Bering Sea
Podothecus veternus	Veteran poacher	Northern Bering Sea
Pogonias cromis	Black drum	Southeast US Fall
Pollachius virens	Pollock	Northeast US Fall, Northeast US Spring
Polydactylus octonemus	Atlantic threadfin	Gulf of Mexico
Polymixia lowei	Beardfish	Northeast US Fall
Polystira albida	White giant-turris	Gulf of Mexico
Pomatomus saltatrix	Bluefish	Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer
Pontophilus norvegicus	Norwegian shrimp	Northeast US Fall, Northeast US Spring
Porcellana sigsbeiana	Striped porcelain crab	Southeast US Fall, Southeast US Spring, Southeast US Summer

Porichthys notatus	Plainfin midshipman	West Coast Annual, West Coast Triennial
Porichthys plectrodon	Atlantic midshipman	Gulf of Mexico, Southeast US
Domtumus savi	Sargassum swimming crab	Summer Southeast US Fall
Portunus sayi		
Priacanthus arenatus	Atlantic bigeye	Gulf of Mexico
Prionotus alatus	Spiny searobin	Gulf of Mexico
Prionotus carolinus	Northern searobin	Northeast US Fall, Northeast US Spring, Southeast US Fall, Southeast US Spring, Southeast US Summer
Prionotus evolans	Striped searobin	Northeast US Fall, Northeast US Spring, Southeast US Fall, Southeast US Spring, Southeast US Summer
Prionotus longispinosus	Bigeye searobin	Gulf of Mexico
Prionotus martis	Gulf of mexico barred searobin	Gulf of Mexico
Prionotus ophryas	Bandtail searobin	Gulf of Mexico
Prionotus paralatus	Mexican searobin	Gulf of Mexico
Prionotus roseus	Bluespotted searobin	Gulf of Mexico
Prionotus rubio	Blackwing searobin	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Prionotus scitulus	Leopard searobin	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Prionotus stearnsi	Shortwing searobin	Gulf of Mexico
Prionotus tribulus	Bighead searobin	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Pristigenys alta	Short bigeye	Gulf of Mexico
Pristipomoides aquilonaris	Wenchman	Gulf of Mexico
Pseudarchaster parelii	Northern scarlet star	Aleutian Islands, Gulf of Alaska, West Coast Triennial
Pseudobatos lentiginosus	Atlantic guitarfish	Southeast US Fall, Southeast US Spring, Southeast US Summer
Pseudopleuronectes	Winter flounder	Northeast US Fall, Northeast US
americanus		Spring
Pseudorhombila quadridentata	Flecked squareback crab	Gulf of Mexico
Pseudostichopus mollis	Sandy sea cucumber	West Coast Annual
Pteraster jordani	Jordan's cushion star	West Coast Annual
Pycnopodia helianthoides	Sunflower sea star	Gulf of Alaska, West Coast Annual, West Coast Triennial
Pyrosoma atlanticum	NA	West Coast Annual

Rachycentron canadum	Cobia	Southeast US Fall, Southeast US Spring, Southeast US Summer
Raninoides louisianensis	Gulf frog crab	Gulf of Mexico
Rathbunaster californicus	California sun star	West Coast Annual, West Coast Triennial
Reinhardtius hippoglossoides	Greenland halibut	Aleutian Islands, Eastern Bering Sea
Renilla muelleri	Mueller's sea pansy	Gulf of Mexico
Rhinoptera bonasus	Cownose ray	Southeast US Fall, Southeast US Spring, Southeast US Summer
Rhizoprionodon terraenovae	Atlantic sharpnose shark	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer, Northeast US Fall
Rhomboplites aurorubens	Vermilion snapper	Gulf of Mexico
Rhynchoconger flavus	Yellow conger	Gulf of Mexico
Rimapenaeus constrictus	Roughneck shrimp	Southeast US Fall, Southeast US Spring
Rossia pacifica	Eastern pacific bobtail	Aleutian Islands, Gulf of Alaska, West Coast Annual, West Coast Triennial
Rostroraja eglanteria	Clearnose skate	Gulf of Mexico, Northeast US Fall, Northeast US Spring, Southeast US Fall, Southeast US Spring, Southeast US Summer
Rostroraja texana	Roundel skate	Gulf of Mexico
Rypticus maculatus	Whitespotted soapfish	Gulf of Mexico
Sagenaster evermanni	Evermann's star	West Coast Annual
Sardinella aurita	Spanish sardine	Gulf of Mexico, Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer
Sardinops sagax	South american pilchard	West Coast Triennial
Sarritor frenatus	Sawback poacher	Aleutian Islands, Eastern Bering Sea
Saurida brasiliensis	Largescale lizardfish	Gulf of Mexico
Saurida normani	Shortjaw lizardfish	Gulf of Mexico
Scomber japonicus	Chub mackerel	West Coast Triennial
Scomber scombrus	Atlantic mackerel	Northeast US Fall, Northeast US Spring
Scomberesox saurus	Atlantic saury	Northeast US Fall
Scomberomorus cavalla	King mackerel	Southeast US Fall, Southeast US Spring, Southeast US Summer
Scomberomorus maculatus	Spanish mackerel	Gulf of Mexico, Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer

Scophthalmus aquosus	Windowpane flounder	Northeast US Fall, Northeast US Spring, Southeast US Fall, Southeast US Spring, Southeast US Summer
Scorpaena agassizii	Longfin scorpionfish	Gulf of Mexico
Scorpaena brasiliensis	Barbfish	Gulf of Mexico
Scorpaena calcarata	Smoothhead scorpionfish	Gulf of Mexico
Scyliorhinus retifer	Chain catshark	Northeast US Fall, Northeast US Spring
Scyllarides nodifer	Ridged slipper lobster	Gulf of Mexico
Scyllarus chacei	Chace slipper lobster	Gulf of Mexico
Sebastes alutus	Pacific ocean perch	Aleutian Islands, Gulf of Alaska, West Coast Annual, West Coast Triennial
Sebastes aurora	Aurora rockfish	West Coast Annual
Sebastes babcocki	Redbanded rockfish	Gulf of Alaska, West Coast Annual, West Coast Triennial
Sebastes borealis	Shortraker rockfish	Aleutian Islands, Gulf of Alaska
Sebastes brevispinis	Silvergray rockfish	Gulf of Alaska, West Coast Triennial
Sebastes chlorostictus	Greenspotted rockfish	West Coast Annual
Sebastes crameri	Darkblotched rockfish	West Coast Annual, West Coast Triennial
Sebastes diploproa	Splitnose rockfish	West Coast Annual, West Coast Triennial
Sebastes elongatus	Greenstriped rockfish	West Coast Annual, West Coast Triennial
Sebastes entomelas	Widow rockfish	West Coast Annual, West Coast Triennial
Sebastes fasciatus	Acadian redfish	Northeast US Fall, Northeast US Spring
Sebastes flavidus	Yellowtail rockfish	West Coast Annual, West Coast Triennial
Sebastes goodei	Chilipepper rockfish	West Coast Annual, West Coast Triennial
Sebastes helvomaculatus	Rosethorn rockfish	West Coast Annual, West Coast Triennial
Sebastes jordani	Shortbelly rockfish	West Coast Annual, West Coast Triennial
Sebastes melanostictus and S. aleutianus	Blackspotted and rougheye rockfish	Aleutian Islands, Gulf of Alaska, West Coast Annual, West Coast Triennial
Sebastes melanostomus	Blackgill rockfish	West Coast Annual
Sebastes paucispinis	Bocaccio	West Coast Annual, West Coast Triennial
Sebastes pinniger	Canary rockfish	West Coast Annual, West Coast Triennial
Sebastes polyspinis	Northern rockfish	Aleutian Islands, Gulf of Alaska

Sebastes proriger	Redstripe rockfish	Gulf of Alaska, West Coast Triennial
Sebastes ruberrimus	Yelloweye rockfish	West Coast Triennial
Sebastes saxicola	Stripetail rockfish	West Coast Annual, West Coast Triennial
Sebastes semicinctus	Halfbanded rockfish	West Coast Annual
Sebastes variabilis and S. ciliatus	Dusky and dark rockfish	Aleutian Islands, Gulf of Alaska
Sebastes variegatus	Harlequin rockfish	Gulf of Alaska
Sebastes zacentrus	Sharpchin rockfish	Gulf of Alaska, West Coast Annual, West Coast Triennial
Sebastolobus alascanus	Shortspine thornyhead	Aleutian Islands, Gulf of Alaska, West Coast Annual, West Coast Triennial
Sebastolobus altivelis	Longspine thornyhead	West Coast Annual
Selene setapinnis	Atlantic moonfish	Gulf of Mexico, Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer
Selene vomer	Lookdown	Southeast US Fall, Southeast US Spring, Southeast US Summer
Serranus atrobranchus	Blackear bass	Gulf of Mexico
Serranus notospilus	Saddle bass	Gulf of Mexico
Serranus phoebe	Tattler	Gulf of Mexico
Sicyonia brevirostris	Brown rock shrimp	Gulf of Mexico, Southeast US Spring
Sicyonia dorsalis	Lesser rock shrimp	Gulf of Mexico
Solaster dawsoni	Morning sun star	Aleutian Islands
Solaster sp. A (Clark 1997)	NA	Aleutian Islands
Solenocera atlantidis	Dwarf humpback shrimp	Gulf of Mexico
Solenocera vioscai	Humpback shrimp	Gulf of Mexico
Sphoeroides dorsalis	Marbled puffer	Gulf of Mexico
Sphoeroides maculatus	Northern puffer	Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer
Sphoeroides parvus	Least puffer	Gulf of Mexico
Sphoeroides spengleri	Bandtail puffer	Gulf of Mexico
Sphyraena borealis	Northern sennet	Northeast US Fall
Sphyraena guachancho	Guachanche barracuda	Southeast US Fall, Southeast US Spring, Southeast US Summer
Sphyrna lewini	Scalloped hammerhead	Southeast US Fall, Southeast US Spring, Southeast US Summer
Sphyrna tiburo	Bonnethead	Southeast US Fall, Southeast US Spring, Southeast US Summer
Squalus acanthias	Spiny dogfish	Northeast US Fall, Northeast US Spring, Southeast US Spring

Squalus suckleyi	Pacific spiny dogfish	Gulf of Alaska, West Coast Annual, West Coast Triennial
Squilla chydaea	Offshore mantis shrimp	Gulf of Mexico
Squilla empusa	Mantis shrimp	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Squilla rugosa	NA	Gulf of Mexico
Stellifer lanceolatus	Star drum	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Stenocionops coelatus	Furcate spider crab	Gulf of Mexico
Stenocionops furcatus	Furcate spider crab	Gulf of Mexico
Stenorhynchus seticornis	Yellowline arrow crab	Gulf of Mexico
Stenorhynchus yangi	Red arrow crab	Gulf of Mexico
Stenotomus caprinus	Longspine porgy	Gulf of Mexico
Stenotomus chrysops	Scup	Northeast US Fall, Northeast US Spring
Stephanolepis hispida	Planehead filefish	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Stomolophus meleagris	Cannonball jellyfish	Southeast US Fall, Southeast US Spring, Southeast US Summer
Strongylocentrotus fragilis	Fragile sea urchin	West Coast Annual, West Coast Triennial
Stylasterias forreri	Velcro star	Gulf of Alaska, West Coast Annual, West Coast Triennial
Stylocidaris affinis	Pencil urchin	Gulf of Mexico
Syacium gunteri	Shoal flounder	Gulf of Mexico
Syacium papillosum	Dusky flounder	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Symphurus diomedeanus	Spottedfin tonguefish	Gulf of Mexico
Symphurus plagiusa	Blackcheek tonguefish	Gulf of Mexico, Southeast US Fall, Southeast US Spring, Southeast US Summer
Syngnathus louisianae	Chain pipefish	Southeast US Spring, Southeast US Summer
Synodus foetens	Inshore lizardfish	Gulf of Mexico, Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer
Synodus intermedius	Sand diver	Gulf of Mexico
Synodus macrostigmus	Largespot lizardfish	Gulf of Mexico
Synodus poeyi	Offshore lizardfish	Gulf of Mexico
Tactostoma macropus	Longfin dragonfish	West Coast Annual
Talismania bifurcata	Threadfin slickhead	West Coast Annual
Tautogolabrus adspersus	Cunner	Northeast US Fall
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Telmessus cheiragonus	Helmet crab	Eastern Bering Sea, Northern Bering Sea
Tetronarce californica	Pacific electric ray	West Coast Annual, West Coast Triennial
Thaleichthys pacificus	Eulachon	Eastern Bering Sea, Gulf of Alaska, West Coast Annual, West Coast Triennial
Thetys vagina	Virgin salpa	West Coast Annual
Thrissacanthias penicillatus	NA	West Coast Annual
Trachinocephalus myops	Snakefish	Gulf of Mexico
Trachinotus carolinus	Florida pompano	Southeast US Fall, Southeast US Spring, Southeast US Summer
Trachurus lathami	Rough scad	Gulf of Mexico, Northeast US Fall, Southeast US Spring
Trachurus symmetricus	Jack mackerel	West Coast Triennial
Trichiurus lepturus	Atlantic cutlassfish	Gulf of Mexico, Northeast US Fall, Southeast US Fall, Southeast US Spring, Southeast US Summer
Trichopsetta ventralis	Sash flounder	Gulf of Mexico
Triglops forficatus	Scissortail sculpin	Aleutian Islands
Triglops pingelii	Ribbed sculpin	Eastern Bering Sea, Northern Bering Sea
Triglops scepticus	Spectacled sculpin	Aleutian Islands
Trinectes maculatus	Hogchoker	Southeast US Fall, Southeast US Spring, Southeast US Summer
Tritonia tetraquetra	Large orange peel nudibranch	West Coast Annual
Upeneus parvus	Dwarf goatfish	Gulf of Mexico, Southeast US Spring, Southeast US Summer
Urophycis chuss	Red hake	Northeast US Fall, Northeast US Spring
Urophycis cirrata	Gulf hake	Gulf of Mexico
Urophycis earllii	Carolina hake	Southeast US Fall
Urophycis floridana	Southern hake	Gulf of Mexico, Southeast US Spring
Urophycis regia	Spotted hake	Northeast US Fall, Northeast US Spring, Southeast US Spring
Urophycis tenuis	White hake	Northeast US Fall, Northeast US Spring
Vampyroteuthis infernalis	Vampire squid	West Coast Annual
Xeneretmus latifrons	Blacktip poacher	West Coast Triennial
Xiphopenaeus kroyeri	Atlantic seabob	Southeast US Fall, Southeast US Spring, Southeast US Summer
Xyrichtys novacula	Pearly razorfish	Gulf of Mexico
Zalembius rosaceus	Pink seaperch	West Coast Annual, West Coast Triennial
Zaniolepis frenata	Shortspine combfish	West Coast Annual

Zaniolepis latipinnis	Longspine combfish	West Coast Annual, West Coast
		Triennial
Zaprora silenus	Prowfish	Aleutian Islands, Gulf of Alaska
Zenopsis conchifer	Silvery john dory	Northeast US Fall, Northeast US
		Spring
Zoarces americanus	Ocean pout	Northeast US Fall, Northeast US
		Spring

APPENDIX II: SPECIES FILTERED AND REMOVED FROM DATASET, BY REGION

Region	Species Name	Common Name
Aleutian Islands	Actiniaria	Sea anemones
Aleutian Islands	Aforia	NA
Aleutian Islands	Agonidae	Alligatorfishes
Aleutian Islands	Alepocephalidae	Slickheads
Aleutian Islands	Aleutiaster	Ahearns star
Aleutian Islands	Allocareproctus	NA
Aleutian Islands	Ammodytes	sand lance unid.
Aleutian Islands	Amphipoda	Amphipods
Aleutian Islands	Annelida	Segmented worms
Aleutian Islands	Anomiidae	Jingle shells
Aleutian Islands	Anteliaster	NA
Aleutian Islands	Anthozoa	Sea anemones and corals
Aleutian Islands	Antipatharia	Thorny corals
Aleutian Islands	Antipathes	NA
Aleutian Islands	Antiplanes	NA
Aleutian Islands	Arctomelon	NA
Aleutian Islands	Argis	NA
Aleutian Islands	Ascidiacea	Sea squirts
Aleutian Islands	Astarte	NA
Aleutian Islands	Asteroidea	Star fishes
Aleutian Islands	Bathyagonus	starsnout poacher unid.
Aleutian Islands	Bathylagidae	Deep sea smelts
Aleutian Islands	Bathylagus	blacksmelt unid.
Aleutian Islands	Bathymasteridae	Ronquils
Aleutian Islands	Bathypolypus	NA
Aleutian Islands	Beringius	NA
Aleutian Islands	Bivalvia	Bivalves
Aleutian Islands	Boreoscala sp.	NA
Aleutian Islands	Boreotrophon	NA
Aleutian Islands	Bothrocara	NA

Aleutian Islands	Brachiopoda	Lamp shells
Aleutian Islands	Brisaster	NA
Aleutian Islands	Bryozoa	Moss animals
Aleutian Islands	Bryozoichthys	NA
Aleutian Islands	Buccinidae	True whelks
Aleutian Islands	Buccinum	True whelks
Aleutian Islands	Cancer	Cancer crab
Aleutian Islands	Cardita	NA
Aleutian Islands	Careproctus	NA
Aleutian Islands	Caryophylliidae	Cupcorals
Aleutian Islands	Cephalopoda	Squids octopuses, nautilus, and ammonites
Aleutian Islands	Ceramaster	NA
Aleutian Islands	Ceratiidae	Seadevils
Aleutian Islands	Chaetognatha	Arrow worms
Aleutian Islands	Chauliodontinae	Viperfish unid.
Aleutian Islands	Cheiraster	NA
Aleutian Islands	Chiasmodontidae	Snaketooth fishes
Aleutian Islands	Chionoecetes hybrid	Hybrid Tanner crab
Aleutian Islands	Chirolophis	NA
Aleutian Islands	Chirostylus	NA
Aleutian Islands	Chlamys	NA
Aleutian Islands	Chorilia	NA
Aleutian Islands	Cirripedia	Barnacles
Aleutian Islands	Citharichthys	NA
Aleutian Islands	Cladaster	NA
Aleutian Islands	Clinocardium	NA
Aleutian Islands	Cnidaria	Jellyfish and alike
Aleutian Islands	Cottidae	Sculpins
Aleutian Islands	Cranchiidae	Glass squids
Aleutian Islands	Crangon	NA
Aleutian Islands	Crangonidae	Crangonid shrimp
Aleutian Islands	Crepidula	slipper shell
Aleutian Islands	Crossaster	NA
Aleutian Islands	Cryptonatica	NA
Aleutian Islands	Ctenodiscus	NA
Aleutian Islands	Ctenophora	Comb jellies
Aleutian Islands	Cyclocardia	NA
Aleutian Islands	Cyclopecten	NA
Aleutian Islands	Cyclopteridae	Lumpfishes
Aleutian Islands	Cyclothone	NA
Aleutian Islands	Decapodiformes	Squid unid.

Aleutian Islands	Dentalium	NA
Aleutian Islands	Diaphus	NA
Aleutian Islands	Diplopteraster	NA
Aleutian Islands	Dipsacaster	NA
Aleutian Islands	Echinacea	Sea urchins
Aleutian Islands	Echiura	Spoon worms
Aleutian Islands	Elassochirus	NA
Aleutian Islands	Elassodiscus	NA
Aleutian Islands	Emplectonema	NA
Aleutian Islands	Eualus	NA
Aleutian Islands	Eumicrotremus	NA
Aleutian Islands	Euphausiacea	Krill
Aleutian Islands	Evasterias	NA
Aleutian Islands	Fusitriton	NA
Aleutian Islands	Gadidae	Cods and haddocks
Aleutian Islands	Gastropoda	Sea snails
Aleutian Islands	Gephyreaster	NA
Aleutian Islands	Gonatopsis	NA
Aleutian Islands	Gonatus	NA
Aleutian Islands	Gonostomatidae	Bristlemouths
Aleutian Islands	Gymnelus	NA
Aleutian Islands	Gymnocanthus	NA
Aleutian Islands	Hapalogaster	NA
Aleutian Islands	Henricia	NA
Aleutian Islands	Heptacarpus	NA
Aleutian Islands	Hexagrammidae	Greenlings
Aleutian Islands	Hiatella	NA
Aleutian Islands	Hippasteria	NA
Aleutian Islands	Hippolytidae	Humpback prawns
Aleutian Islands	Hirudinea	Leeches
Aleutian Islands	Holothuroidea	Sea cucumbers
Aleutian Islands	Hyas	NA
Aleutian Islands	Hydroidolina	Hydroid unid.
Aleutian Islands	Hydrozoa	Hydroids
Aleutian Islands	Icelinus	NA
Aleutian Islands	Icelus	NA
Aleutian Islands	Isopoda	Pillbugs slaters, and woodlice
Aleutian Islands	Japelion	NA
Aleutian Islands	Japetella	NA
Aleutian Islands	Lamellaria	NA
Aleutian Islands	Lampanyctus	NA

Aleutian Islands	Latisipho sp.	NA
Aleutian Islands	Lebbeus	NA
Aleutian Islands	Leptagonus	NA
Aleutian Islands	Leptasterias	NA
Aleutian Islands	Leptychaster	NA
Aleutian Islands	Lethasterias	NA
Aleutian Islands	Lethotremus	NA
Aleutian Islands	Leuroglossus	NA
Aleutian Islands	Liparidae	Snailfishes
Aleutian Islands	Liparis	Snailfishes
Aleutian Islands	Lithodes	NA
Aleutian Islands	Lithodidae	Stone crabs and king crabs
Aleutian Islands	Lophaster	NA
Aleutian Islands	Luidia	NA
Aleutian Islands	Lycenchelys	Slipskin
Aleutian Islands	Lycodapus	NA
Aleutian Islands	Lycodes	NA
Aleutian Islands	Macoma	NA
Aleutian Islands	Macrouridae	Grenadiers
Aleutian Islands	Majidae	Spider crabs
Aleutian Islands	Malacocottus	NA
Aleutian Islands	Margarites	Margarite snails
Aleutian Islands	Mediaster	NA
Aleutian Islands	Megayoldia sp.	NA
Aleutian Islands	Melamphaidae	Bigscale fishes
Aleutian Islands	Melanostomiinae	Scaleless dragonfish unid.
Aleutian Islands	Metacrangon	NA
Aleutian Islands	Mollusca	Molluses
Aleutian Islands	Muricidae	Murex snails
Aleutian Islands	Musculus	NA
Aleutian Islands	Muusoctopus	NA
Aleutian Islands	Mya	Gaper clams
Aleutian Islands	Myctophidae	Lanternfishes
Aleutian Islands	Myoxocephalus	Stellate sculpin
Aleutian Islands	Mysida	Mysid shrimps
Aleutian Islands	Mysidae	NA
Aleutian Islands	Mytilidae	Mussel unid.
Aleutian Islands	Mytilus	NA
Aleutian Islands	Nannobrachium	NA
Aleutian Islands	Natica	NA
Aleutian Islands	Naticidae	Moon snails

Aleutian Islands	Nearchaster	NA
Aleutian Islands	Nematoda	Roundworms
Aleutian Islands	Nemertea	Ribbon worms
Aleutian Islands	Nemichthyidae	Snipe eels
Aleutian Islands	Neoberingius	NA
Aleutian Islands	Neognathophausia	NA
Aleutian Islands	Neomenia	NA
Aleutian Islands	Neptunea	True whelks
Aleutian Islands	Notostomus	NA
Aleutian Islands	Nudibranchia	Sea slugs
Aleutian Islands	Octocorallia	Octocorals
Aleutian Islands	Octopodidae	Octopus unid.
Aleutian Islands	Octopus	NA
Aleutian Islands	Odontohenricia	NA
Aleutian Islands	Onchidiopsis	NA
Aleutian Islands	Oneirodes	NA
Aleutian Islands	Oneirodidae	Dreamers
Aleutian Islands	Ophidiidae	Cusk eels
Aleutian Islands	Ophiuroidea	Brittle stars
Aleutian Islands	Opisthoproctidae	Barreleyes
Aleutian Islands	Oregonia	NA
Aleutian Islands	Orthasterias	NA
Aleutian Islands	Osmeridae	Smelts
Aleutian Islands	Paguridae	Hermit crabs
Aleutian Islands	Pagurus	NA
Aleutian Islands	Pandalidae	Pandalid shrimps
Aleutian Islands	Pandalus	NA
Aleutian Islands	Panomya	NA
Aleutian Islands	Paralepididae	Barracudinas
Aleutian Islands	Paraliparis	NA
Aleutian Islands	Paralomis	NA
Aleutian Islands	Parantipathes	NA
Aleutian Islands	Parvamussium sp.	NA
Aleutian Islands	Pectinidae	Scallops
Aleutian Islands	Pedicellaster	NA
Aleutian Islands	Penaeidae	Penaeid shrimps
Aleutian Islands	Pennatuloidea	Sea pens
Aleutian Islands	Petromyzontidae	Lampreys
Aleutian Islands	Platyhelminthes	Flatworms
Aleutian Islands	Plicifusus	NA
Aleutian Islands	Pododesmus	NA

Aleutian Islands	Polychaeta	Bristle worms
Aleutian Islands	Polycheles	NA
Aleutian Islands	Polycladida	Polyclad flatworm unid.
Aleutian Islands	Polyplacophora	Chitons
Aleutian Islands	Porifera	Sponges
Aleutian Islands	Protomyctophum	NA
Aleutian Islands	Pseudarchaster	NA
Aleutian Islands	Psychrolutes	NA
Aleutian Islands	Pteraster	Slime stars
Aleutian Islands	Pugettia	kelp crab
Aleutian Islands	Pycnogonida	Sea spiders
Aleutian Islands	Pyrulofusus	NA
Aleutian Islands	Raja	Skates
Aleutian Islands	Rajidae	Skates
Aleutian Islands	Rhynocrangon sp.	NA
Aleutian Islands	Scaphopoda	NA
Aleutian Islands	Scleractinia	Hard corals
Aleutian Islands	Sclerocrangon	NA
Aleutian Islands	Scopelosaurus	NA
Aleutian Islands	Scyphozoa	Jellyfishes
Aleutian Islands	Sebastes	Rockfish
Aleutian Islands	Sebastolobus	NA
Aleutian Islands	Sergestidae	Sergestid shrimps
Aleutian Islands	Serripes	NA
Aleutian Islands	Sipuncula	Peanut worms
Aleutian Islands	Solaster	NA
Aleutian Islands	Spirontocaris	NA
Aleutian Islands	Stenobrachius	NA
Aleutian Islands	Stichaeidae	Pricklebacks
Aleutian Islands	Strongylocentrotus	NA
Aleutian Islands	Stylasterias	NA
Aleutian Islands	Tarletonbeania	NA
Aleutian Islands	Tellina	NA
Aleutian Islands	Thaliacea	Salp unid.
Aleutian Islands	Triglops	NA
Aleutian Islands	Velutina	NA
Aleutian Islands	Volutomitra	NA
Aleutian Islands	Volutopsius	NA
Aleutian Islands	Yoldia	NA
Aleutian Islands	Zoanthus	NA
Aleutian Islands	Zoarcidae	Eelpouts

Eastern Bering Sea	Actiniaria	Sea anemones
Eastern Bering Sea	Admete viridula	NA
Eastern Bering Sea	Aforia	NA
Eastern Bering Sea	Agonidae	Alligatorfishes
Eastern Bering Sea	Ammodytes	sand lance unid.
Eastern Bering Sea	Amphipoda	Amphipods
Eastern Bering Sea	Ancistrolepis	NA
Eastern Bering Sea	Annelida	Segmented worms
Eastern Bering Sea	Anomiidae	Jingle shells
Eastern Bering Sea	Anthozoa	Sea anemones and corals
Eastern Bering Sea	Antipatharia	Thorny corals
Eastern Bering Sea	Antiplanes	NA
Eastern Bering Sea	Arctomelon	NA
Eastern Bering Sea	Argis	NA
Eastern Bering Sea	Artediellus	NA
Eastern Bering Sea	Ascidiacea	Sea squirts
Eastern Bering Sea	Astarte	NA
Eastern Bering Sea	Asterias	NA
Eastern Bering Sea	Asteroidea	Star fishes
Eastern Bering Sea	Aulacofusus esychus	Esychus colus
Eastern Bering Sea	Bathyagonus	starsnout poacher unid.
Eastern Bering Sea	Bathymasteridae	Ronquils
Eastern Bering Sea	Bathypolypus	NA
Eastern Bering Sea	Beringius	NA
Eastern Bering Sea	Bivalvia	Bivalves
Eastern Bering Sea	Boreotrophon	NA
Eastern Bering Sea	Brachiopoda	Lamp shells
Eastern Bering Sea	Bryozoa	Moss animals
Eastern Bering Sea	Buccinidae	True whelks
Eastern Bering Sea	Buccinum	True whelks
Eastern Bering Sea	Calliostoma	NA
Eastern Bering Sea	Calyptraeidae	Slipper limpets
Eastern Bering Sea	Cancer	Cancer crab
Eastern Bering Sea	Capulidae	Hairy snails
Eastern Bering Sea	Cardita	NA
Eastern Bering Sea	Carditidae	Cardita clams
Eastern Bering Sea	Careproctus	NA
Eastern Bering Sea	Cephalopoda	Squids octopuses, nautilus, and ammonites
Eastern Bering Sea	Ceramaster	NA
Eastern Bering Sea	Chesnonia verrucosa	Warty poacher
Eastern Bering Sea	Chionoecetes hybrid	Hybrid Tanner crab

Eastern Bering Sea	Chirolophis	NA
Eastern Bering Sea	Chlamys	NA
Eastern Bering Sea	Cirripedia	Barnacles
Eastern Bering Sea	Citharichthys	NA
Eastern Bering Sea	Clinocardium	NA
Eastern Bering Sea	Clinopegma sp.	NA
Eastern Bering Sea	Cottidae	Sculpins
Eastern Bering Sea	Crangon	NA
Eastern Bering Sea	Crangonidae	Crangonid shrimp
Eastern Bering Sea	Crepidula	slipper shell
Eastern Bering Sea	Crossaster	NA
Eastern Bering Sea	Cryptonatica	NA
Eastern Bering Sea	Ctenodiscus	NA
Eastern Bering Sea	Ctenophora	Comb jellies
Eastern Bering Sea	Cyclocardia	NA
Eastern Bering Sea	Cyclopecten	NA
Eastern Bering Sea	Cyclopteridae	Lumpfishes
Eastern Bering Sea	Decapodiformes	Squid unid.
Eastern Bering Sea	Dentalium	NA
Eastern Bering Sea	Diplopteraster	NA
Eastern Bering Sea	Dipsacaster	NA
Eastern Bering Sea	Echinacea	Sea urchins
Eastern Bering Sea	Echiura	Spoon worms
Eastern Bering Sea	Elassodiscus	NA
Eastern Bering Sea	Emplectonema	NA
Eastern Bering Sea	Enophrys	NA
Eastern Bering Sea	Eualus	NA
Eastern Bering Sea	Eumicrotremus	NA
Eastern Bering Sea	Euspira	NA
Eastern Bering Sea	Evasterias	NA
Eastern Bering Sea	Fusitriton	NA
Eastern Bering Sea	Gastropoda	Sea snails
Eastern Bering Sea	Gonatus	NA
Eastern Bering Sea	Gymnelus	NA
Eastern Bering Sea	Gymnocanthus	NA
Eastern Bering Sea	Hapalogaster	NA
Eastern Bering Sea	Hemilepidotus	NA
Eastern Bering Sea	Henricia	NA
Eastern Bering Sea	Heptacarpus	NA
Eastern Bering Sea	Hexagrammidae	Greenlings
Eastern Bering Sea	Hexagrammos	Greenlings

Eastern Bering Sea	Hexagrammos lagocephalus	Rock greenling
Eastern Bering Sea	Hiatella	NA
Eastern Bering Sea	Hippolytidae	Humpback prawns
Eastern Bering Sea	Hirudinea	Leeches
Eastern Bering Sea	Holothuroidea	Sea cucumbers
Eastern Bering Sea	Hyas	NA
Eastern Bering Sea	Hydroidolina	Hydroid unid.
Eastern Bering Sea	Hydrozoa	Hydroids
Eastern Bering Sea	Icelinus	NA
Eastern Bering Sea	Icelus	NA
Eastern Bering Sea	Isopoda	Pillbugs slaters, and woodlice
Eastern Bering Sea	Lamellaria	NA
Eastern Bering Sea	Lamellariinae	Lamellarid unid.
Eastern Bering Sea	Lampanyctus	NA
Eastern Bering Sea	Latisipho sp.	NA
Eastern Bering Sea	Lebbeus	NA
Eastern Bering Sea	Leptagonus	NA
Eastern Bering Sea	Leptasterias	NA
Eastern Bering Sea	Leptychaster	NA
Eastern Bering Sea	Leukoma sp.	NA
Eastern Bering Sea	Limneria undata	Wavy lamellaria
Eastern Bering Sea	Liocyma fluctuosa	Wavy liocyma
Eastern Bering Sea	Liomesus	NA
Eastern Bering Sea	Liparidae	Snailfishes
Eastern Bering Sea	Liparis	Snailfishes
Eastern Bering Sea	Lissocrangon stylirostris	Smooth bay shrimp
Eastern Bering Sea	Lumpenus	NA
Eastern Bering Sea	Lycodes	NA
Eastern Bering Sea	Macoma	NA
Eastern Bering Sea	Mactromeris	NA
Eastern Bering Sea	Malacocottus	NA
Eastern Bering Sea	Margarites	Margarite snails
Eastern Bering Sea	Mediaster	NA
Eastern Bering Sea	Megayoldia sp.	NA
Eastern Bering Sea	Mollusca	Molluses
Eastern Bering Sea	Musculus	NA
Eastern Bering Sea	Muusoctopus	NA
Eastern Bering Sea	Mya	Gaper clams
Eastern Bering Sea	Myctophidae	Lanternfishes
Eastern Bering Sea	Myoxocephalus	Stellate sculpin
Eastern Bering Sea	Mysida	Mysid shrimps

Eastern Bering Sea	Mysidae	NA
Eastern Bering Sea	Mytilidae	Mussel unid.
Eastern Bering Sea	Mytilus	NA
Eastern Bering Sea	Natica	NA
Eastern Bering Sea	Naticidae	Moon snails
Eastern Bering Sea	Nematoda	Roundworms
Eastern Bering Sea	Nemertea	Ribbon worms
Eastern Bering Sea	Neoberingius	NA
Eastern Bering Sea	Neptunea	True whelks
Eastern Bering Sea	Nucula	Nut clams
Eastern Bering Sea	Nuculana	NA
Eastern Bering Sea	Nudibranchia	Sea slugs
Eastern Bering Sea	Octocorallia	Octocorals
Eastern Bering Sea	Octopodidae	Octopus unid.
Eastern Bering Sea	Octopus	NA
Eastern Bering Sea	Odontohenricia	NA
Eastern Bering Sea	Oenopota	NA
Eastern Bering Sea	Onchidiopsis	NA
Eastern Bering Sea	Oneirodes	NA
Eastern Bering Sea	Ophiuroidea	Brittle stars
Eastern Bering Sea	Oregonia	NA
Eastern Bering Sea	Osmeridae	Smelts
Eastern Bering Sea	Paguridae	Hermit crabs
Eastern Bering Sea	Pagurus	NA
Eastern Bering Sea	Pagurus tanneri	Longhand hermit
Eastern Bering Sea	Pandalidae	Pandalid shrimps
Eastern Bering Sea	Pandalus	NA
Eastern Bering Sea	Panomya	NA
Eastern Bering Sea	Parvamussium sp.	NA
Eastern Bering Sea	Pectinidae	Scallops
Eastern Bering Sea	Pennatuloidea	Sea pens
Eastern Bering Sea	Petromyzontidae	Lampreys
Eastern Bering Sea	Phoronida	Horseshoe worm
Eastern Bering Sea	Pisaster	NA
Eastern Bering Sea	Platyhelminthes	Flatworms
Eastern Bering Sea	Pleuronectiformes	Flatfish
Eastern Bering Sea	Plicifusus	NA
Eastern Bering Sea	Pododesmus	NA
Eastern Bering Sea	Polychaeta	Bristle worms
Eastern Bering Sea	Polycheles	NA
Eastern Bering Sea	Polycladida	Polyclad flatworm unid.

Eastern Bering Sea	Polyplacophora	Chitons
Eastern Bering Sea	Porifera	Sponges
Eastern Bering Sea	Portlandia	NA
Eastern Bering Sea	Priapulida	Priapulid worms
Eastern Bering Sea	Pronucula tenuis	smooth nutclam
Eastern Bering Sea	Pseudarchaster	NA
Eastern Bering Sea	Pseudocadella nuculoides	NA
Eastern Bering Sea	Psychrolutes	NA
Eastern Bering Sea	Psychrolutes phrictus	Blob sculpin
Eastern Bering Sea	Pteraster	Slime stars
Eastern Bering Sea	Pyrulofusus	NA
Eastern Bering Sea	Raja	Skates
Eastern Bering Sea	Rajidae	Skates
Eastern Bering Sea	Retifusus sp.	NA
Eastern Bering Sea	Rhabdus rectius	Dall tuskshell
Eastern Bering Sea	Saxidomus nuttalli	California butterclam
Eastern Bering Sea	Scleractinia	Hard corals
Eastern Bering Sea	Sclerocrangon	NA
Eastern Bering Sea	Scyphozoa	Jellyfishes
Eastern Bering Sea	Sebastes	Rockfish
Eastern Bering Sea	Sebastes crameri	Darkblotched rockfish
Eastern Bering Sea	Sergestidae	Sergestid shrimps
Eastern Bering Sea	Serripes	NA
Eastern Bering Sea	Siliqua	NA
Eastern Bering Sea	Sipuncula	Peanut worms
Eastern Bering Sea	Solariella	NA
Eastern Bering Sea	Solaster	NA
Eastern Bering Sea	Spirontocaris	NA
Eastern Bering Sea	Stichaeidae	Pricklebacks
Eastern Bering Sea	Strongylocentrotus	NA
Eastern Bering Sea	Tachyrhynchus	NA
Eastern Bering Sea	Tellina	NA
Eastern Bering Sea	Teredinidae	Shipworms
Eastern Bering Sea	Thaliacea	Salp unid.
Eastern Bering Sea	Trachipterus altivelis	King of-the-salmon
Eastern Bering Sea	Trichotropis sp.	NA
Eastern Bering Sea	Tridonta arctica	NA
Eastern Bering Sea	Triglops	NA
Eastern Bering Sea	Trochidae	Top shells
Eastern Bering Sea	Velutina	NA
Eastern Bering Sea	Vilasina seminuda	Partly sculptured crenella

Eastern Bering Sea	Volutomitra	NA
Eastern Bering Sea	Volutopsius	NA
Eastern Bering Sea	Yoldia	NA
Eastern Bering Sea	Zoarcidae	Eelpouts
Gulf of Alaska	Acantholithodes	NA
Gulf of Alaska	Acoela	Acoel turbellarian
Gulf of Alaska	Acteocina	NA
Gulf of Alaska	Actiniaria	Sea anemones
Gulf of Alaska	Aforia	NA
Gulf of Alaska	Agonidae	Alligatorfishes
Gulf of Alaska	Alepisaurus ferox	Long snouted lancetfish
Gulf of Alaska	Alepocephalus tenebrosus	California slickhead
Gulf of Alaska	Allocareproctus	NA
Gulf of Alaska	Ammodytes	sand lance unid.
Gulf of Alaska	Amphipoda	Amphipods
Gulf of Alaska	Ancistrolepis	NA
Gulf of Alaska	Annelida	Segmented worms
Gulf of Alaska	Anomiidae	Jingle shells
Gulf of Alaska	Anomura	NA
Gulf of Alaska	Anthozoa	Sea anemones and corals
Gulf of Alaska	Antipatharia	Thorny corals
Gulf of Alaska	Arctomelon	NA
Gulf of Alaska	Argentinidae	Argentine unid.
Gulf of Alaska	Argis	NA
Gulf of Alaska	Argyropelecus	NA
Gulf of Alaska	Aristostomias scintillans	Shiny loosejaw
Gulf of Alaska	Artediellus	NA
Gulf of Alaska	Ascidiacea	Sea squirts
Gulf of Alaska	Astarte	NA
Gulf of Alaska	Asterias	NA
Gulf of Alaska	Asteriidae	NA
Gulf of Alaska	Asteroidea	Star fishes
Gulf of Alaska	Atheresthes	NA
Gulf of Alaska	Bathyagonus	starsnout poacher unid.
Gulf of Alaska	Bathylagidae	Deep sea smelts
Gulf of Alaska	Bathylagus	blacksmelt unid.
Gulf of Alaska	Bathymasteridae	Ronquils
Gulf of Alaska	Bathypathes	NA
Gulf of Alaska	Bathypolypus	NA
Gulf of Alaska	Benthalbella	NA
Gulf of Alaska	Beringius	NA

Gulf of Alaska	Bivalvia	Bivalves
Gulf of Alaska	Boreoscala sp.	NA
Gulf of Alaska	Boreotrophon	NA
Gulf of Alaska	Bothrocara	NA
Gulf of Alaska	Bothrocara molle	Soft eelpout
Gulf of Alaska	Brachiopoda	Lamp shells
Gulf of Alaska	Brisaster	NA
Gulf of Alaska	Brisingidae	Brisingid sea star
Gulf of Alaska	Bryozoa	Moss animals
Gulf of Alaska	Bryozoichthys	NA
Gulf of Alaska	Buccinidae	True whelks
Gulf of Alaska	Buccinum	True whelks
Gulf of Alaska	Calliostoma	NA
Gulf of Alaska	Cancer	Cancer crab
Gulf of Alaska	Capulidae	Hairy snails
Gulf of Alaska	Careproctus	NA
Gulf of Alaska	Caridea	Shrimps
Gulf of Alaska	Caryophylliidae	Cupcorals
Gulf of Alaska	Cephalopoda	Squids octopuses, nautilus, and ammonites
Gulf of Alaska	Ceramaster	NA
Gulf of Alaska	Ceratiidae	Seadevils
Gulf of Alaska	Chauliodontinae	Viperfish unid.
Gulf of Alaska	Cheiraster	NA
Gulf of Alaska	Chionoecetes	NA
Gulf of Alaska	Chionoecetes hybrid	Hybrid Tanner crab
Gulf of Alaska	Chirolophis	NA
Gulf of Alaska	Chiroteuthis	NA
Gulf of Alaska	Chlamys	NA
Gulf of Alaska	Cirripedia	Barnacles
Gulf of Alaska	Clinocardium	NA
Gulf of Alaska	Cnidaria	Jellyfish and alike
Gulf of Alaska	Corallimorphus	NA
Gulf of Alaska	Coryphaenoides	NA
Gulf of Alaska	Cottidae	Sculpins
Gulf of Alaska	Cranchia scabra	Rough cranch squid
Gulf of Alaska	Cranchiidae	Glass squids
Gulf of Alaska	Crangon	NA
Gulf of Alaska	Crangonidae	Crangonid shrimp
Gulf of Alaska	Cranopsis sp.	NA
Gulf of Alaska	Crepidula	slipper shell
Gulf of Alaska	Crossaster	NA

Gulf of Alaska	Cryptolithodes	NA
Gulf of Alaska	Cryptonatica	NA
Gulf of Alaska	Ctenodiscus	NA
Gulf of Alaska	Ctenophora	Comb jellies
Gulf of Alaska	Cyclocardia	NA
Gulf of Alaska	Cyclopecten	NA
Gulf of Alaska	Cyclopteridae	Lumpfishes
Gulf of Alaska	Cyclothone	NA
Gulf of Alaska	Decapodiformes	Squid unid.
Gulf of Alaska	Diaphus	NA
Gulf of Alaska	Diplopteraster	NA
Gulf of Alaska	Dipsacaster	NA
Gulf of Alaska	Echidnocerus	NA
Gulf of Alaska	Echinacea	Sea urchins
Gulf of Alaska	Echiura	Spoon worms
Gulf of Alaska	Elassochirus	NA
Gulf of Alaska	Elassodiscus	NA
Gulf of Alaska	Emplectonema	NA
Gulf of Alaska	Enophrys diceraus	Antlered sculpin
Gulf of Alaska	Eualus	NA
Gulf of Alaska	Eumicrotremus	NA
Gulf of Alaska	Euphausiacea	Krill
Gulf of Alaska	Euspira	NA
Gulf of Alaska	Evasterias	NA
Gulf of Alaska	Fusitriton	NA
Gulf of Alaska	Gadidae	Cods and haddocks
Gulf of Alaska	Galatheidae	Galatheid crab unid.
Gulf of Alaska	Gastropoda	Sea snails
Gulf of Alaska	Glycymeris	Bittersweet clams
Gulf of Alaska	Gonatidae	NA
Gulf of Alaska	Gonatopsis	NA
Gulf of Alaska	Gonatus	NA
Gulf of Alaska	Gonostomatidae	Bristlemouths
Gulf of Alaska	Grandicrepidula grandis	Great slippersnail
Gulf of Alaska	Gymnocanthus	NA
Gulf of Alaska	Hemilepidotus	NA
Gulf of Alaska	Henricia	NA
Gulf of Alaska	Hexagrammidae	Greenlings
Gulf of Alaska	Hiatella	NA
Gulf of Alaska	Hinnites	NA
Gulf of Alaska	Hippasteria	NA

Gulf of Alaska	Hippolytidae	Humpback prawns
Gulf of Alaska	Hirudinea	Leeches
Gulf of Alaska	Histioteuthis	jewel squids
Gulf of Alaska	Holothuroidea	Sea cucumbers
Gulf of Alaska	Hyas	NA
Gulf of Alaska	Hydroidolina	Hydroid unid.
Gulf of Alaska	Hydrozoa	Hydroids
Gulf of Alaska	Hymenaster	pancake star
Gulf of Alaska	Hymenodiscus	NA
Gulf of Alaska	Hymenodora sp.	NA
Gulf of Alaska	Icelinus	NA
Gulf of Alaska	Icelus	NA
Gulf of Alaska	Isopoda	Pillbugs slaters, and woodlice
Gulf of Alaska	Japelion	NA
Gulf of Alaska	Japetella	NA
Gulf of Alaska	Lamellaria	NA
Gulf of Alaska	Lamellariinae	Lamellarid unid.
Gulf of Alaska	Lampanyctus	NA
Gulf of Alaska	Latisipho sp.	NA
Gulf of Alaska	Lebbeus	NA
Gulf of Alaska	Leptagonus	NA
Gulf of Alaska	Leptasterias	NA
Gulf of Alaska	Leptychaster	NA
Gulf of Alaska	Lestidiops ringens	Slender barracudina
Gulf of Alaska	Lethasterias	NA
Gulf of Alaska	Lethotremus	NA
Gulf of Alaska	Leukoma sp.	NA
Gulf of Alaska	Leuroglossus	NA
Gulf of Alaska	Liparidae	Snailfishes
Gulf of Alaska	Liparis	Snailfishes
Gulf of Alaska	Lithodes	NA
Gulf of Alaska	Lithodidae	Stone crabs and king crabs
Gulf of Alaska	Lophaster	NA
Gulf of Alaska	Luidia	NA
Gulf of Alaska	Lumpenus	NA
Gulf of Alaska	Lycenchelys	Slipskin
Gulf of Alaska	Lycodapus	NA
Gulf of Alaska	Lycodes	NA
Gulf of Alaska	Macoma	NA
Gulf of Alaska	Macrouridae	Grenadiers
Gulf of Alaska	Mactromeris	NA

Gulf of Alaska	Majidae	Spider crabs
Gulf of Alaska	Malacocottus	NA
Gulf of Alaska	Malacocottus aleuticus	Whitetail sculpin
Gulf of Alaska	Malacosteinae	Loosejaw unid.
Gulf of Alaska	Margarites	Margarite snails
Gulf of Alaska	Mediaster	NA
Gulf of Alaska	Megayoldia sp.	NA
Gulf of Alaska	Melamphaidae	Bigscale fishes
Gulf of Alaska	Melanostomiinae	Scaleless dragonfish unid.
Gulf of Alaska	Metacrangon	NA
Gulf of Alaska	Mollusca	Molluses
Gulf of Alaska	Muricidae	Murex snails
Gulf of Alaska	Musculus	NA
Gulf of Alaska	Muusoctopus	NA
Gulf of Alaska	Mya	Gaper clams
Gulf of Alaska	Myctophidae	Lanternfishes
Gulf of Alaska	Myoxocephalus	Stellate sculpin
Gulf of Alaska	Mysida	Mysid shrimps
Gulf of Alaska	Mysidae	NA
Gulf of Alaska	Mytilidae	Mussel unid.
Gulf of Alaska	Mytilus	NA
Gulf of Alaska	Natica	NA
Gulf of Alaska	Naticidae	Moon snails
Gulf of Alaska	Nearchaster	NA
Gulf of Alaska	Nematoda	Roundworms
Gulf of Alaska	Nemertea	Ribbon worms
Gulf of Alaska	Nemichthyidae	Snipe eels
Gulf of Alaska	Neognathophausia	NA
Gulf of Alaska	Neomenia	NA
Gulf of Alaska	Neomeniomorpha	Solenogaster unidentified
Gulf of Alaska	Neptunea	True whelks
Gulf of Alaska	Notostomus	NA
Gulf of Alaska	Nucula	Nut clams
Gulf of Alaska	Nuculana	NA
Gulf of Alaska	Nudibranchia	Sea slugs
Gulf of Alaska	Octocorallia	Octocorals
Gulf of Alaska	Octopodidae	Octopus unid.
Gulf of Alaska	Octopus	NA
Gulf of Alaska	Odontohenricia	NA
Gulf of Alaska	Onchidiopsis	NA
Gulf of Alaska	Oncorhynchus	salmon unid.

Gulf of Alaska	Oneirodes	NA
Gulf of Alaska	Oneirodes thompsoni	Alaska dreamer
Gulf of Alaska	Oneirodidae	Dreamers
Gulf of Alaska	Ophiuroidea	Brittle stars
Gulf of Alaska	Opisthoproctidae	Barreleyes
Gulf of Alaska	Oregonia	NA
Gulf of Alaska	Orthasterias	NA
Gulf of Alaska	Osmeridae	Smelts
Gulf of Alaska	Paguridae	Hermit crabs
Gulf of Alaska	Pagurus	NA
Gulf of Alaska	Pandalidae	Pandalid shrimps
Gulf of Alaska	Pandalus	NA
Gulf of Alaska	Panomya	NA
Gulf of Alaska	Paracrangon sp.	NA
Gulf of Alaska	Paralepididae	Barracudinas
Gulf of Alaska	Paraliparis	NA
Gulf of Alaska	Paralithodes	NA
Gulf of Alaska	Paralithodes californiensis	California king crab
Gulf of Alaska	Parantipathes	NA
Gulf of Alaska	Parvamussium sp.	NA
Gulf of Alaska	Pasiphaeidae	Pasiphaeid shrimp unid.
Gulf of Alaska	Pectinidae	Scallops
Gulf of Alaska	Pedicellaster	NA
Gulf of Alaska	Penaeidae	Penaeid shrimps
Gulf of Alaska	Pennatuloidea	Sea pens
Gulf of Alaska	Petromyzontidae	Lampreys
Gulf of Alaska	Phyllolithodes	NA
Gulf of Alaska	Pisaster	NA
Gulf of Alaska	Platyhelminthes	Flatworms
Gulf of Alaska	Pleuronectidae	Righteye flounder unid.
Gulf of Alaska	Pleuronectiform larvae	NA
Gulf of Alaska	Plicifusus	NA
Gulf of Alaska	Pododesmus	NA
Gulf of Alaska	Polychaeta	Bristle worms
Gulf of Alaska	Polycheles	NA
Gulf of Alaska	Polycladida	Polyclad flatworm unid.
Gulf of Alaska	Polyplacophora	Chitons
Gulf of Alaska	Porifera	Sponges
Gulf of Alaska	Priapulida	Priapulid worms
Gulf of Alaska	Protomyctophum	NA
Gulf of Alaska	Pseudarchaster	NA

Gulf of Alaska	Psychrolutes	NA
Gulf of Alaska	Pteraster	Slime stars
Gulf of Alaska	Pugettia	kelp crab
Gulf of Alaska	Puncturella rothi	NA
Gulf of Alaska	Pycnogonida	Sea spiders
Gulf of Alaska	Pyrulofusus	NA
Gulf of Alaska	Raja	Skates
Gulf of Alaska	Rajidae	Skates
Gulf of Alaska	Retifusus sp.	NA
Gulf of Alaska	Rhinoliparis	NA
Gulf of Alaska	Rhynocrangon sp.	NA
Gulf of Alaska	Rouleina attrita	Softskin smooth-head
Gulf of Alaska	Salmonidae	Salmon and trouts unid.
Gulf of Alaska	Scabrotrophon	NA
Gulf of Alaska	Scleractinia	Hard corals
Gulf of Alaska	Sclerocrangon	NA
Gulf of Alaska	Scombridae	Mackerels, tuna, bonitos
Gulf of Alaska	Scopelosaurus harryi	Scaly paperbone
Gulf of Alaska	Scyphozoa	Jellyfishes
Gulf of Alaska	Sebastes	Rockfish
Gulf of Alaska	Sebastolobus	NA
Gulf of Alaska	Sergestes	NA
Gulf of Alaska	Serripes	NA
Gulf of Alaska	Siliqua	NA
Gulf of Alaska	Sipuncula	Peanut worms
Gulf of Alaska	Solaster	NA
Gulf of Alaska	Spirontocaris	NA
Gulf of Alaska	Stenobrachius	NA
Gulf of Alaska	Sternoptychidae	Hatchetfish unid.
Gulf of Alaska	Stichaeidae	Pricklebacks
Gulf of Alaska	Stichaeus punctatus	Arctic shanny
Gulf of Alaska	Strongylocentrotus	NA
Gulf of Alaska	Stylasterias	NA
Gulf of Alaska	Tarletonbeania	NA
Gulf of Alaska	Tellina	NA
Gulf of Alaska	Teredinidae	Shipworms
Gulf of Alaska	Thaliacea	Salp unid.
Gulf of Alaska	Tresus capax	Fat gaper
Gulf of Alaska	Triglops	NA
Gulf of Alaska	Velutina	NA
Gulf of Alaska	Volutomitra	NA

Gulf of Alaska	Volutopsius	NA
Gulf of Alaska	Xanthidae	Mud crabs
Gulf of Alaska	Yoldia	NA
Gulf of Alaska	Zoanthus	NA
Gulf of Alaska	Zoarcidae	Eelpouts
Gulf of Mexico	Abra sp.	NA
Gulf of Mexico	Acanthostracion	NA
Gulf of Mexico	Acetes sp.	NA
Gulf of Mexico	Achelous	NA
Gulf of Mexico	Acmaea	NA
Gulf of Mexico	Actaea	NA
Gulf of Mexico	Actinia	NA
Gulf of Mexico	Actiniaria	Sea anemones
Gulf of Mexico	Actiniidae	Actinid sea anemones unid.
Gulf of Mexico	Actinostolidae	NA
Gulf of Mexico	Aega	NA
Gulf of Mexico	Aequipecten	NA
Gulf of Mexico	Aequorea	NA
Gulf of Mexico	Aequoreidae	NA
Gulf of Mexico	Albula sp.	NA
Gulf of Mexico	Alcyonaria	NA
Gulf of Mexico	Alpheidae	Snapping shrimps
Gulf of Mexico	Alpheus	NA
Gulf of Mexico	Aluterus	NA
Gulf of Mexico	Americardia sp.	NA
Gulf of Mexico	Amphinomidae	NA
Gulf of Mexico	Amphiodia	NA
Gulf of Mexico	Amphiuridae	Burrowing brittle star unid.
Gulf of Mexico	Amusium	NA
Gulf of Mexico	Anadara	NA
Gulf of Mexico	Ancylopsetta	NA
Gulf of Mexico	Andvakiidae	NA
Gulf of Mexico	Annelida	Segmented worms
Gulf of Mexico	Anomura	NA
Gulf of Mexico	Anoplodactylus	NA
Gulf of Mexico	Antedonidae	NA
Gulf of Mexico	Antennarius	NA
Gulf of Mexico	Anthozoa	Sea anemones and corals
Gulf of Mexico	Antillophos	NA
Gulf of Mexico	Antipathes	NA
Gulf of Mexico	Antipathidae	NA

Gulf of Mexico	Aphrodita	Sea mice
Gulf of Mexico	Aphroditidae	Sea mice
Gulf of Mexico	Aplidium	Sea pork
Gulf of Mexico	Aplysia	Sea hares
Gulf of Mexico	Aplysiidae	NA
Gulf of Mexico	Apogon	NA
Gulf of Mexico	Apogonidae	Cardinalfishes
Gulf of Mexico	Apterichtus	NA
Gulf of Mexico	Arca	NA
Gulf of Mexico	Architectonicidae	NA
Gulf of Mexico	Ariomma	NA
Gulf of Mexico	Arthropoda	NA
Gulf of Mexico	Ascidia	Sea squirt
Gulf of Mexico	Ascidiacea	Sea squirts
Gulf of Mexico	Ascidiidae	NA
Gulf of Mexico	Asteroidea	Star fishes
Gulf of Mexico	Asteroporpa (Asteroporpa)	NA
Gulf of Mexico	Asteroschema	NA
Gulf of Mexico	Astrangia	NA
Gulf of Mexico	Astrapogon	NA
Gulf of Mexico	Astropecten	NA
Gulf of Mexico	Astropectinidae	NA
Gulf of Mexico	Astrophyton	NA
Gulf of Mexico	Atrina	NA
Gulf of Mexico	Aurelia	Moon jellyfishes
Gulf of Mexico	Axiopsis	NA
Gulf of Mexico	Bathophilus	NA
Gulf of Mexico	Bellator	NA
Gulf of Mexico	Beroe ovata	Brown comb jelly
Gulf of Mexico	Bivalvia	Bivalves
Gulf of Mexico	Blenniidae	Combtooth blennies
Gulf of Mexico	Blenniiformes	NA
Gulf of Mexico	Bothus	NA
Gulf of Mexico	Brachyura	NA
Gulf of Mexico	Bregmaceros	NA
Gulf of Mexico	Brevoortia	NA
Gulf of Mexico	Brissidae	NA
Gulf of Mexico	Bryozoa	Moss animals
Gulf of Mexico	Buccinidae	True whelks
Gulf of Mexico	Bursatella	NA
Gulf of Mexico	Busycon	True whelks

Gulf of Mexico	Calamus	NA
Gulf of Mexico	Calappa	NA
Gulf of Mexico	Calappidae	NA
Gulf of Mexico	Callechelys	NA
Gulf of Mexico	Calliactis	NA
Gulf of Mexico	Callinectes	NA
Gulf of Mexico	Calliostoma	NA
Gulf of Mexico	Calyptraeidae	Slipper limpets
Gulf of Mexico	Cancellaridae	NA
Gulf of Mexico	Cantharus	NA
Gulf of Mexico	Canthigaster	NA
Gulf of Mexico	Carangidae	Jacks and pompanos
Gulf of Mexico	Caranx	NA
Gulf of Mexico	Caretta caretta	Loggerhead turtle
Gulf of Mexico	Caridea	Shrimps
Gulf of Mexico	Carpilius sp.	NA
Gulf of Mexico	Cassianellidae	NA
Gulf of Mexico	Cassidae	NA
Gulf of Mexico	Cassis	NA
Gulf of Mexico	Caulolatilus	NA
Gulf of Mexico	Celieporidae	NA
Gulf of Mexico	Centropristis	NA
Gulf of Mexico	Cephalopoda	Squids octopuses, nautilus, and ammonites
Gulf of Mexico	Cerianthidae	NA
Gulf of Mexico	Cerithium	NA
Gulf of Mexico	Cerodrillia	NA
Gulf of Mexico	Chaetodon	NA
Gulf of Mexico	Chama	NA
Gulf of Mexico	Chamidae	NA
Gulf of Mexico	Cheilopogon	NA
Gulf of Mexico	Chicoreus	NA
Gulf of Mexico	Chilomycterus	NA
Gulf of Mexico	Chione	NA
Gulf of Mexico	Chiton	NA
Gulf of Mexico	Chloeia	NA
Gulf of Mexico	Choristodon	NA
Gulf of Mexico	Cidaridae	NA
Gulf of Mexico	Cirrhipathes	NA
Gulf of Mexico	Cirripedia	Barnacles
Gulf of Mexico	Citharichthys	NA
Gulf of Mexico	Cladocora	NA

Gulf of Mexico	Clavelina	NA
Gulf of Mexico	Clupeidae	Herrings menhadens, sardins,
		shads
Gulf of Mexico	Clypeaster	NA
Gulf of Mexico	Cnidaria	Jellyfish and alike
Gulf of Mexico	Collodes	NA
Gulf of Mexico	Comactinia	NA
Gulf of Mexico	Conus	Cone snails
Gulf of Mexico	Coralliidae	NA
Gulf of Mexico	Corbulidae	NA
Gulf of Mexico	Crassatellidae	NA
Gulf of Mexico	Crinoidea	Sea lilies and feather stars
Gulf of Mexico	Crustacea	Crustaceans
Gulf of Mexico	Ctenoides	NA
Gulf of Mexico	Ctenophora	Comb jellies
Gulf of Mexico	Cucumariidae	NA
Gulf of Mexico	Cyclopsetta	NA
Gulf of Mexico	Cymatium	NA
Gulf of Mexico	Cymothoa	NA
Gulf of Mexico	Cymothoidae	NA
Gulf of Mexico	Cynoglossidae	Tonguefishes
Gulf of Mexico	Cynoscion	NA
Gulf of Mexico	Cyphoma	NA
Gulf of Mexico	Cypraea	Cowries
Gulf of Mexico	Cypraeidae	NA
Gulf of Mexico	Dardanus	NA
Gulf of Mexico	Decapoda	Ten footed
Gulf of Mexico	Decapterus	NA
Gulf of Mexico	Dendostrea	NA
Gulf of Mexico	Dendrochirotidae	NA
Gulf of Mexico	Dendrodoris	NA
Gulf of Mexico	Dendronotidae	NA
Gulf of Mexico	Diadematidae	NA
Gulf of Mexico	Diaphus	NA
Gulf of Mexico	Diapterus	NA
Gulf of Mexico	Didemnidae	NA
Gulf of Mexico	Diogenidae	NA
Gulf of Mexico	Diplectrum	NA
Gulf of Mexico	Diplosoma	NA
Gulf of Mexico	Discodoris	NA
Gulf of Mexico	Distaplia	NA
Gulf of Mexico	Distorsio	NA

Gulf of Mexico	Dromiidae	Sponge crabs
Gulf of Mexico	Echeneis	NA
Gulf of Mexico	Echinaster	NA
Gulf of Mexico	Echinasteridae	NA
Gulf of Mexico	Echinodermata	Echinoderms
Gulf of Mexico	Echinoidea	Sea urchins
Gulf of Mexico	Echinomuricea	NA
Gulf of Mexico	Ectoprocta	NA
Gulf of Mexico	Ellisellidae	NA
Gulf of Mexico	Elysia	NA
Gulf of Mexico	Encope sp.	NA
Gulf of Mexico	Engraulidae	Anchovies
Gulf of Mexico	Ethusa	NA
Gulf of Mexico	Etropus	NA
Gulf of Mexico	Euchirograpsus sp.	NA
Gulf of Mexico	Eucidaris	NA
Gulf of Mexico	Eucinostomus	NA
Gulf of Mexico	Eucrassatella	NA
Gulf of Mexico	Eudistoma	NA
Gulf of Mexico	Eunice	NA
Gulf of Mexico	Eunicea	NA
Gulf of Mexico	Eunicidae	NA
Gulf of Mexico	Euphrosynoplax	NA
Gulf of Mexico	Euphylax	NA
Gulf of Mexico	Euryalida	NA
Gulf of Mexico	Euryalidae	NA
Gulf of Mexico	Euvola	NA
Gulf of Mexico	Exocoetidae	Flyingfishes
Gulf of Mexico	Fasciolaria	NA
Gulf of Mexico	Faviidae	NA
Gulf of Mexico	Felimare	NA
Gulf of Mexico	Ficus	NA
Gulf of Mexico	Fissurellidae	NA
Gulf of Mexico	Fistularia	NA
Gulf of Mexico	Frevillea	NA
Gulf of Mexico	Fusinus	NA
Gulf of Mexico	Gastropoda	Sea snails
Gulf of Mexico	Gillellus	NA
Gulf of Mexico	Glypturus	NA
Gulf of Mexico	Gobiidae	Gobies
Gulf of Mexico	Gobiiformes	NA

Gulf of Mexico	Goneplax	NA
Gulf of Mexico	Goniasteridae	NA
Gulf of Mexico	Gonodactylidae	NA
Gulf of Mexico	Gordiichthys	NA
Gulf of Mexico	Gorgonia	Sea fans
Gulf of Mexico	Gorgonidae	NA
Gulf of Mexico	Gorgonocephalidae	Basket stars
Gulf of Mexico	Gymnachirus	NA
Gulf of Mexico	Haemulon	NA
Gulf of Mexico	Halichoeres	NA
Gulf of Mexico	Haminoea sp.	NA
Gulf of Mexico	Harengula	NA
Gulf of Mexico	Helix	NA
Gulf of Mexico	Hermodice	NA
Gulf of Mexico	Hesionidae	NA
Gulf of Mexico	Hiatella	NA
Gulf of Mexico	Hippolytidae	Humpback prawns
Gulf of Mexico	Hirudinea	Leeches
Gulf of Mexico	Holacanthus	NA
Gulf of Mexico	Holothuria	NA
Gulf of Mexico	Holothuriidae	Sea cucumbers
Gulf of Mexico	Holothuroidea	Sea cucumbers
Gulf of Mexico	Homolidae	NA
Gulf of Mexico	Hoplunnis	NA
Gulf of Mexico	Hydrozoa	Hydroids
Gulf of Mexico	Hypleurochilus	NA
Gulf of Mexico	Hypoconcha	NA
Gulf of Mexico	Hypoplectrus	NA
Gulf of Mexico	Hypselodoris	NA
Gulf of Mexico	Iliacantha	NA
Gulf of Mexico	Inachidae	NA
Gulf of Mexico	Iridopagurus	NA
Gulf of Mexico	Isopoda	Pillbugs slaters, and woodlice
Gulf of Mexico	Isostichopus	NA
Gulf of Mexico	Laevicardium	NA
Gulf of Mexico	Lagocephalus	NA
Gulf of Mexico	Leiolambrus	NA
Gulf of Mexico	Lepidochelys kempii	Kemp's ridley turtle
Gulf of Mexico	Lepidophanes	NA
Gulf of Mexico	Lepophidium	NA
Gulf of Mexico	Leptogorgia	NA

Gulf of Mexico	Leucosiidae	NA
Gulf of Mexico	Libinia	Spider crabs
Gulf of Mexico	Lima	NA
Gulf of Mexico	Limaria	NA
Gulf of Mexico	Lirophora	NA
Gulf of Mexico	Lithophaga	NA
Gulf of Mexico	Livoneca	NA
Gulf of Mexico	Loliginidae	NA
Gulf of Mexico	Lolliguncula	NA
Gulf of Mexico	Lophius	NA
Gulf of Mexico	Luidia	NA
Gulf of Mexico	Lysmata	NA
Gulf of Mexico	Lytechinus	NA
Gulf of Mexico	Macoma	NA
Gulf of Mexico	Macrocoeloma	NA
Gulf of Mexico	Macrocypraea sp.	NA
Gulf of Mexico	Madracis	NA
Gulf of Mexico	Majidae	Spider crabs
Gulf of Mexico	Manucomplanus	NA
Gulf of Mexico	Megalobrachium	NA
Gulf of Mexico	Meiosquilla	NA
Gulf of Mexico	Mellita	NA
Gulf of Mexico	Melongenidae	NA
Gulf of Mexico	Menippe	NA
Gulf of Mexico	Metapenaeus sp.	NA
Gulf of Mexico	Microgobius	NA
Gulf of Mexico	Mithrax	NA
Gulf of Mexico	Molgula	NA
Gulf of Mexico	Molgula occidentalis	NA
Gulf of Mexico	Mollusca	Molluscs
Gulf of Mexico	Molpadia	NA
Gulf of Mexico	Molpadiidae	NA
Gulf of Mexico	Molpidida	NA
Gulf of Mexico	Monacanthus	NA
Gulf of Mexico	Moreiradromia	NA
Gulf of Mexico	Mugil	NA
Gulf of Mexico	Mullidae	NA
Gulf of Mexico	Mullus	NA
Gulf of Mexico	Munida	NA
Gulf of Mexico	Murex	Murex snails
Gulf of Mexico	Muricidae	Murex snails

Gulf of Mexico	Mustelus	NA
Gulf of Mexico	Mycteroperca	NA
Gulf of Mexico	Myctophidae	Lanternfishes
Gulf of Mexico	Narcine	NA
Gulf of Mexico	Natica	NA
Gulf of Mexico	Nematoda	Roundworms
Gulf of Mexico	Nemausa	NA
Gulf of Mexico	Nemertea	Ribbon worms
Gulf of Mexico	Neogastropoda	Neogastropods whelks & cone shells
Gulf of Mexico	Neopanope	NA
Gulf of Mexico	Nephropsis	NA
Gulf of Mexico	Nereididae	Ragworms
Gulf of Mexico	Nodipecten	NA
Gulf of Mexico	Nudibranchia	Sea slugs
Gulf of Mexico	Octopus	NA
Gulf of Mexico	Oliva	Olive snails
Gulf of Mexico	Olividae	NA
Gulf of Mexico	Ophiactis	NA
Gulf of Mexico	Ophichthidae	Snake eels
Gulf of Mexico	Ophichthus	NA
Gulf of Mexico	Ophidiidae	Cusk eels
Gulf of Mexico	Ophidion	Cusk eels
Gulf of Mexico	Ophioblennius	NA
Gulf of Mexico	Ophioderma	NA
Gulf of Mexico	Ophiodermatidae	NA
Gulf of Mexico	Ophiolepididae	NA
Gulf of Mexico	Ophiolepis	NA
Gulf of Mexico	Ophiomyxa	NA
Gulf of Mexico	Ophiomyxidae	NA
Gulf of Mexico	Ophiothrix	NA
Gulf of Mexico	Ophiotrichidae	NA
Gulf of Mexico	Ophiura	NA
Gulf of Mexico	Ophiuroidea	Brittle stars
Gulf of Mexico	Opisthobranchia	Sea slugs
Gulf of Mexico	Opistognathus	NA
Gulf of Mexico	Opsanus	Toadfish
Gulf of Mexico	Pachycheles	NA
Gulf of Mexico	Pagrus	NA
Gulf of Mexico	Paguridae	Hermit crabs
Gulf of Mexico	Paguristes	NA
Gulf of Mexico	Paguroidea	NA

Gulf of Mexico	Pagurus	NA
Gulf of Mexico	Palaemon	NA
Gulf of Mexico	Palaemonidae	NA
Gulf of Mexico	Palaeomutelidae	NA
Gulf of Mexico	Palicidae	Stilt crabs
Gulf of Mexico	Palicus	NA
Gulf of Mexico	Papyridea	NA
Gulf of Mexico	Paraconger	NA
Gulf of Mexico	Paralichthyidae	Large tooth flounders
Gulf of Mexico	Paralichthys	Flounders
Gulf of Mexico	Paranthus	NA
Gulf of Mexico	Parapenaeus	NA
Gulf of Mexico	Pareques	NA
Gulf of Mexico	Parexocoetus	NA
Gulf of Mexico	Parthenope	NA
Gulf of Mexico	Parthenopidae	Elbow crabs
Gulf of Mexico	Pasiphaeidae	Pasiphaeid shrimp unid.
Gulf of Mexico	Pecten	NA
Gulf of Mexico	Pectinidae	Scallops
Gulf of Mexico	Penaeidae	Penaeid shrimps
Gulf of Mexico	Penaeopsis	NA
Gulf of Mexico	Penaeus	NA
Gulf of Mexico	Pennatula	NA
Gulf of Mexico	Pennatulidae	Pennatulid sea pens
Gulf of Mexico	Perciformes	NA
Gulf of Mexico	Periclimenaeus sp.	NA
Gulf of Mexico	Periclimenes	NA
Gulf of Mexico	Persephona	NA
Gulf of Mexico	Petrolisthes	NA
Gulf of Mexico	Phaeophyceae	NA
Gulf of Mexico	Phaeoptyx	NA
Gulf of Mexico	Phallusia	NA
Gulf of Mexico	Phimochirus	NA
Gulf of Mexico	Phoxichilidiidae	NA
Gulf of Mexico	Phyllonotus	NA
Gulf of Mexico	Pilumnus	NA
Gulf of Mexico	Pinctada	NA
Gulf of Mexico	Pinnidae	NA
Gulf of Mexico	Pinnotheres sp.	NA
Gulf of Mexico	Pinnotheridae	NA
Gulf of Mexico	Pitar	NA

Gulf of Mexico	Pitho	NA
Gulf of Mexico	Platylambrus	NA
Gulf of Mexico	Plesionika	NA
Gulf of Mexico	Pleurobrachiidae	NA
Gulf of Mexico	Pleurobranchaea	NA
Gulf of Mexico	Pleurobranchidae	NA
Gulf of Mexico	Pleurobranchus	NA
Gulf of Mexico	Pleurogona sp.	NA
Gulf of Mexico	Plexaura	NA
Gulf of Mexico	Plexauridae	Plexaurid corals
Gulf of Mexico	Podochela	NA
Gulf of Mexico	Polycarpa	NA
Gulf of Mexico	Polyceridae	NA
Gulf of Mexico	Polychaeta	Bristle worms
Gulf of Mexico	Polyclinidae	NA
Gulf of Mexico	Polynoidae	Scaleworms
Gulf of Mexico	Polystira	NA
Gulf of Mexico	Pomacanthidae	NA
Gulf of Mexico	Porcellana	NA
Gulf of Mexico	Porcellanidae	Porcelain crabs
Gulf of Mexico	Porifera	Sponges
Gulf of Mexico	Portunidae	Swimming crabs
Gulf of Mexico	Portunus	NA
Gulf of Mexico	Prionotus	NA
Gulf of Mexico	Procambarus clarkii	Red swamp crayfish
Gulf of Mexico	Processa	NA
Gulf of Mexico	Prognichthys	NA
Gulf of Mexico	Psenes maculatus	NA
Gulf of Mexico	Pseudochama	NA
Gulf of Mexico	Pseudomyrophis sp.	NA
Gulf of Mexico	Pseudoplexaura	NA
Gulf of Mexico	Pseudopterogorgia sp.	NA
Gulf of Mexico	Pseudorhombila	NA
Gulf of Mexico	Ptereleotris	NA
Gulf of Mexico	Pteriidae	NA
Gulf of Mexico	Pterois	NA
Gulf of Mexico	Pycnogonidae	NA
Gulf of Mexico	Pyrosoma	NA
Gulf of Mexico	Rajidae	Skates
Gulf of Mexico	Ranilia	NA
Gulf of Mexico	Raninoides	NA

Gulf of Mexico	Raymanninus sp.	NA
Gulf of Mexico	Renilla	Sea pansies
Gulf of Mexico	Renillidae	NA
Gulf of Mexico	Rhinoptera	NA
Gulf of Mexico	Rhodomelaceae	NA
Gulf of Mexico	Rhodophyta	NA
Gulf of Mexico	Rhynchoconger	NA
Gulf of Mexico	Rimapenaeus	NA
Gulf of Mexico	Salpa	NA
Gulf of Mexico	Salpidae	NA
Gulf of Mexico	Sardinella	NA
Gulf of Mexico	Sargassum	NA
Gulf of Mexico	Sargocentron	NA
Gulf of Mexico	Scalpellidae	NA
Gulf of Mexico	Scalpellum	NA
Gulf of Mexico	Schizaster	NA
Gulf of Mexico	Schizoporaellidae	NA
Gulf of Mexico	Scleractinia	Hard corals
Gulf of Mexico	Sconsia	NA
Gulf of Mexico	Scorpaena	NA
Gulf of Mexico	Scorpaenidae	Scorpionfishes rockfishes
Gulf of Mexico	Scyllarides	NA
Gulf of Mexico	Scyllarus	NA
Gulf of Mexico	Scyphozoa	Jellyfishes
Gulf of Mexico	Semirossia	NA
Gulf of Mexico	Seriola	NA
Gulf of Mexico	Serpulidae	Calcareous tubeworms
Gulf of Mexico	Serranidae	Seabasses (groupers and fairy
0 10 03 5		basslets)
Gulf of Mexico	Serranus	NA
Gulf of Mexico	Sicyonia	NA
Gulf of Mexico	Sipunculidae	NA
Gulf of Mexico	Solenastrea	NA
Gulf of Mexico	Solenocera	NA
Gulf of Mexico	Solenoceridae	NA
Gulf of Mexico	Sphoeroides	NA
Gulf of Mexico	Sphyraena	NA
Gulf of Mexico	Spondylus	NA
Gulf of Mexico	Squilla	NA
Gulf of Mexico	Squillidae	NA
Gulf of Mexico	Stenocionops	NA
Gulf of Mexico	Stenopus	NA

Gulf of Mexico	Stenorhynchus	NA
Gulf of Mexico	Stephanolepis	NA
Gulf of Mexico	Stichopathes	NA
Gulf of Mexico	Stichopodidae	NA
Gulf of Mexico	Stichopus	NA
Gulf of Mexico	Stomatopoda	Mantis shrimp
Gulf of Mexico	Styela	NA
Gulf of Mexico	Styelidae	NA
Gulf of Mexico	Syacium	NA
Gulf of Mexico	Symphurus	NA
Gulf of Mexico	Synagrops	NA
Gulf of Mexico	Synallactidae	NA
Gulf of Mexico	Synalpheus	NA
Gulf of Mexico	Syngnathus	NA
Gulf of Mexico	Synodontidae	NA
Gulf of Mexico	Synodus	NA
Gulf of Mexico	Tagelus	NA
Gulf of Mexico	Terebellidae	NA
Gulf of Mexico	Tethyaster	NA
Gulf of Mexico	Thor sp.	NA
Gulf of Mexico	Trachycardium	NA
Gulf of Mexico	Trash	Trash
Gulf of Mexico	Trochidae	Top shells
Gulf of Mexico	Trochus	NA
Gulf of Mexico	Tunicata	Sea squirts
Gulf of Mexico	Turbinidae	NA
Gulf of Mexico	Turbo	NA
Gulf of Mexico	Turritella sp.	NA
Gulf of Mexico	Tyche	NA
Gulf of Mexico	Umbellulidae	NA
Gulf of Mexico	Umbraculum	NA
Gulf of Mexico	Unidentified fish	NA
Gulf of Mexico	Unidentified specimen	NA
Gulf of Mexico	Urobatis	NA
Gulf of Mexico	Urophycis	NA
Gulf of Mexico	Varicorbula	NA
Gulf of Mexico	Vermicularia	NA
Gulf of Mexico	Xanthidae	Mud crabs
Gulf of Mexico	Xanthoidea	NA
Gulf of Mexico	Xyrichtys	NA
Gulf of Mexico	Zoantharia	NA

Northeast US Fall	Abudefduf saxatilis	Sergeant major
Northeast US Fall	Acanthostracion quadricornis	Scrawled cowfish
Northeast US Fall	Acanthurus bahianus	Barber surgeonfish
Northeast US Fall	Acanthurus chirurgus	Doctorfish
Northeast US Fall	Acanthurus coeruleus	Blue tang surgeonfish
Northeast US Fall	Aetobatus narinari	Spotted eagle ray
Northeast US Fall	Alepocephalidae	Slickheads
Northeast US Fall	Ancylopsetta dilecta	Three-eye flounder
Northeast US Fall	Anguilliformes	NA
Northeast US Fall	Apeltes quadracus	Fourspine stickleback
Northeast US Fall	Apogon maculatus	Flamefish
Northeast US Fall	Apogonidae	Cardinalfishes
Northeast US Fall	Ariopsis felis	Hardhead catfish
Northeast US Fall	Artediellus	NA
Northeast US Fall	Asterozoa	NA
Northeast US Fall	Atherinidae	NA
Northeast US Fall	Aulostomus maculatus	Trumpetfish
Northeast US Fall	Bagre marinus	Gafftopsail catfish
Northeast US Fall	Balistidae	NA
Northeast US Fall	Bellator egretta	Streamer searobin
Northeast US Fall	Benthosema glaciale	Glacier lantern fish
Northeast US Fall	Blenniidae	Combtooth blennies
Northeast US Fall	Bothidae	Lefteye flounders
Northeast US Fall	Bothus lunatus	Plate fish
Northeast US Fall	Bothus ocellatus	Eyed flounder
Northeast US Fall	Bothus robinsi	Twospot flounder
Northeast US Fall	Calamus bajonado	Jolthead porgy
Northeast US Fall	Calamus calamus	Saucereye porgy
Northeast US Fall	Calamus nodosus	Knobbed porgy
Northeast US Fall	Calamus penna	Sheepshead porgy
Northeast US Fall	Calamus proridens	Littlehead porgy
Northeast US Fall	Calappidae	NA
Northeast US Fall	Cancridae	NA
Northeast US Fall	Canthidermis sufflamen	Ocean triggerfish
Northeast US Fall	Canthigaster rostrata	Caribbean sharpnose-puffer
Northeast US Fall	Caproidae	NA
Northeast US Fall	Carangidae	Jacks and pompanos
Northeast US Fall	Caranx ruber	Bar jack
Northeast US Fall	Carcharhinidae	Requiem sharks
Northeast US Fall	Careproctus ranula	Scotian snailfish
Northeast US Fall	Caretta caretta	Loggerhead turtle

Northeast US Fall	Cephalopoda	Squids octopuses, nautilus, and ammonites
Northeast US Fall	Chaetodon striatus	Banded butterflyfish
Northeast US Fall	Chaetodontidae	NA
Northeast US Fall	Chlorophthalmidae	Greeneyes
Northeast US Fall	Chlorophthalmus	NA
Northeast US Fall	Chromis enchrysurus	Yellowtail reeffish
Northeast US Fall	Citharichthys	NA
Northeast US Fall	Citharichthys gymnorhinus	Anglefin whiff
Northeast US Fall	Clepticus parrae	Creole wrasse
Northeast US Fall	Clinidae	NA
Northeast US Fall	Clupeidae	Herrings menhadens, sardins, shads
Northeast US Fall	Clypeasteroida	Sea biscuits
Northeast US Fall	Congridae	NA
Northeast US Fall	Corniger spinosus	Spinycheek soldierfish
Northeast US Fall	Cottidae	Sculpins
Northeast US Fall	Crustacea shrimp	Crustacean shrimp
Northeast US Fall	Cyclopteridae	Lumpfishes
Northeast US Fall	Cynoscion arenarius	Sand weakfish
Northeast US Fall	Cynoscion nebulosus	Spotted weakfish
Northeast US Fall	Decodon puellaris	Red hogfish
Northeast US Fall	Diaphus	NA
Northeast US Fall	Diaphus dumerilii	Dumeril's lanternfish
Northeast US Fall	Diodon holocanthus	Longspined porcupinefish
Northeast US Fall	Diodon hystrix	Spot fin porcupinefish
Northeast US Fall	Echinoidea	Sea urchins
Northeast US Fall	Echiophis	NA
Northeast US Fall	Echiophis intertinctus	Spotted spoon-nose eel
Northeast US Fall	Elagatis bipinnulata	Rainbow runner
Northeast US Fall	Elops saurus	Ladyfish
Northeast US Fall	Engraulidae	Anchovies
Northeast US Fall	Epinephelus guttatus	Red hind
Northeast US Fall	Epinephelus morio	Red grouper
Northeast US Fall	Eques lanceolatus	Jackknife-fish
Northeast US Fall	Etropus	NA
Northeast US Fall	Etropus rimosus	Gray flounder
Northeast US Fall	Euleptorhamphus velox	Flying halfbeak
Northeast US Fall	Eumecichthys fiski	Unicorn crestfish
Northeast US Fall	Fenestraja plutonia	Pluto skate
Northeast US Fall	Fistularia	NA
Northeast US Fall	Fowlerichthys ocellatus	Ocellated frogfish

Northeast US Fall	Gadidae	Cods and haddocks
Northeast US Fall	Galatheidae	Galatheid crab unid.
Northeast US Fall	Gastropsetta frontalis	Shrimp flounder
Northeast US Fall	Gerreidae	NA
Northeast US Fall	Gobiidae	Gobies
Northeast US Fall	Gonostomatidae	Bristlemouths
Northeast US Fall	Gymnothorax moringa	Spotted moray
Northeast US Fall	Gymnothorax nigromarginatus	Blackedge moray
Northeast US Fall	Gymnothorax saxicola	Honeycomb moray
Northeast US Fall	Haemulidae	NA
Northeast US Fall	Haemulon plumierii	White grunt
Northeast US Fall	Haemulon striatum	Striped grunt
Northeast US Fall	Halichoeres bathyphilus	Greenband wrasse
Northeast US Fall	Halichoeres radiatus	Puddingwife wrasse
Northeast US Fall	Histrio histrio	Sargassumfish
Northeast US Fall	Holacanthus bermudensis	Blue angelfish
Northeast US Fall	Holacanthus ciliaris	Queen angelfish
Northeast US Fall	Holocentridae	NA
Northeast US Fall	Holocentrus adscensionis	Squirrelfish
Northeast US Fall	Holocentrus rufus	Longspine squirrelfish
Northeast US Fall	Hypleurochilus geminatus	Crested blenny
Northeast US Fall	Hyporthodus flavolimbatus	Yellowedge grouper
Northeast US Fall	Hyporthodus mystacinus	Misty grouper
Northeast US Fall	Jenkinsia lamprotaenia	Dwarf round herring
Northeast US Fall	Kajikia albida	Atlantic white marlin
Northeast US Fall	Labridae	NA
Northeast US Fall	Lactophrys trigonus	Buffalo trunkfish
Northeast US Fall	Lepophidium jeannae	Mottled cusk-eel
Northeast US Fall	Lophiiformes	NA
Northeast US Fall	Lutjanidae	Snappers
Northeast US Fall	Lutjanus analis	Mutton snapper
Northeast US Fall	Lutjanus vivanus	Silk snapper
Northeast US Fall	Lycodes reticulatus	Arctic eelpout
Northeast US Fall	Macrouridae	Grenadiers
Northeast US Fall	Majidae	Spider crabs
Northeast US Fall	Malacanthus plumieri	Sand tilefish
Northeast US Fall	Mallotus villosus	Capelin
Northeast US Fall	Membras martinica	Rough silverside
Northeast US Fall	Merluccius	NA
Northeast US Fall	Mobula birostris	Giant manta
Northeast US Fall	Moridae	NA

Northeast US Fall	Mugil cephalus	Flathead grey mullet
Northeast US Fall	Muraenidae	NA
Northeast US Fall	Mycteroperca bonaci	Black grouper
Northeast US Fall	Mycteroperca interstitialis	Yellowmouth grouper
Northeast US Fall	Mycteroperca phenax	Scamp
Northeast US Fall	Myctophidae	Lanternfishes
Northeast US Fall	Myripristis jacobus	Blackbar soldierfish
Northeast US Fall	Narcine brasiliensis	Brazilian electric ray
Northeast US Fall	Naticidae	Moon snails
Northeast US Fall	Nicholsina usta	Emerald parrotfish
Northeast US Fall	Octopoda	Octopuses
Northeast US Fall	Ogcocephalidae	Batfishes
Northeast US Fall	Ogcocephalus corniger	Longnose batfish
Northeast US Fall	Ogcocephalus parvus	Roughback batfish
Northeast US Fall	Oligoplites saurus	Leatherjacket
Northeast US Fall	Ophichthidae	Snake eels
Northeast US Fall	Ophichthus gomesii	Shrimp eel
Northeast US Fall	Ophidiidae	Cusk eels
Northeast US Fall	Opsanus pardus	Leopard toadfish
Northeast US Fall	Ostichthys trachypoma	Bigeye soldierfish
Northeast US Fall	Ovalipes	NA
Northeast US Fall	Paguroidea	NA
Northeast US Fall	Panulirus argus	Caribbean spiny lobster
Northeast US Fall	Parablennius marmoreus	Seaweed blenny
Northeast US Fall	Paralepididae	Barracudinas
Northeast US Fall	Paralichthys	Flounders
Northeast US Fall	Paralichthys albigutta	Gulf flounder
Northeast US Fall	Paralichthys squamilentus	Broad flounder
Northeast US Fall	Penaeus	NA
Northeast US Fall	Penaeus duorarum	Pink shrimp
Northeast US Fall	Phocoena phocoena	Harbour porpoise
Northeast US Fall	Placopecten magellanicus clapper	Atlantic sea scallop
Northeast US Fall	Pleuronectidae	Righteye flounder unid.
Northeast US Fall	Pleuronectiformes	Flatfish
Northeast US Fall	Pomacanthus arcuatus	Gray angelfish
Northeast US Fall	Pomacentridae	NA
Northeast US Fall	Portunidae	Swimming crabs
Northeast US Fall	Prionotus longispinosus	Bigeye searobin
Northeast US Fall	Prionotus paralatus	Mexican searobin
Northeast US Fall	Prognathodes aculeatus	Longsnout butterflyfish
Northeast US Fall	Prognathodes aya	Bank butterflyfish

Northeast US Fall	Pronotogrammus martinicensis	Roughtongue bass
Northeast US Fall	Raja	Skates
Northeast US Fall	Rajiformes	NA
Northeast US Fall	Rypticus subbifrenatus	Spotted soapfish
Northeast US Fall	Saurida brasiliensis	Largescale lizardfish
Northeast US Fall	Scaridae	NA
Northeast US Fall	Schultzea beta	School bass
Northeast US Fall	Sciaenidae	NA
Northeast US Fall	Scomberomorus regalis	Cero
Northeast US Fall	Scombridae	Mackerels, tuna, bonitos
Northeast US Fall	Scorpaena dispar	Hunchback scorpionfish
Northeast US Fall	Scorpaena plumieri	Spotted scorpionfish
Northeast US Fall	Scorpaenidae	Scorpionfishes rockfishes
Northeast US Fall	Scyllarides aequinoctialis	Spanish slipper lobster
Northeast US Fall	Selachimorpha	NA
Northeast US Fall	Sepiolidae	NA
Northeast US Fall	Serranidae	Seabasses (groupers and fairy basslets)
Northeast US Fall	Serranus notospilus	Saddle bass
Northeast US Fall	Sparidae	Porgies
Northeast US Fall	Sphyraena	NA
Northeast US Fall	Sphyraena barracuda	Great barracuda
Northeast US Fall	Sphyrna mokarran	Great hammerhead
Northeast US Fall	Sphyrna tiburo	Bonnethead
Northeast US Fall	Sphyrna zygaena	Smooth hammerhead
Northeast US Fall	Squalidae	NA
Northeast US Fall	Sternoptychidae	Hatchetfish unid.
Northeast US Fall	Stomatopoda	Mantis shrimp
Northeast US Fall	Stomiidae	NA
Northeast US Fall	Stromateidae	NA
Northeast US Fall	Syacium gunteri	Shoal flounder
Northeast US Fall	Symphurus	NA
Northeast US Fall	Syngnathidae	Pipefishes and seahorses
Northeast US Fall	Syngnathus louisianae	Chain pipefish
Northeast US Fall	Synodontidae	NA
Northeast US Fall	Tetraodontidae	Puffers
Northeast US Fall	Trachinotus falcatus	Permit
Northeast US Fall	Trichiuridae	NA
Northeast US Fall	Triglidae	NA
Northeast US Fall	Tylosurus crocodilus	Hound needlefish
Northeast US Fall	Uranoscopidae	NA
Northeast US Fall	Urophycis	NA

Northeast US Fall	Vinciguerria	NA
Northeast US Fall	Zoarcidae	Eelpouts
Northeast US Spring	Acanthostracion polygonium	Honeycomb cowfish
Northeast US Spring	Acanthostracion quadricornis	Scrawled cowfish
Northeast US Spring	Acanthurus bahianus	Barber surgeonfish
Northeast US Spring	Aetobatus narinari	Spotted eagle ray
Northeast US Spring	Alepisaurus ferox	Long snouted lancetfish
Northeast US Spring	Alepocephalidae	Slickheads
Northeast US Spring	Aluterus heudelotii	Dotterel filefish
Northeast US Spring	Aluterus monoceros	Unicorn leatherjacket filefish
Northeast US Spring	Aluterus schoepfii	Orange filefish
Northeast US Spring	Aluterus scriptus	Scribbled leatherjacket filefish
Northeast US Spring	Anchoa lyolepis	Shortfinger anchovy
Northeast US Spring	Ancylopsetta dilecta	Three-eye flounder
Northeast US Spring	Anguilliformes	NA
Northeast US Spring	Apeltes quadracus	Fourspine stickleback
Northeast US Spring	Apogonidae	Cardinalfishes
Northeast US Spring	Ariomma regulus	Spotted driftfish
Northeast US Spring	Ariopsis felis	Hardhead catfish
Northeast US Spring	Ariosoma balearicum	Bandtooth conger
Northeast US Spring	Artediellus	NA
Northeast US Spring	Asterozoa	NA
Northeast US Spring	Astropecten	NA
Northeast US Spring	Atherinidae	NA
Northeast US Spring	Aulostomus maculatus	Trumpetfish
Northeast US Spring	Balistes capriscus	Gray triggerfish
Northeast US Spring	Balistes vetula	Queen triggerfish
Northeast US Spring	Balistidae	NA
Northeast US Spring	Bellator brachychir	Shortfin searobin
Northeast US Spring	Bellator egretta	Streamer searobin
Northeast US Spring	Bellator militaris	Horned searobin
Northeast US Spring	Blenniidae	Combtooth blennies
Northeast US Spring	Bothidae	Lefteye flounders
Northeast US Spring	Bothus ocellatus	Eyed flounder
Northeast US Spring	Bothus robinsi	Twospot flounder
Northeast US Spring	Brama brama	Atlantic pomfret
Northeast US Spring	Calamus calamus	Saucereye porgy
Northeast US Spring	Calamus nodosus	Knobbed porgy
Northeast US Spring	Calamus penna	Sheepshead porgy
Northeast US Spring	Calappidae	NA
Northeast US Spring	Cancridae	NA

Northeast US Spring	Canthidermis sufflamen	Ocean triggerfish
Northeast US Spring	Canthigaster rostrata	Caribbean sharpnose-puffer
Northeast US Spring	Caproidae	NA
Northeast US Spring	Carangidae	Jacks and pompanos
Northeast US Spring	Carapus bermudensis	Pearlfish
Northeast US Spring	Carcharhinidae	Requiem sharks
Northeast US Spring	Carcharhinus acronotus	Blacknose shark
Northeast US Spring	Carcharhinus falciformis	Silky shark
Northeast US Spring	Caretta caretta	Loggerhead turtle
Northeast US Spring	Cephalopoda	Squids octopuses, nautilus, and ammonites
Northeast US Spring	Chaetodipterus faber	Atlantic spadefish
Northeast US Spring	Chaetodon ocellatus	Spotfin butterflyfish
Northeast US Spring	Chaetodon sedentarius	Reef butterflyfish
Northeast US Spring	Chaetodon striatus	Banded butterflyfish
Northeast US Spring	Chilomycterus reticulatus	Spotfin burrfish
Northeast US Spring	Chilomycterus schoepfii	Striped burrfish
Northeast US Spring	Chlamys islandica clapper	NA
Northeast US Spring	Chlorophthalmidae	Greeneyes
Northeast US Spring	Chlorophthalmus	NA
Northeast US Spring	Chromis enchrysurus	Yellowtail reeffish
Northeast US Spring	Citharichthys	NA
Northeast US Spring	Citharichthys gymnorhinus	Anglefin whiff
Northeast US Spring	Citharichthys spilopterus	Bay whiff
Northeast US Spring	Clupeidae	Herrings menhadens, sardins, shads
Northeast US Spring	Congridae	NA
Northeast US Spring	Coryphaena hippurus	Common dolphinfish
Northeast US Spring	Cottidae	Sculpins
Northeast US Spring	Crustacea shrimp	Crustacean shrimp
Northeast US Spring	Cyclopteridae	Lumpfishes
Northeast US Spring	Cynoscion nebulosus	Spotted weakfish
Northeast US Spring	Dactylopterus volitans	Flying gurnard
Northeast US Spring	Decodon puellaris	Red hogfish
Northeast US Spring	Diaphus	NA
Northeast US Spring	Diaphus dumerilii	Dumeril's lanternfish
Northeast US Spring	Diodon holocanthus	Longspined porcupinefish
Northeast US Spring	Diplectrum formosum	Sand perch
Northeast US Spring	Diplodus holbrookii	Spottail seabream
Northeast US Spring	Dorosoma cepedianum	American gizzard shad
Northeast US Spring	Echeneis naucrates	Sharksucker
Northeast US Spring		

Northeast US Spring	Echiophis intertinctus	Spotted spoon-nose eel
Northeast US Spring	Engraulidae	Anchovies
Northeast US Spring	Engraulis eurystole	Silver anchovy
Northeast US Spring	Epinephelus adscensionis	Rock hind
Northeast US Spring	Epinephelus guttatus	Red hind
Northeast US Spring	Epinephelus morio	Red grouper
Northeast US Spring	Eques lanceolatus	Jackknife-fish
Northeast US Spring	Etropus	NA
Northeast US Spring	Eumecichthys fiski	Unicorn crestfish
Northeast US Spring	Fistularia	NA
Northeast US Spring	Fistularia petimba	Red cornetfish
Northeast US Spring	Fistularia tabacaria	Cornetfish
Northeast US Spring	Gadidae	Cods and haddocks
Northeast US Spring	Galatheidae	Galatheid crab unid.
Northeast US Spring	Galeocerdo cuvier	Tiger shark
Northeast US Spring	Gastropsetta frontalis	Shrimp flounder
Northeast US Spring	Gobiidae	Gobies
Northeast US Spring	Gonostomatidae	Bristlemouths
Northeast US Spring	Grammatidae	NA
Northeast US Spring	Gymnachirus melas	Naked sole
Northeast US Spring	Gymnothorax moringa	Spotted moray
Northeast US Spring	Gymnothorax nigromarginatus	Blackedge moray
Northeast US Spring	Gymnothorax saxicola	Honeycomb moray
Northeast US Spring	Haemulon aurolineatum	Tomtate grunt
Northeast US Spring	Haemulon plumierii	White grunt
Northeast US Spring	Haemulon striatum	Striped grunt
Northeast US Spring	Halichoeres bivittatus	Slippery dick
Northeast US Spring	Heteropriacanthus cruentatus	Glasseye snapper
Northeast US Spring	Holacanthus bermudensis	Blue angelfish
Northeast US Spring	Holocentridae	NA
Northeast US Spring	Holocentrus adscensionis	Squirrelfish
Northeast US Spring	Hypanus sabinus	Atlantic stingray
Northeast US Spring	Hypleurochilus geminatus	Crested blenny
Northeast US Spring	Hyporthodus nigritus	Warsaw grouper
Northeast US Spring	Hyporthodus niveatus	Snowy grouper
Northeast US Spring	Labridae	NA
Northeast US Spring	Lachnolaimus maximus	Hogfish
Northeast US Spring	Lepidochelys kempii	Kemp's ridley turtle
Northeast US Spring	Lepophidium jeannae	Mottled cusk-eel
Northeast US Spring	Lophiiformes	NA
Northeast US Spring	Lutjanidae	Snappers

Northeast US Spring	Lutjanus campechanus	Red snapper
Northeast US Spring	Lutjanus synagris	Lane snapper
Northeast US Spring	Lycodes reticulatus	Arctic eelpout
Northeast US Spring	Macrouridae	Grenadiers
Northeast US Spring	Majidae	Spider crabs
Northeast US Spring	Merluccius	NA
Northeast US Spring	Microgadus tomcod	Atlantic tomcod
Northeast US Spring	Mola mola	Ocean sunfish
Northeast US Spring	Monacanthus ciliatus	Fringed filefish
Northeast US Spring	Moridae	NA
Northeast US Spring	Morone americana	White perch
Northeast US Spring	Muraenidae	NA
Northeast US Spring	Mycteroperca interstitialis	Yellowmouth grouper
Northeast US Spring	Mycteroperca microlepis	Gag
Northeast US Spring	Mycteroperca phenax	Scamp
Northeast US Spring	Myctophidae	Lanternfishes
Northeast US Spring	Myripristis jacobus	Blackbar soldierfish
Northeast US Spring	Narcine brasiliensis	Brazilian electric ray
Northeast US Spring	Octopoda	Octopuses
Northeast US Spring	Ocyurus chrysurus	Yellowtail snapper
Northeast US Spring	Ogcocephalidae	Batfishes
Northeast US Spring	Ophichthidae	Snake eels
Northeast US Spring	Ophichthus gomesii	Shrimp eel
Northeast US Spring	Ophichthus puncticeps	Palespotted eel
Northeast US Spring	Ophidiidae	Cusk eels
Northeast US Spring	Ophidion josephi	Crested cusk-eel
Northeast US Spring	Ophidion selenops	Mooneye cusk-eel
Northeast US Spring	Opsanus tau	Oyster toadfish
Northeast US Spring	Ovalipes	NA
Northeast US Spring	Pagrus pagrus	Red porgy
Northeast US Spring	Panulirus argus	Caribbean spiny lobster
Northeast US Spring	Paralepididae	Barracudinas
Northeast US Spring	Paralichthys	Flounders
Northeast US Spring	Paralichthys lethostigma	Southern flounder
Northeast US Spring	Paralichthys squamilentus	Broad flounder
Northeast US Spring	Paranthias furcifer	Creole fish
Northeast US Spring	Pareques acuminatus	High hat
Northeast US Spring	Penaeus	NA
Northeast US Spring	Peprilus paru	Harvestfish
Northeast US Spring	Phocoena phocoena	Harbour porpoise
Northeast US Spring	Pleuronectidae	Righteye flounder unid.

Northeast US Spring	Pleuronectiformes	Flatfish
Northeast US Spring	Pomacentridae	NA
Northeast US Spring	Portunidae	Swimming crabs
Northeast US Spring	Prionotus ophryas	Bandtail searobin
Northeast US Spring	Prionotus roseus	Bluespotted searobin
Northeast US Spring	Pristipomoides aquilonaris	Wenchman
Northeast US Spring	Prognathodes aya	Bank butterflyfish
Northeast US Spring	Pseudupeneus maculatus	Spotted goatfish
Northeast US Spring	Pteroplatytrygon violacea	Pelagic stingray
Northeast US Spring	Rachycentron canadum	Cobia
Northeast US Spring	Raja	Skates
Northeast US Spring	Remora remora	Shark sucker
Northeast US Spring	Rhomboplites aurorubens	Vermilion snapper
Northeast US Spring	Rypticus subbifrenatus	Spotted soapfish
Northeast US Spring	Sardinella aurita	Spanish sardine
Northeast US Spring	Saurida brasiliensis	Largescale lizardfish
Northeast US Spring	Scaridae	NA
Northeast US Spring	Sciaenidae	NA
Northeast US Spring	Scomberomorus cavalla	King mackerel
Northeast US Spring	Scomberomorus maculatus	Spanish mackerel
Northeast US Spring	Scombridae	Mackerels, tuna, bonitos
Northeast US Spring	Scorpaena brasiliensis	Barbfish
Northeast US Spring	Scorpaena calcarata	Smoothhead scorpionfish
Northeast US Spring	Scorpaena plumieri	Spotted scorpionfish
Northeast US Spring	Scorpaenidae	Scorpionfishes rockfishes
Northeast US Spring	Selachimorpha	NA
Northeast US Spring	Sepiolidae	NA
Northeast US Spring	Seriola dumerili	Greater amberjack
Northeast US Spring	Seriola fasciata	Lesser amberjack
Northeast US Spring	Seriola rivoliana	Longfin yellowtail
Northeast US Spring	Seriola zonata	Banded rudderfish
Northeast US Spring	Serranidae	Seabasses (groupers and fairy basslets)
Northeast US Spring	Serranus phoebe	Tattler
Northeast US Spring	Sparidae	Porgies
Northeast US Spring	Sphoeroides dorsalis	Marbled puffer
Northeast US Spring	Sphoeroides nephelus	Southern puffer
Northeast US Spring	Sphoeroides pachygaster	Blunthead puffer
Northeast US Spring	Sphoeroides spengleri	Bandtail puffer
Northeast US Spring	Sphyraena	NA
Northeast US Spring	Sphyraena borealis	Northern sennet
Northeast US Spring	Squalidae	NA

Northeast US Spring	Stellifer lanceolatus	Star drum
Northeast US Spring	Stenotomus caprinus	Longspine porgy
Northeast US Spring	Sternoptychidae	Hatchetfish unid.
Northeast US Spring	Stomatopoda	Mantis shrimp
Northeast US Spring	Stomiidae	NA
Northeast US Spring	Stromateidae	NA
Northeast US Spring	Strongylura marina	Atlantic needlefish
Northeast US Spring	Symphurus	NA
Northeast US Spring	Symphurus diomedeanus	Spottedfin tonguefish
Northeast US Spring	Symphurus urospilus	Spottail tonguefish
Northeast US Spring	Syngnathidae	Pipefishes and seahorses
Northeast US Spring	Synodontidae	NA
Northeast US Spring	Synodus intermedius	Sand diver
Northeast US Spring	Synodus synodus	Diamond lizardfish
Northeast US Spring	Tetraodontidae	Puffers
Northeast US Spring	Trachinocephalus myops	Snakefish
Northeast US Spring	Trichiuridae	NA
Northeast US Spring	Triglidae	NA
Northeast US Spring	Upeneus parvus	Dwarf goatfish
Northeast US Spring	Uranoscopidae	NA
Northeast US Spring	Urophycis	NA
Northeast US Spring	Urophycis earllii	Carolina hake
Northeast US Spring	Xyrichtys novacula	Pearly razorfish
Northeast US Spring	Zoarcidae	Eelpouts
Northern Bering Sea	Actiniaria	Sea anemones
Northern Bering Sea	Agonidae	Alligatorfishes
Northern Bering Sea	Ammodytes	sand lance unid.
Northern Bering Sea	Amphipoda	Amphipods
Northern Bering Sea	Annelida	Segmented worms
Northern Bering Sea	Anthozoa	Sea anemones and corals
Northern Bering Sea	Argis	NA
Northern Bering Sea	Artediellus	NA
Northern Bering Sea	Ascidiacea	Sea squirts
Northern Bering Sea	Astarte	NA
Northern Bering Sea	Asterias	NA
Northern Bering Sea	Asteroidea	Star fishes
Northern Bering Sea	Bathypolypus	NA
Northern Bering Sea	Beringius	NA
Northern Bering Sea	Bivalvia	Bivalves
Northern Bering Sea	Boreotrophon	NA
Northern Bering Sea	Bryozoa	Moss animals

Northern Bering Sea	Buccinidae	True whelks
Northern Bering Sea	Buccinum	True whelks
Northern Bering Sea	Careproctus	NA
Northern Bering Sea	Chionoecetes hybrid	Hybrid Tanner crab
Northern Bering Sea	Chlamys	NA
Northern Bering Sea	Cirripedia	Barnacles
Northern Bering Sea	Clinocardium	NA
Northern Bering Sea	Clinopegma sp.	NA
Northern Bering Sea	Corallimorphus	NA
Northern Bering Sea	Cottidae	Sculpins
Northern Bering Sea	Crangon	NA
Northern Bering Sea	Crepidula	slipper shell
Northern Bering Sea	Crossaster	NA
Northern Bering Sea	Cryptonatica	NA
Northern Bering Sea	Ctenophora	Comb jellies
Northern Bering Sea	Cumacea	cumacean unid.
Northern Bering Sea	Cyclocardia	NA
Northern Bering Sea	Echiura	Spoon worms
Northern Bering Sea	Enophrys	NA
Northern Bering Sea	Eualus	NA
Northern Bering Sea	Eumicrotremus	NA
Northern Bering Sea	Euspira	NA
Northern Bering Sea	Gastropoda	Sea snails
Northern Bering Sea	Gymnocanthus	NA
Northern Bering Sea	Hemilepidotus	NA
Northern Bering Sea	Henricia	NA
Northern Bering Sea	Hexagrammidae	Greenlings
Northern Bering Sea	Hiatella	NA
Northern Bering Sea	Hirudinea	Leeches
Northern Bering Sea	Holothuroidea	Sea cucumbers
Northern Bering Sea	Hyas	NA
Northern Bering Sea	Hydroidolina	Hydroid unid.
Northern Bering Sea	Hydrozoa	Hydroids
Northern Bering Sea	Isopoda	Pillbugs slaters, and woodlice
Northern Bering Sea	Lamellaria	NA
Northern Bering Sea	Lamellariinae	Lamellarid unid.
Northern Bering Sea	Latisipho sp.	NA
Northern Bering Sea	Lebbeus	NA
Northern Bering Sea	Leptasterias	NA
Northern Bering Sea	Lethasterias	NA
Northern Bering Sea	Liparis	Snailfishes

Northern Bering Sea	Lithodes	NA
Northern Bering Sea	Lycodes	NA
Northern Bering Sea	Macoma	NA
Northern Bering Sea	Mactromeris	NA
Northern Bering Sea	Mollusca	Molluscs
Northern Bering Sea	Musculus	NA
Northern Bering Sea	Muusoctopus	NA
Northern Bering Sea	Mya	Gaper clams
Northern Bering Sea	Myoxocephalus	Stellate sculpin
Northern Bering Sea	Mytilidae	Mussel unid.
Northern Bering Sea	Mytilus	NA
Northern Bering Sea	Natica	NA
Northern Bering Sea	Naticidae	Moon snails
Northern Bering Sea	Nautichthys	NA
Northern Bering Sea	Nematoda	Roundworms
Northern Bering Sea	Nemertea	Ribbon worms
Northern Bering Sea	Neptunea	True whelks
Northern Bering Sea	Nuculana	NA
Northern Bering Sea	Nudibranchia	Sea slugs
Northern Bering Sea	Octocorallia	Octocorals
Northern Bering Sea	Onchidiopsis	NA
Northern Bering Sea	Oncorhynchus	salmon unid.
Northern Bering Sea	Ophiuroidea	Brittle stars
Northern Bering Sea	Oregonia	NA
Northern Bering Sea	Pagurus	NA
Northern Bering Sea	Pandalidae	Pandalid shrimps
Northern Bering Sea	Pandalus	NA
Northern Bering Sea	Panomya	NA
Northern Bering Sea	Pasiphaeidae	Pasiphaeid shrimp unid.
Northern Bering Sea	Pectinidae	Scallops
Northern Bering Sea	Petromyzontidae	Lampreys
Northern Bering Sea	Platyhelminthes	Flatworms
Northern Bering Sea	Pleuronectiformes	Flatfish
Northern Bering Sea	Plicifusus	NA
Northern Bering Sea	Podothecus	NA
Northern Bering Sea	Polychaeta	Bristle worms
Northern Bering Sea	Polyplacophora	Chitons
Northern Bering Sea	Porifera	Sponges
Northern Bering Sea	Priapulida	Priapulid worms
Northern Bering Sea	Pteraster	Slime stars
Northern Bering Sea	Pyrulofusus	NA

Northern Bering Sea	Sclerocrangon	NA
Northern Bering Sea	Scyphozoa	Jellyfishes
Northern Bering Sea	Serripes	NA
Northern Bering Sea	Siliqua	NA
Northern Bering Sea	Sipuncula	Peanut worms
Northern Bering Sea	Solaster	NA
Northern Bering Sea	Spirontocaris	NA
Northern Bering Sea	Stichaeidae	Pricklebacks
Northern Bering Sea	Strongylocentrotus	NA
Northern Bering Sea	Tachyrhynchus	NA
Northern Bering Sea	Tellina	NA
Northern Bering Sea	Thaliacea	Salp unid.
Northern Bering Sea	Trichotropis sp.	NA
Northern Bering Sea	Triglops	NA
Northern Bering Sea	Trochidae	Top shells
Northern Bering Sea	Velutina	NA
Northern Bering Sea	Volutopsius	NA
Northern Bering Sea	Yoldia	NA
Southeast US Fall	Ameiurus catus	NA
Southeast US Fall	Caretta caretta	Loggerhead turtle
Southeast US Fall	Cynoscion	NA
Southeast US Fall	Ephippidae	Spadefishes
Southeast US Fall	Lepidochelys kempii	Kemp's ridley turtle
Southeast US Fall	Libinia	Spider crabs
Southeast US Fall	Pagurus	NA
Southeast US Fall	Pilumnus	NA
Southeast US Fall	Porichthys plectrodon	Atlantic midshipman
Southeast US Fall	Stenotomus	Porgies
Southeast US Fall	Urophycis floridana	Southern hake
Southeast US Spring	Ameiurus catus	NA
Southeast US Spring	Callinectes	NA
Southeast US Spring	Caretta caretta	Loggerhead turtle
Southeast US Spring	Coronis scolopendra	NA
Southeast US Spring	Crangon septemspinosa	Sevenspine bay shrimp
Southeast US Spring	Cynoscion	NA
Southeast US Spring	Ephippidae	Spadefishes
Southeast US Spring	Hyperoglyphe perciformis	Barrelfish
Southeast US Spring	Lepidochelys kempii	Kemp's ridley turtle
Southeast US Spring	Libinia	Spider crabs
Southeast US Spring	Lophius americanus	Monkfish
Southeast US Spring	Pilumnus	NA

Southeast US Spring	Portunus	NA
Southeast US Spring	Scomber scombrus	Atlantic mackerel
Southeast US Spring	Stenotomus	Porgies
Southeast US Summer	Ameiurus catus	NA
Southeast US Summer	Caretta caretta	Loggerhead turtle
Southeast US Summer	Cynoscion	NA
Southeast US Summer	Ephippidae	Spadefishes
Southeast US Summer	Lepidochelys kempii	Kemp's ridley turtle
Southeast US Summer	Libinia	Spider crabs
Southeast US Summer	Stenotomus	Porgies
West Coast Annual	Acanthascus	NA
West Coast Annual	Acanthascus (Rhabdocalyptus)	NA
West Coast Annual	Acanthascus (Staurocalyptus)	NA
West Coast Annual	Acanthephyra	NA
West Coast Annual	Actinernus	NA
West Coast Annual	Actiniaria	Sea anemones
West Coast Annual	Actinoscyphia	NA
West Coast Annual	Actinostola	NA
West Coast Annual	Actinostolidae	NA
West Coast Annual	Aequorea	NA
West Coast Annual	Aforia	NA
West Coast Annual	Agonidae	Alligatorfishes
West Coast Annual	Alcyonacea	Soft corals
West Coast Annual	Alepisauridae	NA
West Coast Annual	Alepocephalidae	Slickheads
West Coast Annual	Alepocephalus	NA
West Coast Annual	Ammodytidae	NA
West Coast Annual	Ampheraster	NA
West Coast Annual	Amphiophiura	NA
West Coast Annual	Amphipoda	Amphipods
West Coast Annual	Amphiuridae	Burrowing brittle star unid.
West Coast Annual	Anarhichadidae	NA
West Coast Annual	Anguilliformes	NA
West Coast Annual	Annelida	Segmented worms
West Coast Annual	Anoplogastridae	NA
West Coast Annual	Antedonidae	NA
West Coast Annual	Anteliaster	NA
West Coast Annual	Anthoathecata	NA
West Coast Annual	Anthomastus	NA
West Coast Annual	Anthoptilum	NA
West Coast Annual	Anthozoa	Sea anemones and corals

West Coast Annual	Antipatharia	Thorny corals
West Coast Annual	Antiplanes	NA
West Coast Annual	Aphrodita	Sea mice
West Coast Annual	Aphroditidae	Sea mice
West Coast Annual	Aplacophora	NA
West Coast Annual	Apristurus	NA
West Coast Annual	Argentinidae	Argentine unid.
West Coast Annual	Argyropelecus	NA
West Coast Annual	Arhynchobatidae	NA
West Coast Annual	Asterias	NA
West Coast Annual	Asteroidea	Star fishes
West Coast Annual	Asteronyx	NA
West Coast Annual	Astronesthinae	NA
West Coast Annual	Astropecten	NA
West Coast Annual	Atolla	NA
West Coast Annual	Aurelia	Moon jellyfishes
West Coast Annual	Balticina	NA
West Coast Annual	Bathyagonus	starsnout poacher unid.
West Coast Annual	Bathylagidae	Deep sea smelts
West Coast Annual	Bathylagus	blacksmelt unid.
West Coast Annual	Bathymasteridae	Ronquils
West Coast Annual	Bathypathes	NA
West Coast Annual	Bathypolypus	NA
West Coast Annual	Batrachoididae	Toadfishes
West Coast Annual	Benthesicymus	NA
West Coast Annual	Benthodesmus	NA
West Coast Annual	Benthodytes sp.	NA
West Coast Annual	Bivalvia	Bivalves
West Coast Annual	Bolitaeninae	NA
West Coast Annual	Boreotrophon	NA
West Coast Annual	Bothidae	Lefteye flounders
West Coast Annual	Brachiopoda	Lamp shells
West Coast Annual	Brachyura	NA
West Coast Annual	Brain sponge	NA
West Coast Annual	Brisaster	NA
West Coast Annual	Buccinidae	True whelks
West Coast Annual	Buccinum	True whelks
West Coast Annual	Callianassa	NA
West Coast Annual	Callogorgia	NA
West Coast Annual	Calocarides	NA
West Coast Annual	Cancer	Cancer crab

West Coast Annual	Cancridae	NA
West Coast Annual	Caprella	skeleton shrimps
West Coast Annual	Careproctus	NA
West Coast Annual	Caridea	Shrimps
West Coast Annual	Carinariidae	NA
West Coast Annual	Caristiidae	Manefishes
West Coast Annual	Caryophyllia	Cupcorals
West Coast Annual	Caryophylliidae	Cupcorals
West Coast Annual	Cataetyx	NA
West Coast Annual	Centrolophidae	Medusafishes
West Coast Annual	Ceramaster	NA
West Coast Annual	Ceratiidae	Seadevils
West Coast Annual	Chauliodontinae	Viperfish unid.
West Coast Annual	Cheiraster	NA
West Coast Annual	Chiasmodontidae	Snaketooth fishes
West Coast Annual	Chionoecetes	NA
West Coast Annual	Chionoecetes hybrid	Hybrid Tanner crab
West Coast Annual	Chirostylus	NA
West Coast Annual	Chondrichthyes	NA
West Coast Annual	Chrysaora	Sea nettles
West Coast Annual	Chrysopathes	NA
West Coast Annual	Citharichthys	NA
West Coast Annual	Clupeidae	Herrings menhadens, sardins, shads
West Coast Annual	Cnemidocarpa	NA
West Coast Annual	Corallimorphus	NA
West Coast Annual	Coryphaenoides	NA
West Coast Annual	Cottidae	Sculpins
West Coast Annual	Cranchiidae	Glass squids
West Coast Annual	Crangon	NA
West Coast Annual	Crangonidae	Crangonid shrimp
West Coast Annual	Craniella	puffball sponges
West Coast Annual	Crinoidea	Sea lilies and feather stars
West Coast Annual	Crossaster	NA
West Coast Annual	Crustacea	Crustaceans
West Coast Annual	Cryptacanthodidae	Wrymouths
West Coast Annual	Ctenodiscus	NA
West Coast Annual	Ctenophora	Comb jellies
West Coast Annual	Cucumaria	NA
W C A. 1	Cucumana	
West Coast Annual	Cyclopteridae	Lumpfishes
West Coast Annual West Coast Annual		

West Coast Annual	Dasyatidae	Sting rays
West Coast Annual	Decapoda	Ten footed
West Coast Annual	Demospongiae	Horny sponges
West Coast Annual	Diaphus	NA
West Coast Annual	Diplopteraster	NA
West Coast Annual	Dipsacaster	NA
West Coast Annual	Dolichopteryx	Winged spookfish
West Coast Annual	Dorididae	Archidorid nudibranchs
West Coast Annual	Echidnocerus	NA
West Coast Annual	Echinacea	Sea urchins
West Coast Annual	Echinoidea	Sea urchins
West Coast Annual	Embiotocidae	NA
West Coast Annual	Engraulidae	Anchovies
West Coast Annual	Eptatretus	NA
West Coast Annual	Eualus	NA
West Coast Annual	Euphausiacea	Krill
West Coast Annual	Eurypharyngidae	Gulpers
West Coast Annual	Exilioidea	NA
West Coast Annual	Farrea	NA
West Coast Annual	Flabellidae	NA
West Coast Annual	Florometra	NA
West Coast Annual	Fluffy sponge	NA
West Coast Annual	Fusinus	NA
West Coast Annual	Fusitriton	NA
West Coast Annual	Galatheidae	Galatheid crab unid.
West Coast Annual	Galatheoidea	NA
West Coast Annual	Gastropoda	Sea snails
West Coast Annual	Gersemia	sea raspberry
West Coast Annual	Glyphocrangonidae	Armored shrimps
West Coast Annual	Gonatopsis	NA
West Coast Annual	Gonatus	NA
West Coast Annual	Gonostoma	NA
West Coast Annual	Gonostomatidae	Bristlemouths
West Coast Annual	Gorgonacea	Gorgonian corals
West Coast Annual	Graneledone	NA
West Coast Annual	Gymnolaemata	NA
West Coast Annual	Halocynthia	NA
West Coast Annual	Hemilepidotus	NA
West Coast Annual	Hemisquillidae	NA
West Coast Annual	Henricia	NA
West Coast Annual	Heterodontidae	Bullhead sharks

West Coast Annual	Hexactinellida	Glass sponges
West Coast Annual	Hippasteria	NA
West Coast Annual	Hippolytidae	Humpback prawns
West Coast Annual	Histioteuthis	jewel squids
West Coast Annual	Holothuroidea	Sea cucumbers
West Coast Annual	Hormathiidae	NA
West Coast Annual	Hyalonema	fiber optic sponge
West Coast Annual	Hydrolagus	NA
West Coast Annual	Hymenaster	pancake star
West Coast Annual	Hymenodiscus	NA
West Coast Annual	Icelinus	NA
West Coast Annual	Icosteidae	NA
West Coast Annual	Invertebrata	Invertebrate
West Coast Annual	Isidella	articulated bamboo coral
West Coast Annual	Isididae	Bamboo coral unid.
West Coast Annual	Isopoda	Pillbugs slaters, and woodlice
West Coast Annual	Japelion aleutica	NA
West Coast Annual	Keratoisis	nodal bamboo coral unid.
West Coast Annual	Lamellaria	NA
West Coast Annual	Lampanyctus	NA
West Coast Annual	Latisipho sp.	NA
West Coast Annual	Lepas	Goose barnacles
West Coast Annual	Lepeta	NA
West Coast Annual	Leptocephalus	Eel larvae
West Coast Annual	Leptychaster	NA
West Coast Annual	Leuroglossus	NA
West Coast Annual	Lillipathes	NA
West Coast Annual	Liparidae	Snailfishes
West Coast Annual	Lithodes	NA
West Coast Annual	Lithodidae	Stone crabs and king crabs
West Coast Annual	Lophaster	NA
West Coast Annual	Lophogastrida	Opossum shrimps
West Coast Annual	Luidia	NA
West Coast Annual	Lycodapus	NA
West Coast Annual	Macrouridae	Grenadiers
West Coast Annual	Majidae	Spider crabs
West Coast Annual	Malacanthidae	Tilefishes
West Coast Annual	Malacosteinae	Loosejaw unid.
West Coast Annual	Maulisia	NA
West Coast Annual	Mediaster	NA
West Coast Annual	Megasurcula	NA

West Coast Annual	Melamphaidae	Bigscale fishes
West Coast Annual	Melanonidae	NA
West Coast Annual	Melanostomiinae	Scaleless dragonfish unid.
West Coast Annual	Merlucciidae	Merluccid hakes
West Coast Annual	Metridium	NA
West Coast Annual	Molgula	NA
West Coast Annual	Mollusca	Molluscs
West Coast Annual	Molpadia	NA
West Coast Annual	Moridae	NA
West Coast Annual	Munidopsis	Squat lobsters
West Coast Annual	Muriceides	NA
West Coast Annual	Mycale	NA
West Coast Annual	Myctophidae	Lanternfishes
West Coast Annual	Myliobatidae	NA
West Coast Annual	Mytilidae	Mussel unid.
West Coast Annual	Myxinidae	Hagfishes
West Coast Annual	Naticidae	Moon snails
West Coast Annual	Nearchaster	NA
West Coast Annual	Nematocarcinus	NA
West Coast Annual	Nematoda	Roundworms
West Coast Annual	Nemichthyidae	Snipe eels
West Coast Annual	Neognathophausia	NA
West Coast Annual	Neomenia	NA
West Coast Annual	Neon yellow vase sponge	NA
West Coast Annual	Neoscopelidae	NA
West Coast Annual	Nephtheidae	NA
West Coast Annual	Nephtyidae	Catworms
West Coast Annual	Neptunea	True whelks
West Coast Annual	Nereis	NA
West Coast Annual	Nettastomatidae	NA
West Coast Annual	Notostomus	NA
West Coast Annual	Nudibranchia	Sea slugs
West Coast Annual	Octocorallia	Octocorals
West Coast Annual	Octopodidae	Octopus unid.
West Coast Annual	Octopus	NA
West Coast Annual	Oneirodes	NA
West Coast Annual	Oneirodidae	Dreamers
West Coast Annual	Onychoteuthidae	NA
West Coast Annual	Ophiacantha	NA
West Coast Annual	Ophidiidae	Cusk eels
West Coast Annual	Ophiolebes	NA

West Coast Annual	Ophiopholis	NA
West Coast Annual	Ophioscolex	NA
West Coast Annual	Ophiura	NA
West Coast Annual	Ophiurida	NA
West Coast Annual	Ophiuroidea	Brittle stars
West Coast Annual	Opisthoproctidae	Barreleyes
West Coast Annual	Orange encrusting sponge	NA
West Coast Annual	Orange sponge	NA
West Coast Annual	Orthasterias	NA
West Coast Annual	Osmeridae	Smelts
West Coast Annual	Ostreoida	NA
West Coast Annual	Pachastrellidae sp. 1	mushroom sponge
West Coast Annual	Paguridae	Hermit crabs
West Coast Annual	Pagurus	NA
West Coast Annual	Pandalidae	Pandalid shrimps
West Coast Annual	Pandalus	NA
West Coast Annual	Paragorgia	NA
West Coast Annual	Paralepididae	Barracudinas
West Coast Annual	Paraliparis	NA
West Coast Annual	Paralithodes	NA
West Coast Annual	Paralomis	NA
West Coast Annual	Paramuriceidae	NA
West Coast Annual	Parastichopus	NA
West Coast Annual	Pasiphaeidae	Pasiphaeid shrimp unid.
West Coast Annual	Pectinidae	Scallops
West Coast Annual	Pedicellaster	NA
West Coast Annual	Pennatuloidea	Sea pens
West Coast Annual	Pentamera	NA
West Coast Annual	Periphylla	NA
West Coast Annual	Petromyzontidae	Lampreys
West Coast Annual	Phacellophora	NA
West Coast Annual	Phoronida	Horseshoe worm
West Coast Annual	Physiculus	NA
West Coast Annual	Pisaster	NA
West Coast Annual	Platyhelminthes	Flatworms
West Coast Annual	Platytroctidae	Tubeshoulders
West Coast Annual	Pleuronectidae	Righteye flounder unid.
West Coast Annual	Pleuronectiformes	Flatfish
West Coast Annual	Plicifusus	NA
West Coast Annual	Plumarella	NA
West Coast Annual	Polinices	NA

West Coast Annual	Polychaeta	Bristle worms
West Coast Annual	Polymastia	NA
West Coast Annual	Polynoidae	Scaleworms
West Coast Annual	Polyplacophora	Chitons
West Coast Annual	Porifera	Sponges
West Coast Annual	Porifera (segregated 1)	NA
West Coast Annual	Porifera (segregated 2)	NA
West Coast Annual	Portunidae	Swimming crabs
West Coast Annual	Pseudarchaster	NA
West Coast Annual	Pseudostichopus	NA
West Coast Annual	Psolidae	NA
West Coast Annual	Psolus	NA
West Coast Annual	Pteraster	Slime stars
West Coast Annual	Pugettia	kelp crab
West Coast Annual	Purple striated anemone	Purple striated anemone
West Coast Annual	Pycnogonida	Sea spiders
West Coast Annual	Pyrosoma	NA
West Coast Annual	Rajidae	Skates
West Coast Annual	Red striated anemone	NA
West Coast Annual	Rhinobatidae	NA
West Coast Annual	Rhinoliparis	NA
West Coast Annual	Rondeletiidae	Redmouth whalefishes
West Coast Annual	Rossellidae	Sea spunge
West Coast Annual	Saccopharyngidae	NA
West Coast Annual	Saccopharynx	NA
West Coast Annual	Sceptrulophora	Sponge
West Coast Annual	Sciaenidae	NA
West Coast Annual	Scleractinia	Hard corals
West Coast Annual	Scleralcyonacea	NA
West Coast Annual	Scomberesocidae	Sauries
West Coast Annual	Scombridae	Mackerels, tuna, bonitos
West Coast Annual	Scopelarchidae	Pearleyes
West Coast Annual	Scopelosaurus	NA
West Coast Annual	Scorpaenidae	Scorpionfishes rockfishes
West Coast Annual	Scotoplanes	Sea pigs
West Coast Annual	Scyliorhinidae	NA
West Coast Annual	Scyphozoa	Jellyfishes
West Coast Annual	Sebastes	Rockfish
West Coast Annual	Sebastolobus	NA
West Coast Annual	Selachii sharks	NA
West Coast Annual	Sergestes	NA

West Coast Annual	Sergestidae	Sergestid shrimps
West Coast Annual	Serranidae	Seabasses (groupers and fairy
		basslets)
West Coast Annual	Serrivomer	NA
West Coast Annual	Serrivomeridae	NA
West Coast Annual	Sicyonis	NA
West Coast Annual	Sipuncula	Peanut worms
West Coast Annual	Solariella	NA
West Coast Annual	Solaster	NA
West Coast Annual	Solemya	NA
West Coast Annual	Spatangoida	NA
West Coast Annual	Squalidae	NA
West Coast Annual	Squatinidae	Angel sharks
West Coast Annual	Stenobrachius	NA
West Coast Annual	Sternoptychidae	Hatchetfish unid.
West Coast Annual	Sternoptyx	NA
West Coast Annual	Stichaeidae	Pricklebacks
West Coast Annual	Stomiidae	NA
West Coast Annual	Stomiiformes	NA
West Coast Annual	Stomphia	NA
West Coast Annual	Stromateidae	NA
West Coast Annual	Strongylocentrotus	NA
West Coast Annual	Stylasterias	NA
West Coast Annual	Stylasteridae	Lace corals
West Coast Annual	Stylatula	slender seawhips
West Coast Annual	Stylissa	NA
West Coast Annual	Suberites	NA
West Coast Annual	Swiftia	NA
West Coast Annual	Synallactidae	NA
West Coast Annual	Syngnathidae	Pipefishes and seahorses
West Coast Annual	Synodontidae	NA
West Coast Annual	Tarletonbeania	NA
West Coast Annual	Terebratellacea	Brachiopod
West Coast Annual	Teredinidae	Shipworms
West Coast Annual	Tethya	ball sponge
West Coast Annual	Tetragonuridae	Squaretails
West Coast Annual	Teuthida	NA
West Coast Annual	Thaliacea	Salp unid.
West Coast Annual	Thoracica	True barnacles
West Coast Annual	Torpedinidae	Electric rays
West Coast Annual West Coast Annual	Trachipteridae	Ribbonfishes
West Coast Annual West Coast Annual	Triakidae	NA NA

West Coast Annual	Triglidae	NA
West Coast Annual	Tritonia	NA
West Coast Annual	Tunicata	Sea squirts
West Coast Annual	Umbellula	NA
West Coast Annual	Uranoscopidae	NA
West Coast Annual	Urticina	NA
West Coast Annual	Vase sponge	NA
West Coast Annual	Venefica	NA
West Coast Annual	Vesicomyidae	NA
West Coast Annual	Virgulariidae	NA
West Coast Annual	White claypipe sponge	NA
West Coast Annual	Yellow bowl sponge	NA
West Coast Annual	Yoldia	NA
West Coast Annual	Yoldiella	NA
West Coast Annual	Zaniolepidinae	NA
West Coast Annual	Zoarcidae	Eelpouts
West Coast Annual	Zoroaster	NA
West Coast Annual	Zoroasteridae	NA
West Coast Triennial	Acanthascus	NA
West Coast Triennial	Actiniaria	Sea anemones
West Coast Triennial	Actinoscyphia	NA
West Coast Triennial	Actinostolidae	NA
West Coast Triennial	Aforia	NA
West Coast Triennial	Agonidae	Alligatorfishes
West Coast Triennial	Akoya platinum	Silvery topsnail
West Coast Triennial	Albatrossia pectoralis	Giant grenadier
West Coast Triennial	Alcyonacea	Soft corals
West Coast Triennial	Alepocephalus tenebrosus	California slickhead
West Coast Triennial	Ampheraster	NA
West Coast Triennial	Ampheraster marianus	Mariana's island star
West Coast Triennial	Amphipoda	Amphipods
West Coast Triennial	Anoplogaster cornuta	Common fangtooth
West Coast Triennial	Anotopterus nikparini	North pacific daggertooth
West Coast Triennial	Anthomastus	NA
West Coast Triennial	Antipatheria	Thorny corals
West Coast Triennial	Antiplanes	NA
West Coast Triennial	Aphrodita	Sea mice
West Coast Triennial	Aphroditidae	Sea mice
West Coast Triennial	Arctozenus risso	Spotted barracudina
West Coast Triennial	Argentinidae	Argentine unid.
West Coast Triennial	Argyropelecus	NA

West Coast Triennial	Ascidiacea	Sea squirts
West Coast Triennial	Asteroidea	Star fishes
West Coast Triennial	Asteronyx	NA
West Coast Triennial	Asteronyx longifissus	NA
West Coast Triennial	Atolla	NA
West Coast Triennial	Aulacofusus herendeeni	Thin-ribbed whelk
West Coast Triennial	Aurelia	Moon jellyfishes
West Coast Triennial	Bathyagonus	starsnout poacher unid.
West Coast Triennial	Bathyagonus infraspinatus	Spinycheek starsnout
West Coast Triennial	Bathybembix bairdii	NA
West Coast Triennial	Bathylagidae	Deep sea smelts
West Coast Triennial	Bathylagus	blacksmelt unid.
West Coast Triennial	Bathymasteridae	Ronquils
West Coast Triennial	Bathyplotes	NA
West Coast Triennial	Bathypolypus	NA
West Coast Triennial	Batrachoididae	Toadfishes
West Coast Triennial	Benthalbella dentata	Northern pearleye
West Coast Triennial	Benthopectinidae	NA
West Coast Triennial	Bivalvia	Bivalves
West Coast Triennial	Bothidae	Lefteye flounders
West Coast Triennial	Bothrocara brunneum	Twoline eelpout
West Coast Triennial	Brachiopoda	Lamp shells
West Coast Triennial	Brisaster	NA
West Coast Triennial	Bryozoa	Moss animals
West Coast Triennial	Buccinum	True whelks
West Coast Triennial	Callianassa	NA
West Coast Triennial	Calliostoma	NA
West Coast Triennial	Cancer	Cancer crab
West Coast Triennial	Careproctus	NA
West Coast Triennial	Careproctus cypselurus	Falcate snailfish
West Coast Triennial	Careproctus rastrinus	Salmon snailfish
West Coast Triennial	Cephaloscyllium ventriosum	Swell shark
West Coast Triennial	Ceramaster	NA
West Coast Triennial	Chauliodontinae	Viperfish unid.
West Coast Triennial	Chionoecetes	NA
West Coast Triennial	Chiroteuthis	NA
West Coast Triennial	Chrysaora	Sea nettles
West Coast Triennial	Chrysopathes speciosa	Gaudy black coral
West Coast Triennial	Citharichthys	NA
West Coast Triennial	Citharichthys xanthostigma	Longfin sanddab
West Coast Triennial	Coelorinchus scaphopsis	Shoulderspot grenadier

West Coast Triennial	Colus griseus	Gray whelk
West Coast Triennial	Corallimorphus	NA
West Coast Triennial	Coryphaenoides acrolepis	Pacific grenadier
West Coast Triennial	Cottidae	Sculpins
West Coast Triennial	Cranchia scabra	Rough cranch squid
West Coast Triennial	Crangon	NA
West Coast Triennial	Crangonidae	Crangonid shrimp
West Coast Triennial	Crossaster	NA
West Coast Triennial	Crustacea	Crustaceans
West Coast Triennial	Ctenophora	Comb jellies
West Coast Triennial	Cucumaria	NA
West Coast Triennial	Cyanea	NA
West Coast Triennial	Cyclocardia	NA
West Coast Triennial	Decapodiformes	Squid unid.
West Coast Triennial	Diaphus	NA
West Coast Triennial	Dipsacaster	NA
West Coast Triennial	Echidnocerus	NA
West Coast Triennial	Echinacea	Sea urchins
West Coast Triennial	Echiura	Spoon worms
West Coast Triennial	Elassodiscus caudatus	Blackbelly snailfish
West Coast Triennial	Embiotocidae	NA
West Coast Triennial	Euphausiacea	Krill
West Coast Triennial	Eurypharynx pelecanoides	Pelican eel
West Coast Triennial	Euspira	NA
West Coast Triennial	Florometra	NA
West Coast Triennial	Galatheidae	Galatheid crab unid.
West Coast Triennial	Gastropoda	Sea snails
West Coast Triennial	Gersemia	sea raspberry
West Coast Triennial	Gonatus	NA
West Coast Triennial	Gonatus berryi	Berry armhook squid
West Coast Triennial	Gonatus californiensis	California armhook squid
West Coast Triennial	Gonatus pyros	Fiery armhook squid
West Coast Triennial	Gorgonacea	Gorgonian corals
West Coast Triennial	Halichondria (Halichondria) panicea	Breadcrumb sponge
West Coast Triennial	Halocynthia	NA
West Coast Triennial	Henricia	NA
West Coast Triennial	Hexactinellida	Glass sponges
West Coast Triennial	Hexagrammidae	Greenlings
West Coast Triennial	Ticxagrammuac	Greenings
	Hexagrammos	Greenlings
West Coast Triennial	•	ū

West Coast Triennial	Hippoglossina stomata	Bigmouth flounder
West Coast Triennial	Histioteuthis	jewel squids
West Coast Triennial	Holothuroidea	Sea cucumbers
West Coast Triennial	Hormathiidae	NA
West Coast Triennial	Hyas	NA
West Coast Triennial	Isopoda	Pillbugs slaters, and woodlice
West Coast Triennial	Japetella heathi	NA
West Coast Triennial	Lampanyctus	NA
West Coast Triennial	Lampanyctus regalis	Pinpoint lampfish
West Coast Triennial	Latisipho sp.	NA
West Coast Triennial	Lepidopus fitchi	Pacific scabbardfish
West Coast Triennial	Leptocephalus	Eel larvae
West Coast Triennial	Leptychaster	NA
West Coast Triennial	Lestidiops ringens	Slender barracudina
West Coast Triennial	Leuroglossus schmidti	Northern smoothtongue
West Coast Triennial	Leuroglossus stilbius	California smoothtongue
West Coast Triennial	Liparidae	Snailfishes
West Coast Triennial	Liparis	Snailfishes
West Coast Triennial	Lithodidae	Stone crabs and king crabs
West Coast Triennial	Lophaster	NA
West Coast Triennial	Loxorhynchus crispatus	Moss crab
West Coast Triennial	Luidia	NA
West Coast Triennial	Lycodapus	NA
West Coast Triennial	Lyconema barbatum	Bearded eelpout
West Coast Triennial	Macrouridae	Grenadiers
West Coast Triennial	Magnisudis atlantica	Duckbill barracudina
West Coast Triennial	Malacocephalus laevis	Softhead grenadier
West Coast Triennial	Malacosteinae	Loosejaw unid.
West Coast Triennial	Maulisia	NA
West Coast Triennial	Mediaster	NA
West Coast Triennial	Melamphaidae	Bigscale fishes
West Coast Triennial	Melanostomiinae	Scaleless dragonfish unid.
West Coast Triennial	Metacarcinus anthonyi	Yellow rock crab
West Coast Triennial	Metridium	NA
West Coast Triennial	Mollusca	Molluses
West Coast Triennial	Molpadia	NA
West Coast Triennial	Mustelus	NA
West Coast Triennial	Mya	Gaper clams
West Coast Triennial	Mycale (Mycale) loveni	Loven's horny sponge
West Coast Triennial	Myctophidae	Lanternfishes
West Coast Triennial	Mytilidae	Mussel unid.

West Coast Triennial	Myxinidae	Hagfishes
West Coast Triennial	Myxoderma sacculatum	Giant slimy star
West Coast Triennial	Natica	NA
West Coast Triennial	Naticidae	Moon snails
West Coast Triennial	Nearchaster	NA
West Coast Triennial	Nemichthyidae	Snipe eels
West Coast Triennial	Neognathophausia gigas	Giant red mysid
West Coast Triennial	Neognathophausia ingens	Giant red mysid
West Coast Triennial	Neomenia	NA
West Coast Triennial	Neoscopelus macrolepidotus	Large scaled lantern fish
West Coast Triennial	Neptunea	True whelks
West Coast Triennial	Neptunea ithia	NA
West Coast Triennial	Nezumia stelgidolepis	California grenadier
West Coast Triennial	Nudibranchia	Sea slugs
West Coast Triennial	Octocorallia	Octocorals
West Coast Triennial	Octopodidae	Octopus unid.
West Coast Triennial	Ommastrephidae	NA
West Coast Triennial	Oncorhynchus	salmon unid.
West Coast Triennial	Oneirodidae	Dreamers
West Coast Triennial	Onychoteuthidae	NA
West Coast Triennial	Onychoteuthis borealijaponica	Boreal clubhook squid
West Coast Triennial	Ophidiidae	Cusk eels
West Coast Triennial	Ophiopholis	NA
West Coast Triennial	Ophiura	NA
West Coast Triennial	Ophiuroidea	Brittle stars
West Coast Triennial	Opisthoteuthis albatrossi	NA
West Coast Triennial	Osmeridae	Smelts
West Coast Triennial	Paguridae	Hermit crabs
West Coast Triennial	Pagurus	NA
West Coast Triennial	Pandalidae	Pandalid shrimps
West Coast Triennial	Pandalus	NA
West Coast Triennial	Pandalus amplus	Deepwater bigeye
West Coast Triennial	Paralepididae	Barracudinas
West Coast Triennial	Paraliparis	NA
West Coast Triennial	Paraliparis cephalus	Swellhead snailfish
West Coast Triennial	Paraliparis dactylosus	Red snailfish
West Coast Triennial	Paraliparis pectoralis	Pectoral snailfish
West Coast Triennial	Parastichopus	NA
West Coast Triennial	Parmaturus xaniurus	Filetail catshark
West Coast Triennial	Pasiphaeidae	Pasiphaeid shrimp unid.
West Coast Triennial	Pectinidae	Scallops

West Coast Triennial	Penaeidae	Penaeid shrimps
West Coast Triennial	Pennatuloidea	Sea pens
West Coast Triennial	Pentamera	NA
West Coast Triennial	Pentamera lissoplaca	Crescent sea cucumber
West Coast Triennial	Petromyzontidae	Lampreys
West Coast Triennial	Pisaster	NA
West Coast Triennial	Platyhelminthes	Flatworms
West Coast Triennial	Platytroctidae	Tubeshoulders
West Coast Triennial	Pleuronectiform larvae	NA
West Coast Triennial	Pleuronichthys coenosus	C o sole
West Coast Triennial	Polychaeta	Bristle worms
West Coast Triennial	Polycladida	Polyclad flatworm unid.
West Coast Triennial	Polynoidae	Scaleworms
West Coast Triennial	Porichthys	NA
West Coast Triennial	Porifera	Sponges
West Coast Triennial	Prionotus stephanophrys	Lumptail searobin
West Coast Triennial	Pseudarchaster	NA
West Coast Triennial	Pseudostichopus	NA
West Coast Triennial	Psolus	NA
West Coast Triennial	Pteraster	Slime stars
West Coast Triennial	Pugettia	kelp crab
West Coast Triennial	Rajidae	Skates
West Coast Triennial	Rhabdocalyptus	cloud sponge
West Coast Triennial	Rhinoliparis attenuatus	Slim snailfish
West Coast Triennial	Scleractinia	Hard corals
West Coast Triennial	Scombridae	Mackerels, tuna, bonitos
West Coast Triennial	Scorpaena guttata	California scorpionfish
West Coast Triennial	Scyliorhinidae	NA
West Coast Triennial	Scyphozoa	Jellyfishes
West Coast Triennial	Sebastes	NA
West Coast Triennial	Sebastes	Rockfish
West Coast Triennial	Sebastes lentiginosus	Freckled rockfish
West Coast Triennial	Sergestes	NA
West Coast Triennial	Sergestidae	Sergestid shrimps
West Coast Triennial	Serrivomer sector	Sawtooth eel
West Coast Triennial	Sigmops gracilis	Slender fangjaw
West Coast Triennial	Sipuncula	Peanut worms
West Coast Triennial	Solaster	NA
West Coast Triennial	Solengaster sp.	NA
West Coast Triennial	Spatangus californicus	California heart urchin
West Coast Triennial	Squatina californica	Pacific angelshark

West Coast Triennial	Stegophiura ponderosa	NA
West Coast Triennial	Sternoptychidae	Hatchetfish unid.
West Coast Triennial	Stichaeidae	Pricklebacks
West Coast Triennial	Stomias atriventer	Black-belly dragonfish
West Coast Triennial	Stomphia	NA
West Coast Triennial	Stromateidae	NA
West Coast Triennial	Strongylocentrotus	NA
West Coast Triennial	Stylatula	slender seawhips
West Coast Triennial	Symbolophorus californiensis	Bigfin lanternfish
West Coast Triennial	Synodontidae	NA
West Coast Triennial	Taonius pavo	Peacock cranch squid
West Coast Triennial	Tarletonbeania	NA
West Coast Triennial	Tethya	ball sponge
West Coast Triennial	Thaliacea	Salp unid.
West Coast Triennial	Triakis semifasciata	Leopard shark
West Coast Triennial	Trichiuridae	NA
West Coast Triennial	Tritonia	NA
West Coast Triennial	Urticina	NA
West Coast Triennial	Vampyroteuthis infernalis	Vampire squid
West Coast Triennial	Virgularia	smoothstem seawhip
West Coast Triennial	Virgulariidae	NA
West Coast Triennial	Xystreurys liolepis	Fantail flounder
West Coast Triennial	Yoldia	NA
West Coast Triennial	Zoarcidae	Eelpouts