



2002-2007 WDFW SCIENTIFIC BOTTOM TRAWL SURVEYS IN THE SOUTHERN SALISH SEA: SPECIES DISTRIBUTIONS, ABUNDANCE, AND POPULATION TRENDS

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EXECUTIVE SUMMARY

The Washington Department of Fish and Wildlife (WDFW) is charged with managing the fauna of the state of Washington on behalf of its residents. At its core, this management consists of determining when and where organisms are found, assessing their abundance, monitoring changes in distribution and abundance over time, and developing policies that ensure continued persistence of populations and the habitats upon which they rely. In order to adequately document and understand the distribution and abundance of marine bottomfish in the southern Salish Sea (defined as the U.S. portions of the Straits of Georgia and Juan de Fuca, the San Juan Archipelago, and Puget Sound), the Washington Department of Fisheries (WDF) (which later became part of the WDFW) began conducting systematic scientific bottom trawling in 1987.

This report contains detailed results for the WDFW's scientific bottom trawl surveys conducted from 2002 through 2007, inclusive. A total of 747 tows were completed during the months of April-June from 2002 to 2007 throughout the southern Salish Sea ("Puget Sound"), covering a total area of 613 ha in four depth strata (5-20 fa, 21-40 fa, 41-60, >60 fa). Each of the nine regions of Puget Sound was surveyed at least twice with a two- or three-year gap between sampling periods, and the Eastern and Western Straits of Juan de Fuca were surveyed three times. In an effort to obtain a holistic view of the biological composition of the benthic-demersal community, all species collected with the trawl – including invertebrates and non-bottomfish – were identified to the lowest possible taxonomic level, counted, and weighed. Population abundance and biomass estimates were then extrapolated from species counts and weights for each depth stratum and region.

Results of these estimates are first examined for each of the nine regions (South Sound, Central Sound, Hood Canal, Whidbey Island, Discovery Bay, Eastern and Western Straits of Juan de Fuca, San Juan Islands, and Georgia Basin), followed by a Sound-wide summary, and then examined by species group with more detailed analyses for a select few species. Individual species examined in more detail include Spotted Ratfish, English Sole, Starry Flounder, Pacific Sanddab, Rock Sole, North Pacific Spiny Dogfish, Walleye Pollock, Pacific Hake, and Pacific Cod; analyses for each consist of Sound-wide densities, depth distributions, length-frequencies, and hot spot maps.

Overall, Central Sound supported the highest fish biomass while Whidbey Island supported the highest average fish abundance. Spotted Ratfish and English Sole were the most dominant single species in terms of both biomass and abundance found throughout the survey. Species compositions, however, varied substantially among regions and corresponded with both depth availability and distance to ocean input. Whidbey Island and Hood Canal had the most similar assemblages, but those from most other regions deviated substantially from each other. These results should be taken into account when designing future surveys, as a Sound-wide approach might be best to capture the status of fish populations in each region within the same year.

Though not every aspect of the data are examined in this report, complete data for all species and catches are provided as an appendix, and a digital copy of the data can be obtained by contacting the WDFW Puget Sound Marine Fish Science Unit.

TABLE OF CONTENTS

Acknowledgments	i
Executive Summary	ii
List of Figures	v
List of Tables	x
Introduction.....	1
Methods.....	3
Survey Design and Execution	3
Trawl Gear	5
Catch Processing and Estimations	6
Data Displays	6
Results--Regions	8
South Sound (SS).....	8
Central Sound (CS).....	12
Hood Canal (HC)	17
Whidbey Island Basin (WI)	21
Discovery Bay (DB)	25
Eastern Strait of Juan de Fuca (JE)	29
Western Strait of Juan de Fuca (JW)	33
San Juan Islands (SJ)	37
Georgia Basin (GB)	41
Southern Salish Sea-Wide Results Summary	45
Results--Species	50
Ratfish (<i>Hydrolagus colliei</i>)	50
Flatfish (Pleuronectiformes)	53
English Sole (<i>Parophrys vetulus</i>)	53
Starry Flounder (<i>Platichthys stellatus</i>)	57
Pacific Sanddab (<i>Citharichthys sordidus</i>)	60
Southern & Northern Rock Sole (<i>Lepidopsetta bilineata</i> & <i>L. polyxystra</i>)	63
Sharks/Skates (Elasmobranchs)	66
North Pacific Spiny Dogfish (<i>Squalus suckleyi</i>).....	66
Sculpin (Cottoidea)	70
Codfish (Gadiformes)	70
Walleye Pollock (<i>Gadus chalcogrammus</i>)	71
Pacific Hake (<i>Merluccius productus</i>)	75
Pacific Cod (<i>Gadus macrocephalus</i>)	79
Other Fish	83
Discussion	84
References	87
Appendices.....	91

Appendix A: Trawl Net Specifications and Diagram	91
Appendix B: Net Widths as a Function of Depth and Scope.....	92
Appendix C: Biological Samples and Measurements to Take for Key Species	94
Appendix D: Detailed Results and Parameters of Bootstrap Average Calculation and Simper Analysis in Primer	96
Appendix E: Estimates by Stratum	101

LIST OF FIGURES

Figure 1: Map of regions and stations sampled in the southern Salish Sea during the 2002-2007 bottom trawl surveys.....	4
Figure 2: Areas (ha) of the depth strata within each region of the southern Salish Sea.....	5
Figure 3: Total fish biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for South Sound by depth stratum.	10
Figure 4: Average proportion between years of each fish group in the overall fish biomass (4a, “by weights”) and abundance (4b, “by counts”) in South Sound.	10
Figure 5: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in South Sound of the primary fish groups.	11
Figure 6: Biomass (a) and abundance (b) estimates by depth stratum and year for the primary fish groups in South Sound.	11
Figure 7: Total invertebrate biomass estimates (mt; a) and abundance estimates (Individuals x1000; b) for South Sound by depth stratum.	12
Figure 8: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in South Sound of the primary invertebrate groups.	12
Figure 9: Total fish biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for Central Sound by depth stratum.	14
Figure 10: Average proportion between years of each fish group in the overall fish biomass (10a, “by weights”) and abundance (10b, “by counts”) in Central Sound.....	15
Figure 11: Biomass (mt; a) and abundance (Ind.x1000; b) estimates by year of the primary fish groups in Central Sound.....	15
Figure 12: Biomass (a) and abundance (b) estimates by depth stratum and year for the primary fish groups in Central Sound.....	16
Figure 13: Total invertebrate biomass estimates (mt; a) and abundance estimates (Individuals x1000; b) for Central Sound by depth stratum.....	16
Figure 14: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in Central Sound of the primary invertebrate groups.	17
Figure 15: Total fish biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for Hood Canal by depth stratum.	18
Figure 16: Average proportion between years of each fish group in the overall fish biomass (16a, “by weights”) and abundance (16b, “by counts”) in Hood Canal.	19
Figure 17: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in Hood Canal of the primary fish groups.	19
Figure 18: Biomass (a) and abundance (b) estimates by depth stratum and year for the primary fish groups in Hood Canal.	20
Figure 19: Total invertebrate biomass estimates (mt; a) and abundance estimates (Individuals x1000; b) for Hood Canal by depth stratum.	20
Figure 20: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in Hood Canal of the	

primary invertebrate groups.....	21
Figure 21: Total fish biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for Whidbey Island by depth stratum.....	22
Figure 22: Average proportion between years of each fish group in the overall fish biomass (22a, “by weights”) and abundance (22b, “by counts”) in Whidbey Island.	23
Figure 23: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in Whidbey Island of the primary fish groups.	23
Figure 24: Biomass (a) and abundance (b) estimates by depth stratum and year for the primary fish groups in Whidbey Island.	24
Figure 25: Total invertebrate biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for Whidbey Island by depth stratum.	24
Figure 26: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in Whidbey Island of the primary invertebrate groups.	25
Figure 27: Total fish biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for Discovery Bay by depth stratum.	26
Figure 28: Average proportion between years of each fish group in the overall fish biomass (28a, “by weights”) and abundance (28b, “by counts”) in Discovery Bay.....	27
Figure 29: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in Discovery Bay of the primary fish groups.	27
Figure 30: Biomass (a) and abundance (b) estimates by depth stratum and year for the primary fish groups in Discovery Bay.....	28
Figure 31: Total invertebrate biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for Discovery Bay by depth stratum.....	28
Figure 32: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in Discovery Bay of the primary invertebrate groups.	29
Figure 33: Total fish biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for the Eastern Strait of Juan de Fuca by depth stratum.	30
Figure 34: Average proportion among years of each fish group in the overall fish biomass (34a, “by weights”) and abundance (34b, “by counts”) in the Eastern Strait of Juan de Fuca.....	31
Figure 35: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in the Eastern Strait of Juan de Fuca of the primary fish groups.	31
Figure 36: Biomass (a) and abundance (b) estimates by depth stratum and year for the primary fish groups in the Eastern Strait of Juan de Fuca.....	32
Figure 37: Total invertebrate biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for the Eastern Strait of Juan de Fuca by depth stratum.....	32
Figure 38: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in the Eastern Strait of Juan de Fuca of the primary invertebrate groups.	33
Figure 39: Total fish biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for the Western Strait of Juan de Fuca by depth stratum.	34

Figure 40: Average proportion among years of each fish group in the overall fish biomass (40a, “by weights”) and abundance (40b, “by counts”) in the Western Strait of Juan de Fuca.....	35
Figure 41: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in the Western Strait of Juan de Fuca of the primary fish groups.....	35
Figure 42: Biomass (a) and abundance (b) estimates by depth stratum and year for the primary fish groups in the Western Strait of Juan de Fuca.	36
Figure 43: Total invertebrate biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for the Western Strait of Juan de Fuca by depth stratum.	36
Figure 44: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in the Western Strait of Juan de Fuca of the primary invertebrate groups.	37
Figure 45: Total fish biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for the San Juan Islands by depth stratum.	38
Figure 46: Average proportion between years of each fish group in the overall fish biomass (46a, “by weights”) and abundance (46b, “by counts”) in the San Juan Islands.	39
Figure 47: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in the San Juan Islands of the primary fish groups.	39
Figure 48: Biomass (a) and abundance (b) estimates by depth stratum and year for the primary fish groups in the San Juan Islands.	40
Figure 49: Total invertebrate biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for the San Juan Islands by depth stratum.	40
Figure 50: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in the San Juan Islands of the primary invertebrate groups.	41
Figure 51: Total fish biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for Georgia Basin by depth stratum.	42
Figure 52: Average proportion between years of each fish group in the overall fish biomass (52a, “by weights”) and abundance (52b, “by counts”) in the Georgia Basin.	43
Figure 53: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in Georgia Basin of the primary fish groups.	43
Figure 54: Biomass (a) and abundance (b) estimates by depth stratum and year for the primary fish groups in the Georgia Basin.	44
Figure 55: Total invertebrate biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for Georgia Basin by depth stratum.	44
Figure 56: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in Georgia Basin of the primary invertebrate groups.	45
Figure 57: Regional fish biomass density (kg/ha; primary y-axis; blue bars) and population density (ind/ha; secondary y-axis; green bars) in each sampling year (x-axis).	47
Figure 58: Biomass and count density summaries for key species and species groups across all survey years and regions.	48
Figure 59: Bootstrap averages on non-metric MDS plot based on individual tow densities (kg/ha) of fish species by Region-Year.	49

Figure 60: Proportion of Spotted Ratfish biomass and abundance occurring in each depth stratum across all survey regions and years.....	51
Figure 61: Biomass density (kg/ha; primary y-axis) and population density (ind/ha; secondary y-axis) of Spotted Ratfish by region and year.....	51
Figure 62: Getis-Ord hot spot analysis, performed in ArcGIS, based on the tow biomass densities (kg/ha) of Spotted Ratfish for all 747 tows in the 2002-2007 surveys.....	52
Figure 63: Proportional species composition of the flatfish species group, by both biomass (a) and abundance (b), based on population estimates from all years and regions of the 2002-2007 surveys.....	53
Figure 64: Proportion of English Sole biomass and abundance occurring in each depth stratum across all survey regions and years.....	54
Figure 65: Biomass density (kg/ha; primary y-axis) and population density (ind/ha; secondary y-axis) of English Sole by region and year.....	54
Figure 66: Getis-Ord hot spot analysis, performed in ArcGIS, based on the tow biomass densities (kg/ha) of English Sole for all 747 tows in the 2002-2007 surveys.....	55
Figure 67: Percent length composition data for English Sole captured in the trawl survey.	56
Figure 68: Proportion of Starry Flounder biomass and abundance occurring in each depth stratum across all survey regions and years.....	57
Figure 69: Biomass density (kg/ha; primary y-axis) and population density (ind/ha; secondary y-axis) of Starry Flounder by region and year.....	57
Figure 70: Getis-Ord hot spot analysis, performed in ArcGIS, based on the tow biomass densities (kg/ha) of Starry Flounder for all 747 tows in the 2002-2007 surveys.....	58
Figure 71: Percent length composition data for Starry Flounder captured in the trawl survey....	59
Figure 72: Proportion of Pacific Sanddab biomass and abundance occurring in each depth stratum across all survey regions and years.....	60
Figure 73: Biomass density (kg/ha; primary y-axis) and population density (ind/ha; secondary y-axis) of Pacific Sanddab by region and year.....	60
Figure 74: Getis-Ord hot spot analysis, performed in ArcGIS, based on the tow biomass densities (kg/ha) of Pacific Sanddab for all 747 tows in the 2002-2007 surveys.....	61
Figure 75: Percent length composition data for Pacific Sanddab captured in the trawl survey...	62
Figure 76: Proportion of Rock Sole biomass and abundance occurring in each depth stratum across all survey regions and years.....	63
Figure 77: Biomass density (kg/ha; primary y-axis) and population density (ind/ha; secondary y-axis) of Rock Sole by region and year.....	63
Figure 78: Getis-Ord hot spot analysis, performed in ArcGIS, based on the tow biomass densities (kg/ha) of Rock Sole for all 747 tows in the 2002-2007 surveys.	64
Figure 79: Percent length composition data for Rock Sole captured in the trawl survey.	65
Figure 80: Proportional species composition of the sharks/skates species group, by both biomass (a) and abundance (b), based on population estimates from all years and regions of the 2002-2007 surveys.....	66

Figure 81: Proportion of North Pacific Spiny Dogfish biomass and abundance occurring in each depth stratum across all survey regions and years.....	67
Figure 82: Biomass density (kg/ha; primary y-axis) and population density (ind/ha; secondary y-axis) of North Pacific Spiny Dogfish by region and year.....	67
Figure 83: Getis-Ord hot spot analysis, performed in ArcGIS, based on the tow biomass densities (kg/ha) of North Pacific Spiny Dogfish for all 747 tows in the 2002-2007 surveys. .	68
Figure 84: Percent total length composition data for North Pacific Spiny Dogfish captured in the trawl survey.....	69
Figure 85: Proportional species composition of the sculpin species group, by both biomass (a) and abundance (b), based on population estimates from all years and regions of the 2002-2007 surveys.....	70
Figure 86: Proportional species composition of the codfish species group, by both biomass (a) and abundance (b), based on population estimates from all years and regions of the 2002-2007 surveys.....	71
Figure 87: Proportion of Walleye Pollock biomass and abundance occurring in each depth stratum across all survey regions and years.....	72
Figure 88: Biomass density (kg/ha; primary y-axis) and population density (ind/ha; secondary y-axis) of Walleye Pollock by region and year.....	72
Figure 89: Getis-Ord hot spot analysis, performed in ArcGIS, based on the tow biomass densities (kg/ha) of Walleye Pollock for all 747 tows in the 2002-2007 surveys.	73
Figure 90: Percent length composition data for Walleye Pollock captured in the trawl survey..	74
Figure 91: Proportion of Pacific Hake biomass and abundance occurring in each depth stratum across all survey regions and years.....	75
Figure 92: Biomass density (kg/ha; primary y-axis) and population density (ind/ha; secondary y-axis) of Pacific Hake by region and year.....	76
Figure 93: Getis-Ord hot spot analysis, performed in ArcGIS, based on the tow biomass densities (kg/ha) of Pacific Hake for all 747 tows in the 2002-2007 surveys.	77
Figure 94: Percent length composition data for Pacific Hake captured in the trawl survey.	78
Figure 95: Proportion of Pacific Cod biomass and abundance occurring in each depth stratum across all survey regions and years.....	79
Figure 96: Biomass density (kg/ha; primary y-axis) and population density (ind/ha; secondary y-axis) of Pacific Cod by region and year.....	80
Figure 97: Getis-Ord hot spot analysis, performed in ArcGIS, based on the tow biomass densities (kg/ha) of Pacific Cod for all 747 tows in the 2002-2007 surveys.	81
Figure 98: Percent length composition data for Pacific Cod captured in the trawl survey.	82
Figure 99: Proportional species composition of the “other fish” species group, by both biomass (a) and abundance (b), based on population estimates from all years and regions of the 2002-2007 surveys.	83

LIST OF TABLES

Table 1: Number of trawl tows successfully conducted during each year within each region.....	8
Table 2: Summary of sampling effort by stratum in South Sound for surveys conducted in 2002 and 2005.....	9
Table 3: Summary of sampling effort by stratum in Central Sound for surveys conducted in 2002 and 2005.....	14
Table 4: Summary of sampling effort by stratum in Hood Canal for surveys conducted in 2002 and 2005.....	18
Table 5: Summary of sampling effort by stratum in Whidbey Island for surveys conducted in 2002 and 2005.....	22
Table 6: Summary of sampling effort by stratum in Discovery Bay for surveys conducted in 2003 and 2007.....	26
Table 7: Summary of sampling effort by stratum in the Eastern Strait of Juan de Fuca for surveys conducted in 2003, 2004, and 2007.....	30
Table 8: Summary of sampling effort by stratum in the Western Strait of Juan de Fuca for surveys conducted in 2003, 2004, and 2007.....	34
Table 9: Summary of sampling effort by stratum in the San Juan Islands for surveys conducted in 2004 and 2006.....	38
Table 10:Summary of sampling effort by stratum in Georgia Basin for surveys conducted in 2004 and 2006.....	42

INTRODUCTION

The Washington Department of Fish and Wildlife (WDFW) is charged with managing the fauna of the state of Washington on behalf of its residents. At its core, this management consists of determining when and where organisms are found, assessing their abundance, monitoring changes in distribution and abundance over time, and developing policies that ensure continued persistence of populations and the habitats upon which they rely. As appropriate, management policies may be developed to allow sustainable harvest of portions of these populations by commercial and recreational interests, though this is also balanced with development of fish and wildlife viewing opportunities. These fundamental goals are shared with numerous federally recognized Native American tribes that reside upon territory that overlaps portions of the state, most of which have independent natural resource departments. Cooperation by these partners, as well as a variety of private, city, country, and federal entities, is crucial to effective implementation of conservation and utilization policies.

The inland marine waters of Washington State, hereafter referred to as the southern Salish Sea (the U.S. portions of the Straits of Georgia and Juan de Fuca, the San Juan Archipelago, and Puget Sound), are home to a wide variety of fishes, including anadromous fishes (salmon, sturgeon), non-game fishes (eelpouts, gunnels, gobies, etc.), forage fishes (anchovy, herring, sand lance, sardine, and smelt) and bottomfishes¹. Of the 221 marine fish species recorded in Puget Sound, 86 are legally considered bottomfish, and 36 of these were/are commonly caught in commercial and recreational fisheries (Palsson et al. 1996), which have existed in the region since the late 1800s (Jordan 1884; Anderson et al. 1949; Pedersen and DiDonato 1982). Until 1994, more than 90% of bottomfish landings in the southern Salish Sea came from commercial fisheries, including jig, troll, pot, drag seine, set line, and set net fisheries, but particularly the bottom trawl fishery (Palsson et al. 1996; Burley et al. 2017). Historically, the bottom trawl fishery in Puget Sound targeted Pacific Cod, rockfish, Lingcod, Sablefish, Starry Flounder, and various species of sole (Heyamoto et al. 1960). The WDFW used the detailed catch records from the trawl fishery, as well as from other fisheries, to monitor bottomfish populations and implement fishery management measures. As catches declined over the decades, however, commercial fishery restrictions and closures increased; by 1992 jig and troll gears had been banned in all waters east of Sekiu, and by 1994 bottom trawling was only allowed in the Strait of Georgia and western Strait of Juan de Fuca (Burley et al. 2017). Recreational fisheries, primarily hook-and-line and spearfishing, have also targeted bottomfish in the Sound, and declining rockfish populations have influenced most of the increasingly restrictive regulations (Burley et al. 2017).

Long-term management of animal populations must be built upon scientific understanding to be successful, and robust management strategies that rely on science often prove to be the most versatile and adaptive to variation in population-level stressors and threats. As the reduction of commercial and recreational fisheries began in Puget Sound, and thus the amount of incoming catch data on bottomfish decreased, the Washington Department of Fisheries (WDF) (which later became part of the WDFW) initiated a series of fishery-independent research trawl surveys in

¹ WAC 220-300-040 Bottomfish are defined as including Pacific Cod, Pacific Tomcod, Pacific Hake, Walleye Pollock, Lingcod, Ratfish, Sablefish, Cabezon, Buffalo Sculpin, Great Sculpin, Red Irish Lord, Brown Irish Lord, Pacific Staghorn Sculpin, Wolf-eel, Giant Wrymouth, Plainfin Midshipman, North Pacific Spiny Dogfish, Sixgill Shark, Tope Shark and all species of skate, dab, sole, flounder (except Pacific Halibut), greenling, shark, rockfish, rattail, and surfperch (except Shiner Perch).

1987 to assess and monitor the distribution and abundance of certain bottomfish populations. Though commercial fisheries had been operating for over 150 years by this time and several short-term scientific evaluations of species distribution and harvest pressure had occurred (e.g., Smith 1936; WDF 1940; Kauffman and Pruter 1952; Pruter and Van Cleve 1954; Bargmann et al. 1985), this represented the genesis of the first semi-consistent, fishery-independent, long-term monitoring effort designed to evaluate the status of bottomfish populations in this area.

The National Oceanographic and Atmospheric Administration (NOAA) had been conducting such surveys regularly on the Pacific west coast since 1977 and in the Bering Sea since 1979 (Wienberg et al. 1994; Lauth and Acuna 2007), so the WDF was able to base their catch processing protocol on NOAA's established method. WDF's original survey design was depth-stratified, targeted English Sole and Starry Flounder, and used the Washington State Groundfish Management Regions established in 1986, which divided the Sound into seven fishing areas (Quinnell and Schmitt 1991; Evans 1998). While the primary focus of the survey was on two species, data on all fish and invertebrates were recorded and ultimately provided a beneficial look into other commercial stocks and into the ecosystem as a whole. Subsequent southern Salish Sea-wide trawl surveys were completed in 1989 and 1991 following the same sampling design but were conducted between late-April and early June with modified net gear that slightly reduced fishing power but greatly reduced bottom snagging (Quinnell et al. 1993).

For the 1994-1996 surveys, the agency kept the modified net and late spring timing but shortened the tow durations and narrowed the survey scope to fish in one or two regions each year to sample more extensively than in the Sound-wide surveys; the Georgia Basin was sampled in 1994, Central Sound in 1995, and both Hood Canal and South Sound in 1996. While the results from these surveys were never formally written into reports, the data were still used to inform management decisions (Palsson et al. 1996). The scope of the trawl survey was again changed in 1997, 2000, and 2001, to address the 1992 Environmental Cooperative Agreement between Washington and British Columbia and survey the fishes and invertebrates in the transboundary waters, including the San Juan Islands and the Straits of Georgia and Juan de Fuca (Palsson et al. 1998, Palsson et al. 2002, Palsson et al. 2003).

Following the transboundary studies, in 2002 the WDFW returned to a design in which efforts were focused in two to four regions each year, and each region was fished at least twice over the course of five years. The regional delineations used were slightly different from the 1986 ones, splitting the Sound into nine areas instead of seven (see below); the survey design also incorporated other improvements made during previous surveys, including shortened and more consistent tow durations, spring timing, and modified net gear. The primary objective of the survey was to estimate the abundance of key bottomfishes and benthic macroinvertebrates living deeper than 30 ft (mean low low water) in order to gain information critical to population assessment and monitoring. In addition to abundance and spatial distribution data, the survey also gathered size and age distributions of key species, as well as tissue samples for a genetic reference collection. The data provide a look at the species compositions within each region and how these populations change over time, serving as a baseline for evaluating ecosystem function and persistence (Palsson et al. 2002).

This report contains detailed results for the WDFW's scientific bottom trawl surveys conducted from 2002 through 2007, inclusive. Though detailed results are only provided for a selection of encountered species, complete data for all species are provided as an appendix, and a digital copy of the data can be obtained by contacting the WDFW Puget Sound Marine Fish Science Unit.

METHODS

The procedures for otter trawling, catch processing, and calculating population estimates remained relatively unchanged from the time when the WDF began conducting trawl surveys in 1987 through 2007. While they are summarized briefly below, additional details can be found in Palsson et al. (2003).

Survey Design and Execution

The southern Salish Sea was divided based on geophysical and hydrographic landmarks into nine regions: South Sound (SS), Central Sound (CS), Hood Canal (HC), Whidbey Island (WI), Discovery Bay (DB), Eastern (JE) and Western (JW) Strait of Juan de Fuca, San Juan Islands (SJ), and Georgia Basin (GB) (Figure 1). Each region was further divided into four depth strata: 5-20 fa, 21-40 fa, 41-60 fa, and >60 fa. Trawling was not conducted shallower than 5 fa due to concerns about impacts to nearshore vegetation, the assumption that avoidance behavior of target species would be highly effective under well-lit conditions, and the depth restrictions of the survey vessel. Therefore, population estimates do not include individuals occupying habitats shallower than 5 fa. For some species this represents a significant limitation to the use of population estimates for resource management, which is why the WDFW conducts systematic scuba surveys when practicable (LeClair et al. 2018).

To calculate the surface areas of each stratum in each region, an ArcGIS coverage of depth contours was created based on available bathymetry data, divided at the specified depth breaks, and clipped at the boundaries of each region. The ArcGIS geometry calculator was then used to calculate each area. The Eastern Strait of Juan de Fuca is the largest region, covering nearly 137,000 ha (deeper than 5 fa), while Discovery Bay is by far the smallest with only 3,100 ha (Figure 2). The San Juan Islands, Hood Canal, Whidbey Island, and the Eastern Strait of Juan de Fuca all have relatively balanced areas across all depth strata, while the other regions are dominated by one or two strata. South Sound has very little area >60 fa deep, and Discovery Bay has no habitat in either the 41-60 fa or >60 fa strata. Due to the lack of a fine-resolution, Sound-wide bathymetric habitat map, it was not possible to remove areas of rocky habitats too rugose to sample with a bottom trawl net. Therefore, while the survey only sampled habitats of trawlable bottoms, estimates were calculated based on the full area of each region's depth strata.

Station selection techniques were based on those from the 2001 WDFW bottom trawl survey (Palsson et al. 2003) in which sampling locations were randomly chosen using computer-generated calculations of strata areas and a grid of 0.25 nm^2 cells overlaid on nautical charts. The number of stations sampled per stratum and region each year, which ranged from 4-22, was designed to produce a minimum coefficient of variation of 30% for key bottomfish species, based on encounter rates and densities from previous surveys using the same sampling gear.

At each station, a 400-mesh Eastern bottom trawl was towed for approximately 0.4 nm (~10 min with an average boat speed of 1.5-2.5 knots) within the target depth stratum. The minimum duration for a tow to be considered ‘valid’ was five minutes; if obstacles were encountered that required fishing to stop before the minimum time was met, the net would be brought to the surface until the doors were onboard, the boat would move away from the obstacle but remain within the depth stratum, and the net and doors would be re-deployed to finish the tow. The time

and distance of these ‘composite’ tows were summed to get the total for the station. This strategy was only employed on three percent of the total number of tows conducted during this six-year sampling period.

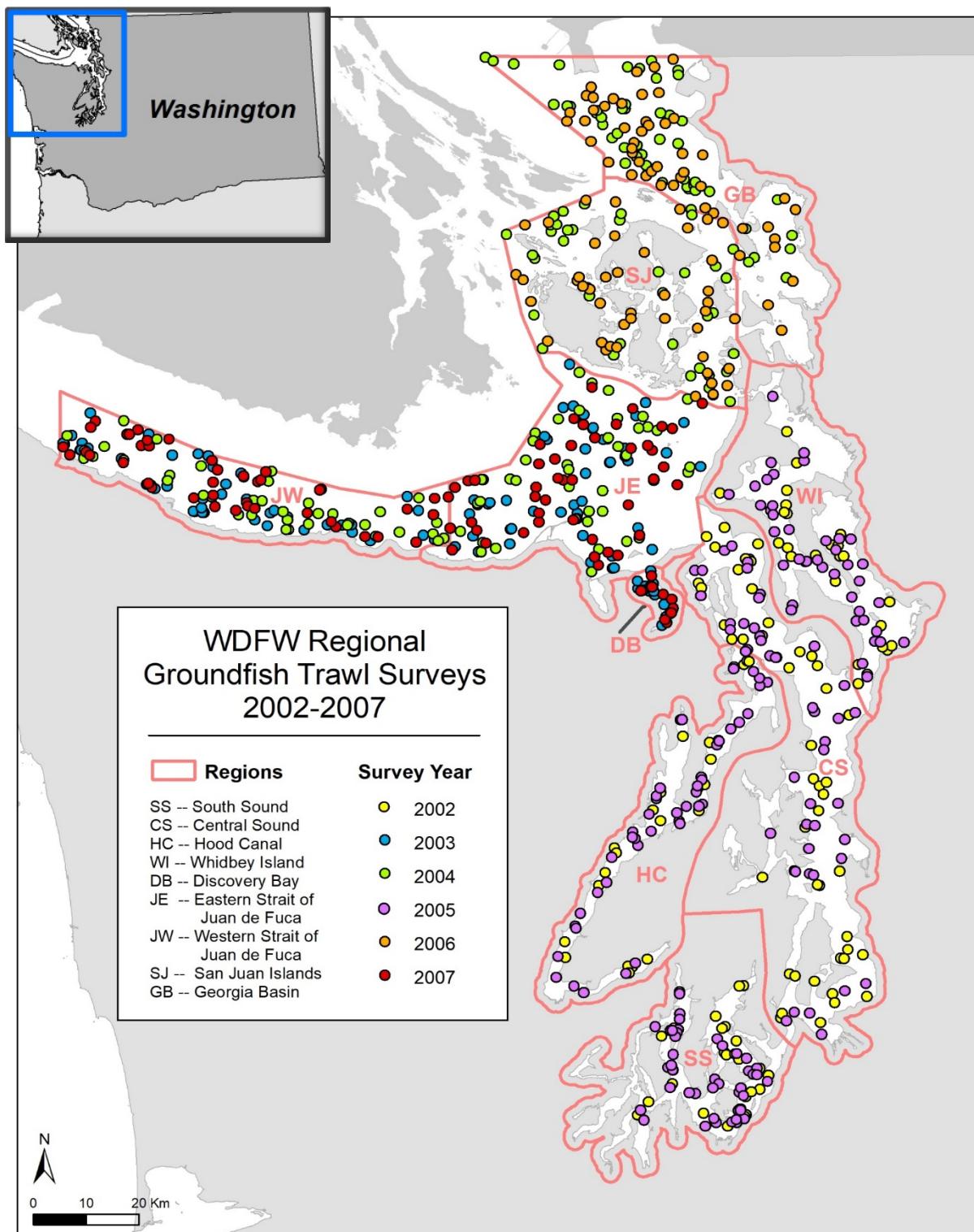


Figure 1: Map of regions and stations sampled in the southern Salish Sea during the 2002-2007 bottom trawl surveys.

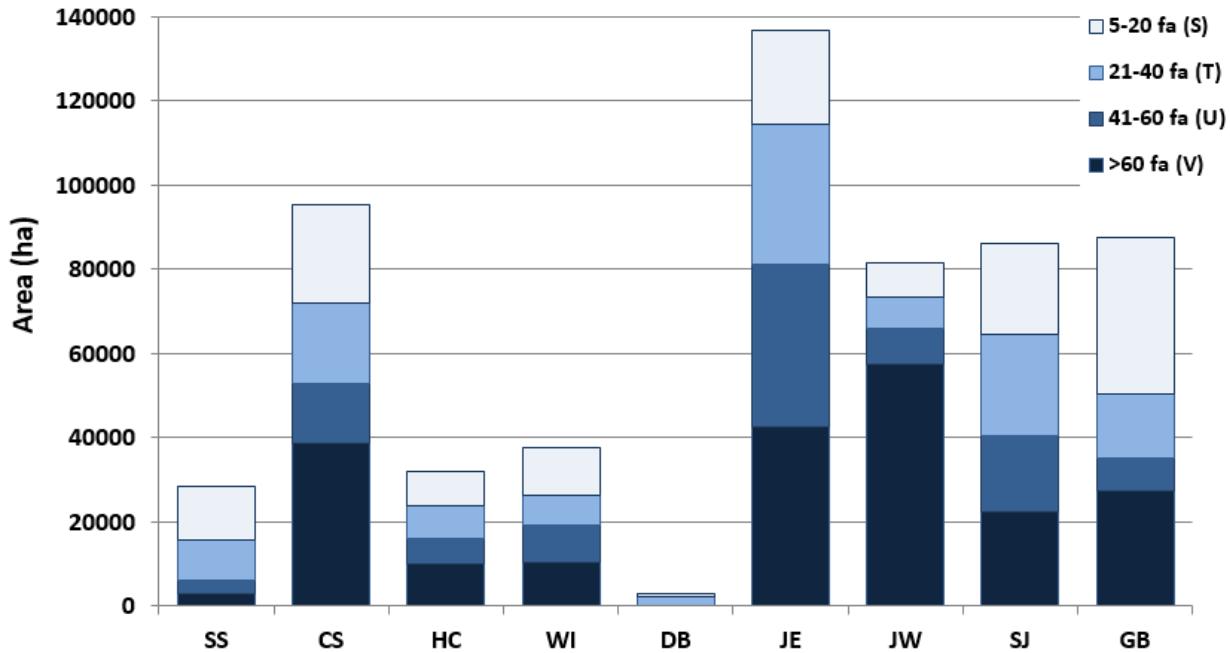


Figure 2: Areas (ha) of the depth strata within each region of the southern Salish Sea. SS=South Sound; CS=Central Sound; HC=Hood Canal; WI=Whidbey Island; DB=Discovery Bay; JE=Eastern Strait of Juan de Fuca; JW=Western Strait of Juan de Fuca; SJ=San Juan Islands; GB=Georgia Basin.

Trawl Gear

Survey operations were conducted from the chartered *F/V Chasina*, a 17.7-m, steel-hull purse seiner outfitted with bottom trawl gear and operated by the vessel's captain and crew. The net used for sampling each year was a commercial-style 400-mesh Eastern otter trawl constructed of synthetic twine with a primary mesh size of 10 cm and a 3.2-cm mesh liner in the codend (Appendix A). The headrope was 21.4 m long and the footrope was 28.7 m long. Additionally, the footrope was fitted with 13 cm "cookie gear" (i.e., tightly packed, non-moving, rubber disks) to reduce both wear on the footrope itself and snagging on bottom features. Use of cookie gear made it possible to sample on bottoms composed of cobble and small boulders, as well as in areas with substantial anthropogenic and terrestrial debris (i.e., trash and trees). Steel trawl doors (otter boards) were used to spread the net, and the net towed a path 8.7-13.7 m wide, depending on bottom depth and wire (warp) out. Net widths as a function of depth and scope were previously determined in a 1994 mensuration experiment (Appendix B; WDFW, unpublished data), the results of which are assumed to be have remained applicable in the current survey period as a result of consistency in vessel and gear configuration.

Catch Processing and Estimations

After each tow, the net was retrieved and emptied onto a sorting table. All fish and invertebrates were identified to the lowest possible taxon, enumerated, weighed, and returned to the water, with the exception of whole specimens collected for further study. Lengths, genetic samples, age structures, and/or voucher specimens were also collected for particular bottomfish species of interest (Appendix C). When the catch exceeded the capacity of the sorting table or could not be sorted within a reasonable amount of time, or when there were too many of one species to individually count, the catch was randomly subsampled following the procedures detailed in Palsson et al. (2003).

Catch data were entered into a database on the vessel and later verified in an office environment. Species-specific biomass and abundance estimates, and associated variances and coefficients of variation, were calculated for each region and regional depth stratum based on formulas from Gunderson (1993) and modifications for stratified random surveys by Schaeffer et al. (1979). As explained in Palsson et al. (2003):

Where f_{ij} is the i-th density observation (either in terms of numbers or weight) of n stations in the j-th stratum, and A_j is the area of the j-th stratum and N_j is the species population estimate of the j-th stratum:

$$N_j = A_j \overline{f_j} = A_j \sum_{i=1}^n \frac{f_{ij}}{n}$$

Regional estimates of numerical and biomass population abundances were made by summing the point estimates and their variances over all strata. The variance of stratum population estimates was calculated as:

$$Var(N_j) = A_j^2 Var(\overline{f_j}) = A_j^2 \sum_{i=1}^n \frac{(f_{ij} - \overline{f_j})^2}{n(n-1)}$$

Coefficients of variation were calculated as the percentage of the square root of the variance divided by the population estimate.

Data Displays

Below, estimates are summarized, displayed, and discussed in multiple configurations. For many summaries, fish species were combined into six primary groups: ratfish, flatfish, sharks/skates, sculpins (Cottoidea), codfish (Gadiformes), and other fish. Results are first discussed on a regional level with basic summaries of total fish biomass and abundance, proportional species group compositions, species group estimates, and estimates by depth stratum. Estimates for invertebrate species, which were also simplified into major groups (anemones, bivalves,

brachyuran crabs, sea cucumbers, sea stars, sea urchins, shrimp, and other invertebrates), are also briefly discussed.

Following the nine regional breakdowns, total biomass and abundance estimates were converted to density estimates to compare among regions on an aggregate basis. To better compare regions based on their species assemblages and catch rates, bootstrap averages were performed in PRIMER 7 (PRIMER-e 2015). Bootstrapping methods, which are commonly employed in processing trawl survey data (Gunderson 1993, Smith 1996, Smith 1997, Cervino and Saborido-Rey 2006, etc.), use computational power to run “multiple simulated surveys, each using a different random selection (with replacement) of sampling stations, … and the means and variances from each series of simulations are then compared” (Gunderson 1993). The bootstrap average protocol in PRIMER (v7) displays a region estimate (referred to as a ‘variability cloud’ in Results) for each group mean on a two-dimensional ordination plot (Clarke and Gorley 2015). Biomass densities (kg/ha) for each fish species were first calculated for each tow before the data were treated with a fourth-root transformation and a resemblance matrix based on Bray-Curtis similarity was calculated (PRIMER-e 2015). Bootstrap averages based on the resemblance matrix were then calculated and results plotted on a non-metric MDS by a particular factor (i.e., Region or Region-Year); detailed analysis parameters can be found in Appendix D. As a follow-up to patterns noticed in the bootstrap analysis, a two-way crossed SIMPER analysis was also performed in PRIMER 7 to examine the species driving the similarities and differences among the regions and depth strata; these parameters and basic results can also be found in Appendix D.

In addition to the regional breakdown, results are also presented on a species level. Proportional compositions of each fish species group are displayed, and detailed species profiles for the most commonly encountered and/or commercially impacted species are provided. Each profile for these nine species contains depth distribution, density estimates by region, and biomass hotspot maps. ArcGIS 10.4.1 (ESRI 2015) was used to run a Hot Spot Analysis (Getis-Ord Gi*) based on the tow densities (kg/ha) of a specific species for each of the 747 tows performed throughout the survey. According to ESRI (2015), “given a set of weighted features,...this [Hot Spot Analysis] tool identifies statistically significant spatial clusters of high values (hot spots) and low values (cold spots),...[creating] a new Output Feature Class with a z-score, p-value, and confidence level bin (Gi_Bin) for each feature in the Input Feature Class.” Tool parameters were established as the “fixed distance band” conceptualization, with an average distance band of 5,680 m to ensure that each tow point had at least the recommended eight neighbors. It is important to note, however, that this band could be wider than some portions of land throughout the Sound, which could make tows that are on either side of the land to be considered “neighbors” even though the fish populations could be of different basins and not easily mixed. After running the tool, results were classified into seven p-value or confidence level bins and displayed on an ArcGIS map.

This report only discusses a portion of the data collected and analyzed from the 2002-2007 surveys. Full catch data are included in Appendix E and can also be obtained by contacting the Puget Sound Marine Fish Science Unit, along with further information regarding the surveys.

RESULTS--REGIONS

A total of 747 tows were conducted during the months of April-June from 2002 to 2007 throughout the southern Salish Sea, covering a total area of 613 ha (Table 1). Seven of the nine regions were surveyed twice with a two-to-three-year gap between sampling periods, while the Eastern and Western Straits of Juan de Fuca were surveyed three times. The number of tows conducted in each region during each annual survey were relatively equal among years, with the exception of Hood Canal, South Sound, and Whidbey Island, in which effort increased an average of 54% from 2002 to 2005. This increase was due to an increase in available funding, and the additional effort was allocated to each region-stratum relative to the total fish biomass, as estimated based on previous surveys, and stratum areas.

Table 1: Number of trawl tows successfully conducted during each year within each region.

	2002	2003	2004	2005	2006	2007	Total
South Sound (SS)	27			42			69
Central Sound (CS)	49			46			95
Hood Canal (HC)	26			40			66
Whidbey Island (WI)	26			40			66
Discovery Bay (DB)		14			12		26
Eastern Strait of Juan de Fuca (JE)	39	41		44			124
Western Strait of Juan de Fuca (JW)	39	40			41		120
San Juan Islands (SJ)		37		44			81
Georgia Basin (GB)		50		50			100
Total	128	92	168	168	94	97	747

Throughout the survey period, the trawls caught an estimated 436,000 individual fish weighing over 132 mt and consisting of 140 species, and an estimated 449,000 invertebrates weighing 50 mt and consisting of 204 species. Biomass and abundance estimates were calculated and examined on regional, species-specific, and stratum-specific bases.

South Sound (SS)

A total of 27 tows were conducted in South Sound (SS) in 2002, but 42 were conducted in 2005; the majority of the additional tows were added to the shallowest two depth strata (5-20 fa, 21-40 fa) (Table 2). On average, tows in 2005 were slightly shorter, and thus the average area swept per tow was lower. With the additional tows, however, seven more hectares were fished in 2005 than in 2002.

Total fish biomass estimates decreased 29% from 3,988 mt in 2002 to 2,832 mt in 2005 while abundance estimates increased 13% from 44.8 million individuals to 50.5 million (Figure 3). The majority of the decrease in biomass occurred in the 5-20 fa depth stratum, in which estimates

dropped over 1,100 mt (55%), and can be attributed primarily to lower catches of flatfish in that stratum (Figure 6). On average, flatfish comprised over half of the fish biomass in SS with an estimated 2,525 mt in 2002 and 1,508 mt in 2005 (Figure 4, Figure 5). In 2002, Starry Flounder (*Platichthys stellatus*) were the dominant species of flatfish, representing over 70% of the flatfish biomass in the region; while it was also the most dominant in 2005, English Sole (*Parophrys vetulus*) and Rock Sole (*Lepidotsetta* spp.) were also key contributors that year.

Despite making up over half of the fish biomass in SS, flatfish was not the most abundant species group, as “other fish” represented almost half of the fish abundance (Figure 4). Of the 27 fish species that were identified in the “other fish” group, Blackbelly Eelpouts (*Lycodes pacificus*) comprised 61% of the group’s abundance in 2002 and 85% in 2005 with estimates of 11.8 million and 22.8 million, respectively. This is likely an underestimate, as the trawl net is not designed to catch eelpouts, and they can be seen escaping through the mesh when the net is brought on board, as noted by Pacunski et al. (2016). Other than flatfish and ‘other fish,’ sculpins also comprised 18% of the fish abundance, with the most dominant species being Buffalo Sculpin (*Enophryns bison*).

Estimates of invertebrate biomass and abundance doubled between 2002 and 2005, respectively from 2,745 mt to 5,759 mt and from 14.3 million individuals to 30 million individuals (Figure 7). A large portion of both increases can be attributed to a higher number of Metridium anemones encountered in 2005 (Figure 8). Additionally, all three key species of Brachyuran crabs – Dungeness (*Cancer magister*), Red Rock (*Cancer productus*), and Graceful (*Cancer gracilis*) – increased in both weight and numbers, as did Rosy Tritonia (*Tritonia diomedea*), a nudibranch that comprised over 80% of the “other invert” group estimates.

Table 2: Summary of sampling effort by stratum in South Sound for surveys conducted in 2002 and 2005.

SOUTH SOUND						
DEPTH	NUMBER	AVG. TOW	AVG. TOW	Avg. Tow	Avg. Tow Area	Total Area
YEAR	TOWS	MINUTES	DISTANCE (m)	DEPTH (fa)	SWEPT (m ²)	Surveyed (ha)
5-20 fa (S)						
2002	8	10.25	726.91	13.38	7322.44	5.86
2005	14	9.86	600.58	13.57	6405.13	8.97
21-40 fa (T)						
2002	8	11.13	782.47	29.50	9212.68	7.37
2005	13	10.38	642.50	26.77	7634.06	9.92
41-60 fa (U)						
2002	6	11.00	774.75	47.67	10061.08	6.04
2005	7	9.43	571.47	48.29	7433.24	5.20
>60 fa (V)						
2002	5	11.20	733.39	75.40	9859.42	4.93
2005	8	10.50	664.41	75.75	8936.55	7.15

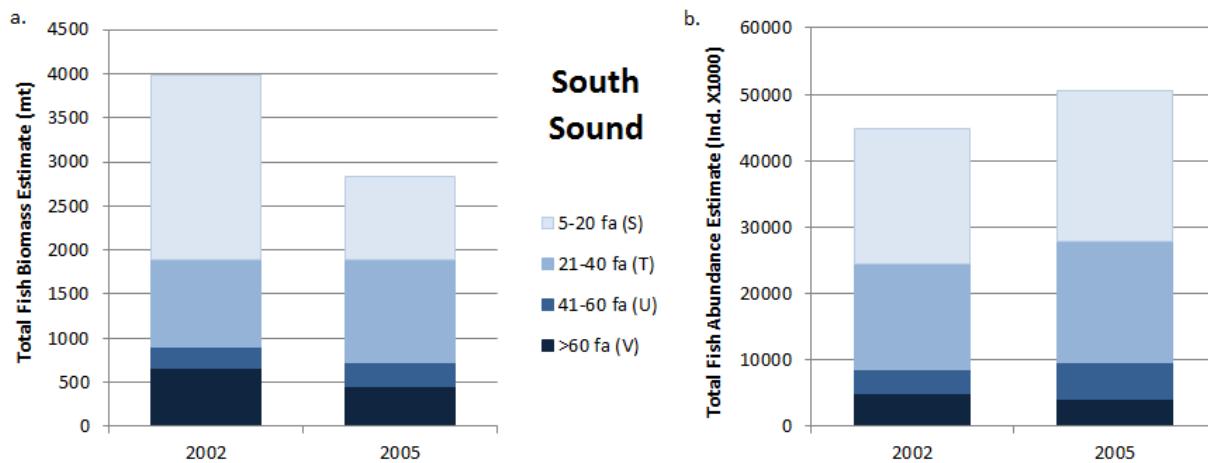


Figure 3: Total fish biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for South Sound by depth stratum.

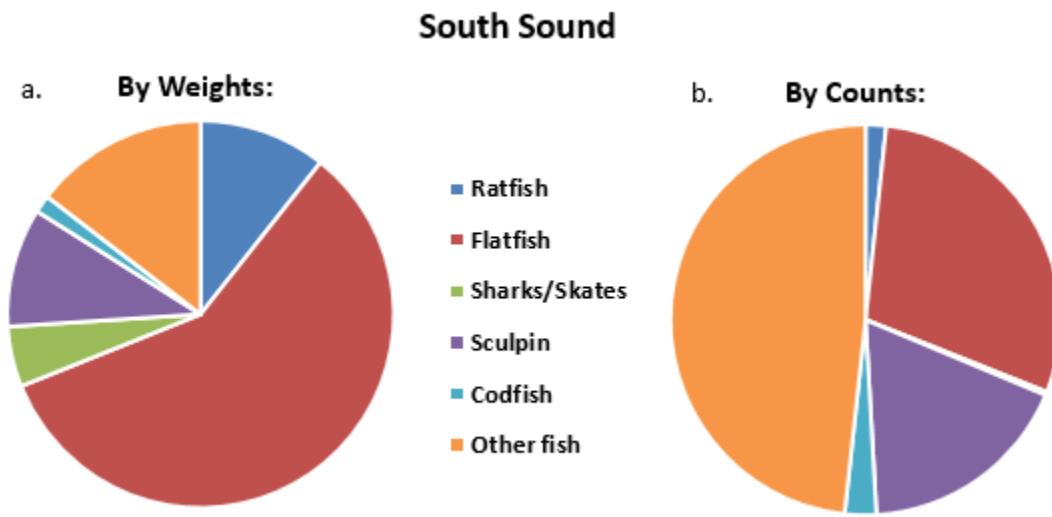


Figure 4: Average proportion between years of each fish group in the overall fish biomass (4a, “by weights”) and abundance (4b, “by counts”) in South Sound.

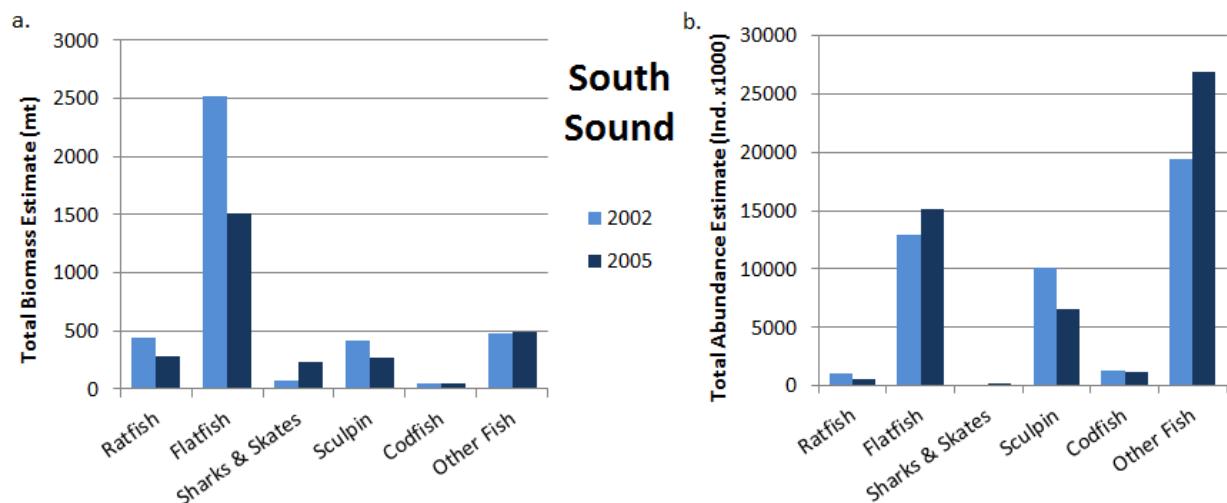


Figure 5: Biomass (mt; a) and abundance (Ind. x1000; b) estimates in South Sound of the primary fish groups.

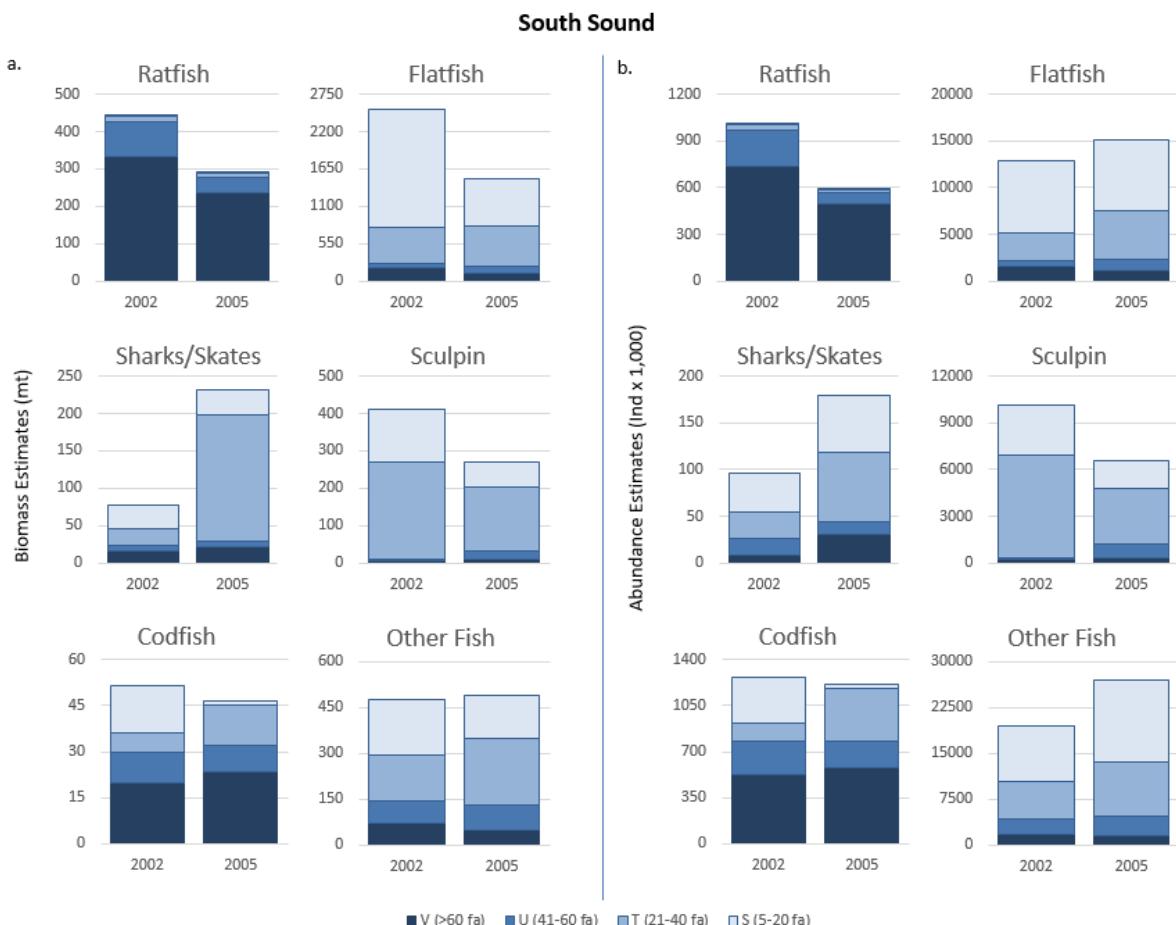


Figure 6: Biomass (a) and abundance (b) estimates by depth stratum and year for the primary fish groups in South Sound.

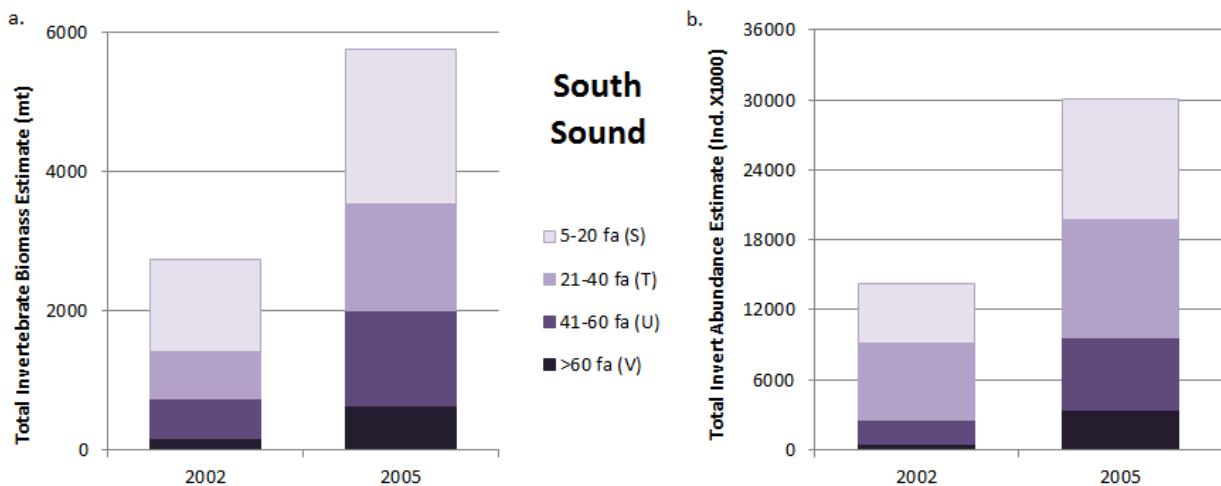


Figure 7: Total invertebrate biomass estimates (mt; a) and abundance estimates (Individuals x1000; b) for South Sound by depth stratum.

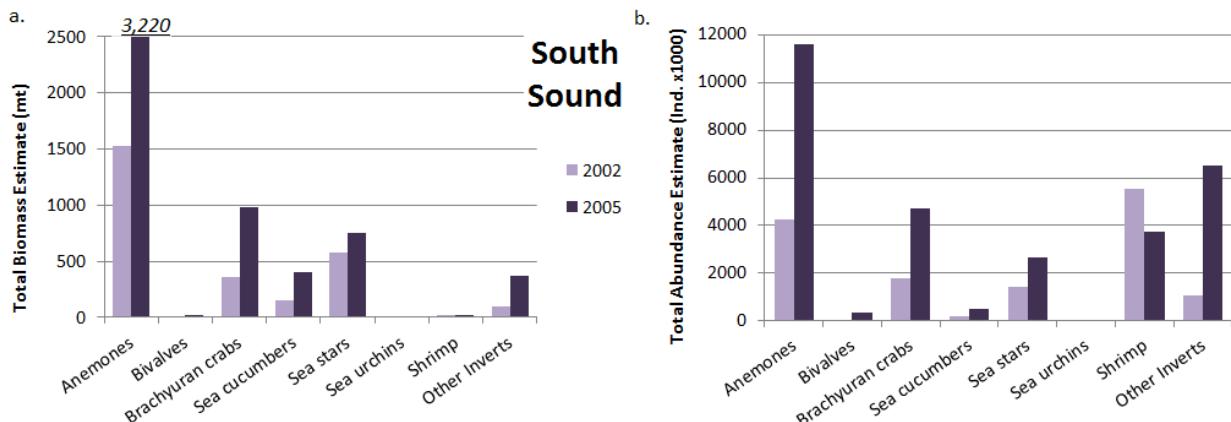


Figure 8: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in South Sound of the primary invertebrate groups.

Central Sound (CS)

Within each depth stratum, 10-14 tows were conducted each survey year for a total of 49 tows in 2002 and 46 in 2005, covering 39.68 ha and 35.14 ha, respectively (Table 3). Tow characteristics were relatively consistent within strata between years, with the exception of the 21-40 fa stratum in which tows in 2005 covered 40% less total area than those in 2002 due to fewer total tows and shorter tow durations. Overall, tows tended to be shorter, and thus less area was fished, in the shallower two depth strata compared to the deeper two.

Total fish biomass estimates for Central Sound (CS) essentially remained the same between years, increasing just 1.5% from 46,179 mt in 2002 to 46,889 mt in 2005 (Figure 9). Fish abundance estimates also increased 1.5%, from 153.5 million individuals to 155.8 million. On average, CS was dominated by Spotted Ratfish (*Hydrolagus colliei*) and flatfish (including all species of sole, flounder, and dab) (Figure 10). Combined, these two species groups comprised 91% of the total fish biomass and 85% of the total fish abundance, while the remaining groups

(sharks/skates, sculpin, codfish, other fish) contributed 4% or less to the biomass and 9% or less to the abundance.

Ratfish comprised over 72% of total fish biomass and 60% of abundance in CS in both 2002 and 2005 (Figure 10, Figure 11). Ratfish biomass estimates averaged around 35,000 mt among years and only increased 11% between years (Figure 11); however, larger shifts in depth distribution occurred, as ratfish biomass in the deepest stratum more than doubled in 2005 while biomass in the shallowest two strata dropped 62-72% (Figure 12). The flatfish composition of CS was dominated by English Sole, which accounted for 68% of the flatfish biomass and 64% of the abundance, on average. The remaining primary contributors of the 15 identified species were Rock Sole, Pacific Sanddab (*Citharichthys sordidus*), Starry Flounder, and either Dover Sole (*Microstomus pacificus*) in terms of biomass or Slender Sole (*Lyopsetta exilis*) in terms of abundance. Between years, flatfish biomass estimates decreased overall by 2,500 mt, or 29%, which was primarily driven by large drops in English Sole and Rock Sole. Among depth strata, these changes resulted in biomass decreases in the 5-20 fa (-46%) and 41-60 fa strata (-90%), and an increase in the >60 fa stratum (+53%) (Figure 12).

While other species groups didn't contribute much to the overall biomass and abundance compared to ratfish and flatfish, there were a couple notable changes in their catch rates. Larger catches of North Pacific Spiny Dogfish (*Squalus suckleyi*), Walleye Pollock (*Gadus chalcogrammus*), and Shiner Perch (*Cymatogaster aggregata*) were the primary drivers contributing to higher densities in 2005 of the elasmobranchs, codfish, and 'other fish' groups, respectively, while lower catches of Buffalo Sculpin and Red Irish Lord (*Hemilepidotus hemilepidotus*) resulted in the decrease in sculpin densities. With the exception of Walleye Pollock, which are more uniformly distributed in CS, changes in the other species may not be reflective of actual population changes owing to their patchier distributions and higher CVs in most depth strata.

Total invertebrate biomass and abundance estimates in CS changed substantially more between years than fish catches, as biomass increased from 4,455 mt in 2002 to 9,953 mt in 2005 (+123%) and abundance increased from 38.8 million individuals to 124.6 million (+221%) (Figure 13). The majority of this increase is a result of a higher bivalve catch as a number of tows encountered high abundances of Northern Horse Mussel (*Modiolus modiolus*), particularly in the deepest stratum (>60 fa) (Figure 13, Figure 14). All other species groups, however, also increased in both biomass and abundance between years (Figure 14). On average, anemones, bivalves, and brachyuran crabs dominate the invertebrate biomass in CS while shrimp and bivalves comprise the majority of invertebrate abundance.

Table 3: Summary of sampling effort by stratum in Central Sound for surveys conducted in 2002 and 2005.

CENTRAL SOUND

DEPTH YEAR	NUMBER TOWS	Avg. TOW MINUTES	Avg. Tow Distance (m)	Avg. Tow Depth (fa)	Avg. Tow Area Swept (m ²)	Total Area Surveyed (ha)
5-20 fa (S)						
2002	12	9.25	618.88	12.83	6448.73	7.74
2005	10	9.00	563.01	12.60	5938.23	5.94
21-40 fa (T)						
2002	13	9.69	641.08	32.08	7703.34	10.01
2005	10	7.90	479.67	31.60	5970.42	5.97
41-60 fa (U)						
2002	10	9.40	640.79	49.20	8173.56	8.17
2005	13	10.15	626.83	49.38	8160.55	10.61
>60 fa (V)						
2002	14	11.07	723.60	98.29	9827.43	13.76
2005	13	10.69	713.73	100.38	9705.36	12.62

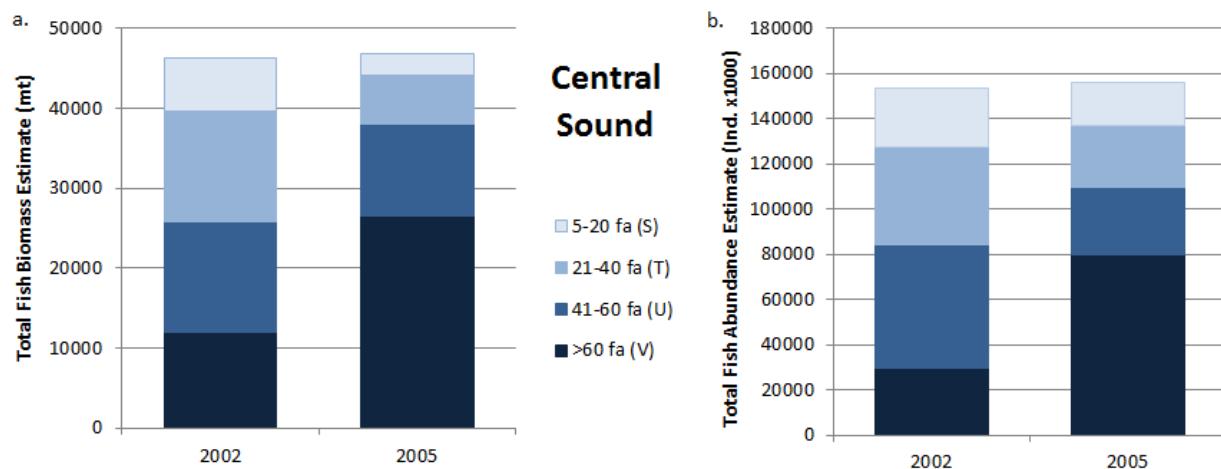
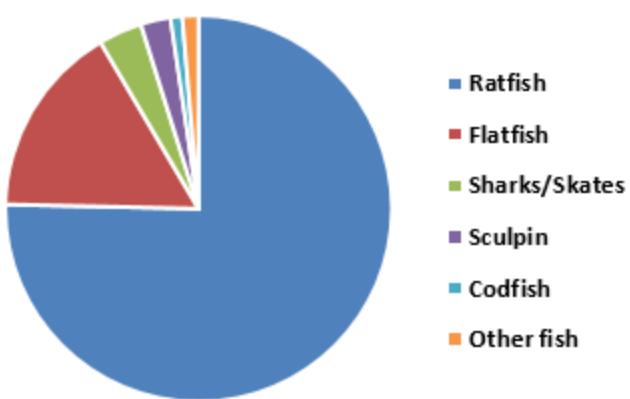


Figure 9: Total fish biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for Central Sound by depth stratum.

Central Sound

a. **By Weights:**



b. **By Counts:**

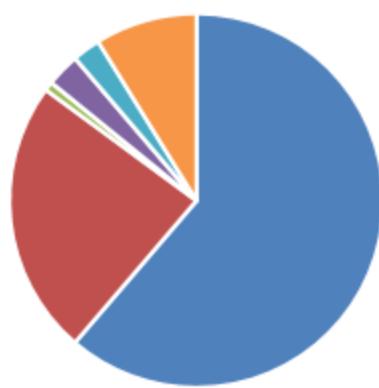


Figure 10: Average proportion between years of each fish group in the overall fish biomass (10a, “by weights”) and abundance (10b, “by counts”) in Central Sound.

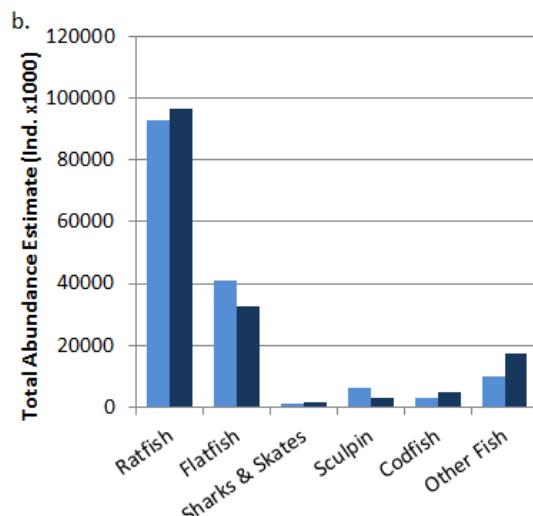
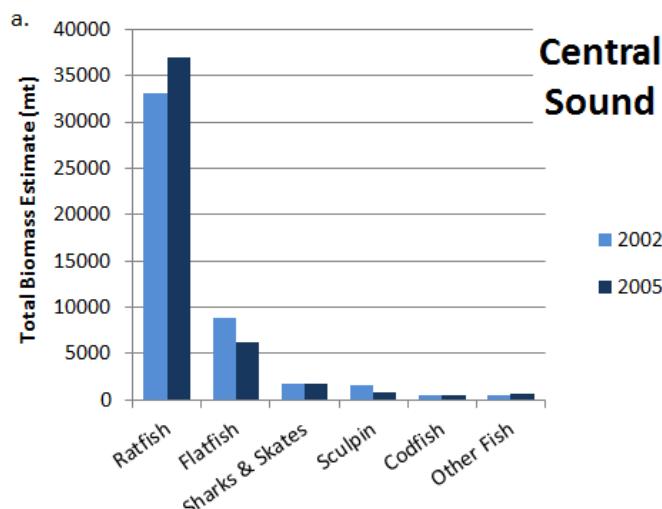


Figure 11: Biomass (mt; a) and abundance (Ind.x1000; b) estimates by year of the primary fish groups in Central Sound.

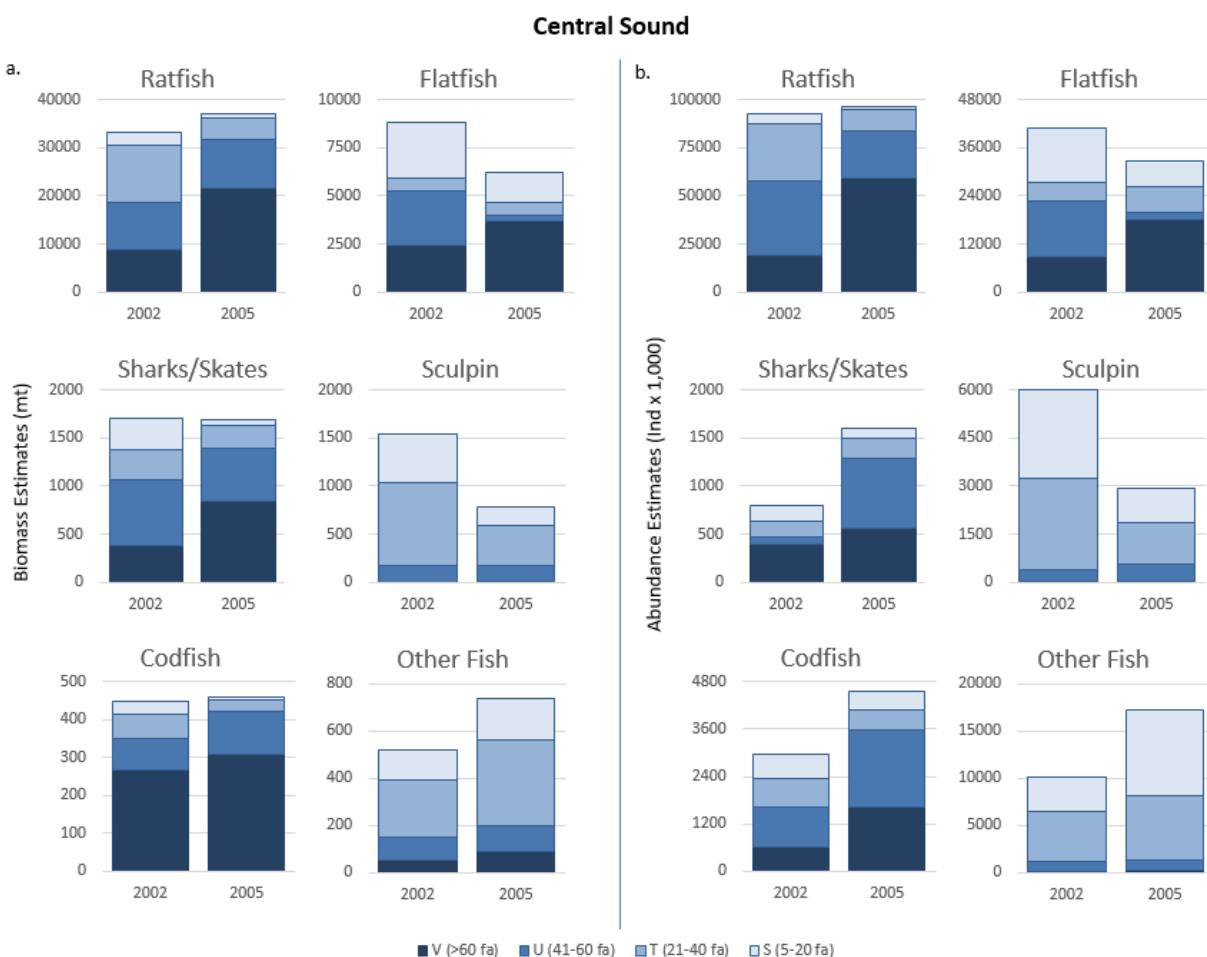


Figure 12: Biomass (a) and abundance (b) estimates by depth stratum and year for the primary fish groups in Central Sound.

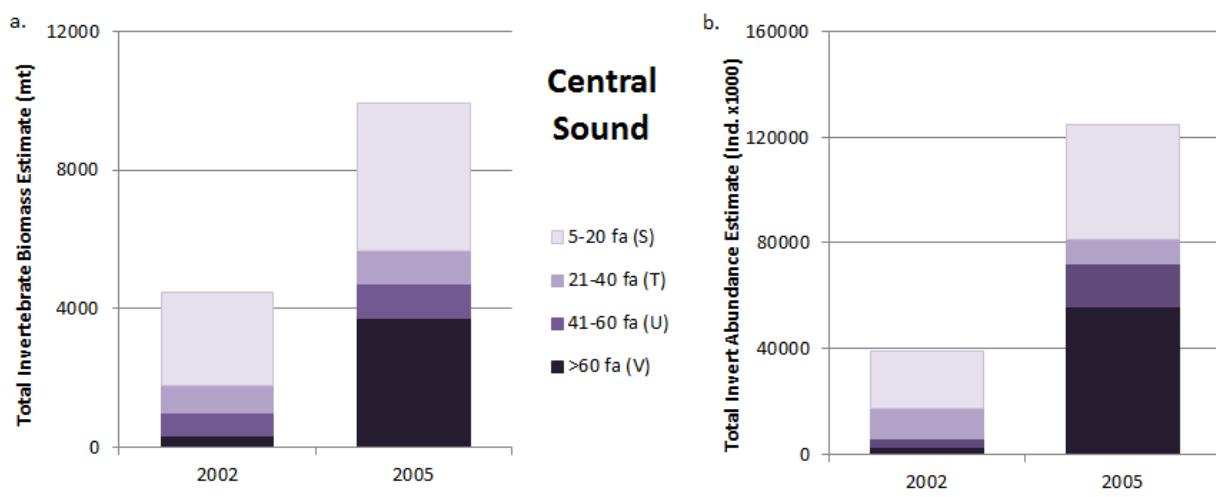


Figure 13: Total invertebrate biomass estimates (mt; a) and abundance estimates (Individuals x1000; b) for Central Sound by depth stratum.

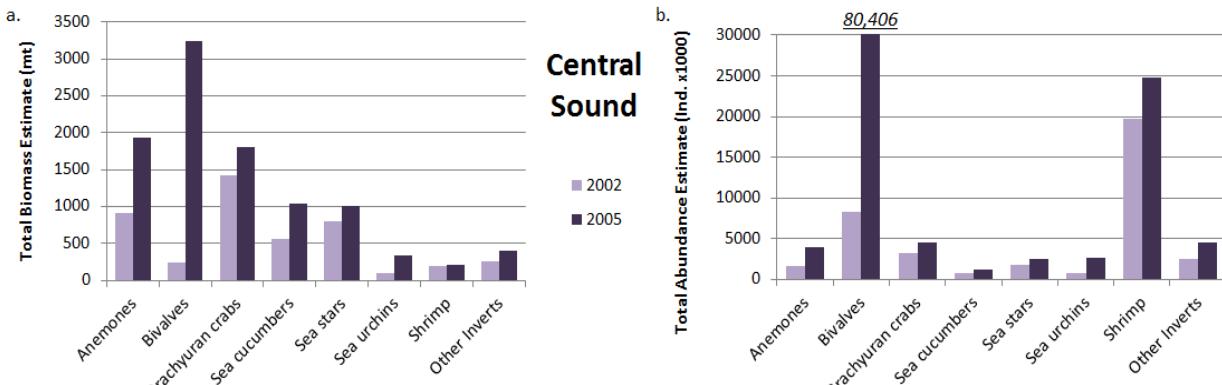


Figure 14: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in Central Sound of the primary invertebrate groups.

Hood Canal (HC)

Sampling efforts in Hood Canal (HC) increased from 26 total tows in 2002 to 40 tows in 2005 (Table 4). While more tows were performed in each depth stratum, the majority of additional tows were conducted in the 41-60 fa depth stratum (in which there were 6 tows in 2002 and 15 in 2005) as this stratum supported the highest total fish biomass in previous surveys. As with other regions, tows in the shallowest depth stratum covered less area on average than in the deeper strata, due in large part to the reduced scope of warp needed to deploy the trawl net and the resultantly short delay in recovery time at the end of each transect. Overall, 20.73 ha were fished in 2002 and 31.73 ha were fished in 2005.

Both biomass and abundance estimates for fish, in total, in HC increased between 2002 and 2005 (Figure 15). Overall fish biomass estimates were 5,850 mt in 2002 and 7,412 mt in 2005, a 27% increase, while abundance estimates were 44.2 million individuals in 2002 and 51.9 million in 2005, a 17% increase; total fish biomass was highest in the 41-60 fa depth stratum, as predicted (Figure 15). On average, HC fish populations were dominated by ratfish (42%) and flatfish (33%) in terms of biomass and by flatfish (39%) and “other fish” (33%) in terms of abundance (Figure 16). Plainfin Midshipmen (*Porichthys notatus*) dominated the “other fish” group and were, on average, even more abundant than ratfish.

In both years, flatfish were the most abundant species group, but ratfish dominated the fish biomass in 2002 with 2,782 mt (Figure 17, Figure 18). Sharks/skates and codfish increased in both estimated biomass and abundance between years due to increased catches of skates (Big, *Raja binoculata*; and Longnose, *R. rhina*) and Pacific Hake (*Merluccius productus*), respectively, while sculpins decreased primarily due to smaller catches of Great Sculpin (*Myoxocephalus polyacanthocephalus*). Flatfish, however, were the primary driver in the overall biomass and abundance increases, as their biomass estimate rose from 1,397 mt in 2002 to 3,181 mt in 2005, and abundance rose from 12.6 million individuals to 26 million (Figure 17, Figure 18). Of the 13 species of flatfish encountered during both survey years, English Sole were by far the most dominant, representing 50% of the flatfish biomass in 2002 and 78% in 2005. Slender Sole was the second most abundant species in both years, comprising 39% of the flatfish abundance in 2002 and 16% in 2005, but had less impact in terms of biomass due to the species’ smaller size. In 2002, Rock Sole comprised 16% of the flatfish biomass, but in 2005, no flatfish species other than English Sole contributed more than 6% to the total flatfish biomass.

Unlike the aggregate fish estimates, the total invertebrate biomass estimate decreased 25% from 3,830 mt in 2002 to 2,878 mt in 2005, but the abundance estimate increased 27% from 33.8 million individuals to 42.8 million (Figure 19). As is the case with patchy invertebrate populations, the majority of this increase in abundance can be attributed to one tow in 2005 that encountered a large ($>20,000$ individuals) Heart Urchin (*Briaster latifrons*) bed, causing sea urchin abundance estimates to drastically expand over 1000% compared to 2002 (Figure 20). The invertebrate population in HC is more reliably described as being dominated by Dungeness Crab and Metridium anemones in terms of biomass, and Spot Prawn (*Pandalus platyceros*) in terms of abundance.

Table 4: Summary of sampling effort by stratum in Hood Canal for surveys conducted in 2002 and 2005.

HOOD CANAL

DEPTH YEAR	NUMBER TOWS	Avg. TOW MINUTES	Avg. Tow Distance (m)	Avg. Tow Depth (fa)	Avg. Tow Area Swept (m ²)	Total Area Surveyed (ha)
5-20 fa (S)						
2002	7	8.29	552.95	9.43	5418.42	3.79
2005	8	10.25	664.41	12.50	6715.05	5.37
21-40 fa (T)						
2002	6	10.67	709.93	28.67	8221.89	4.93
2005	9	10.11	666.72	30.11	8099.19	7.29
41-60 fa (U)						
2002	6	11.00	731.54	49.83	9405.51	5.64
2005	15	9.67	606.22	49.40	8011.78	12.02
>60 fa (V)						
2002	7	10.43	685.24	72.71	9105.75	6.37
2005	8	10.25	652.83	83.88	8810.73	7.05

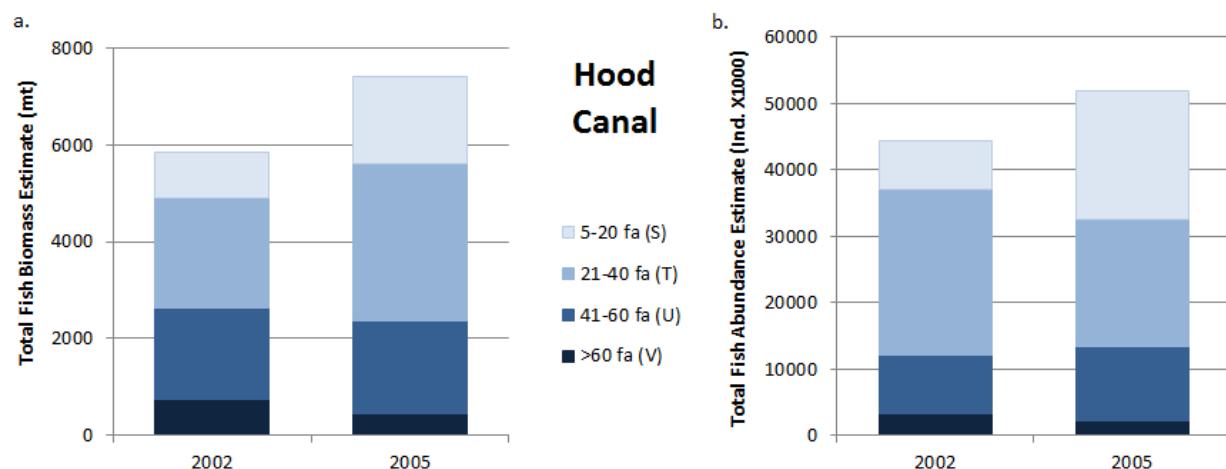


Figure 15: Total fish biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for Hood Canal by depth stratum.

Hood Canal

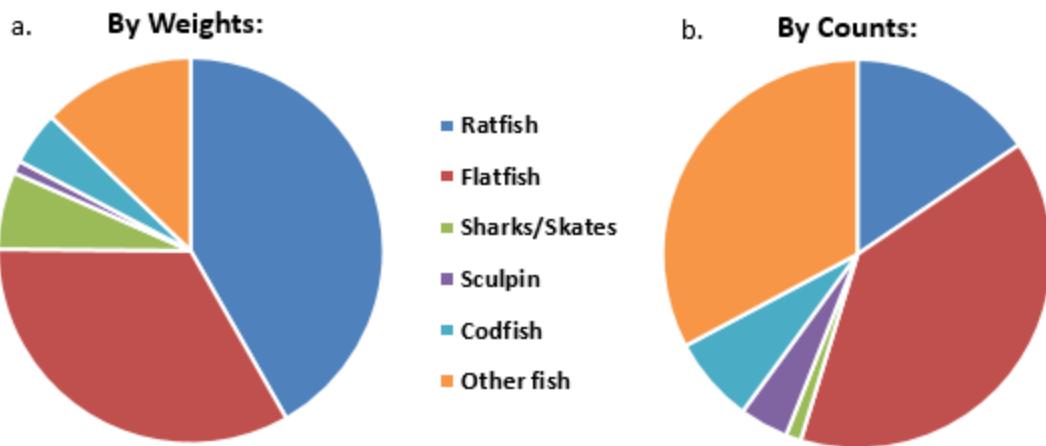


Figure 16: Average proportion between years of each fish group in the overall fish biomass (16a, “by weights”) and abundance (16b, “by counts”) in Hood Canal.

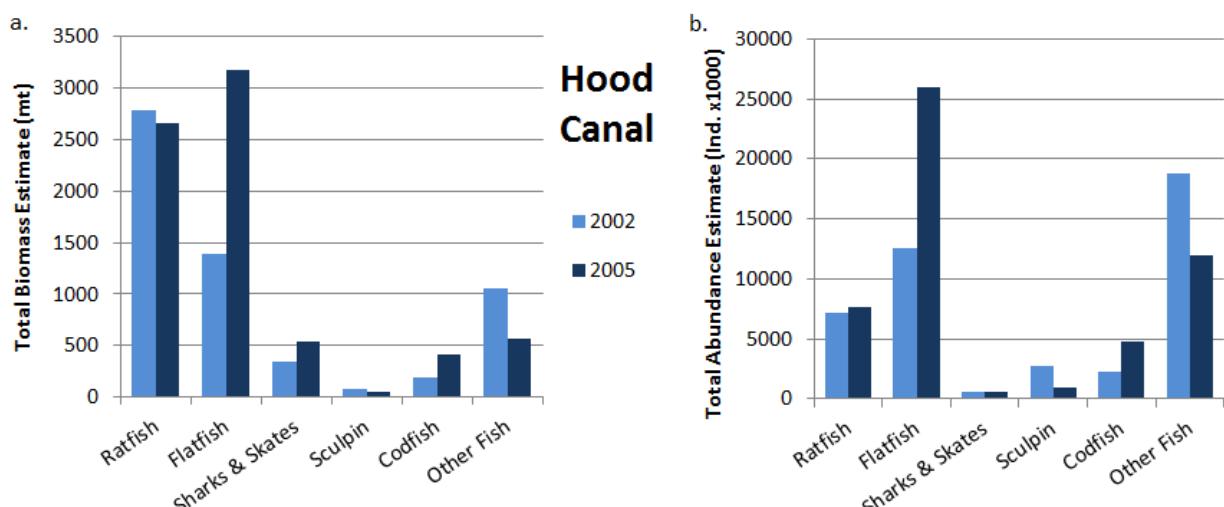


Figure 17: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in Hood Canal of the primary fish groups.

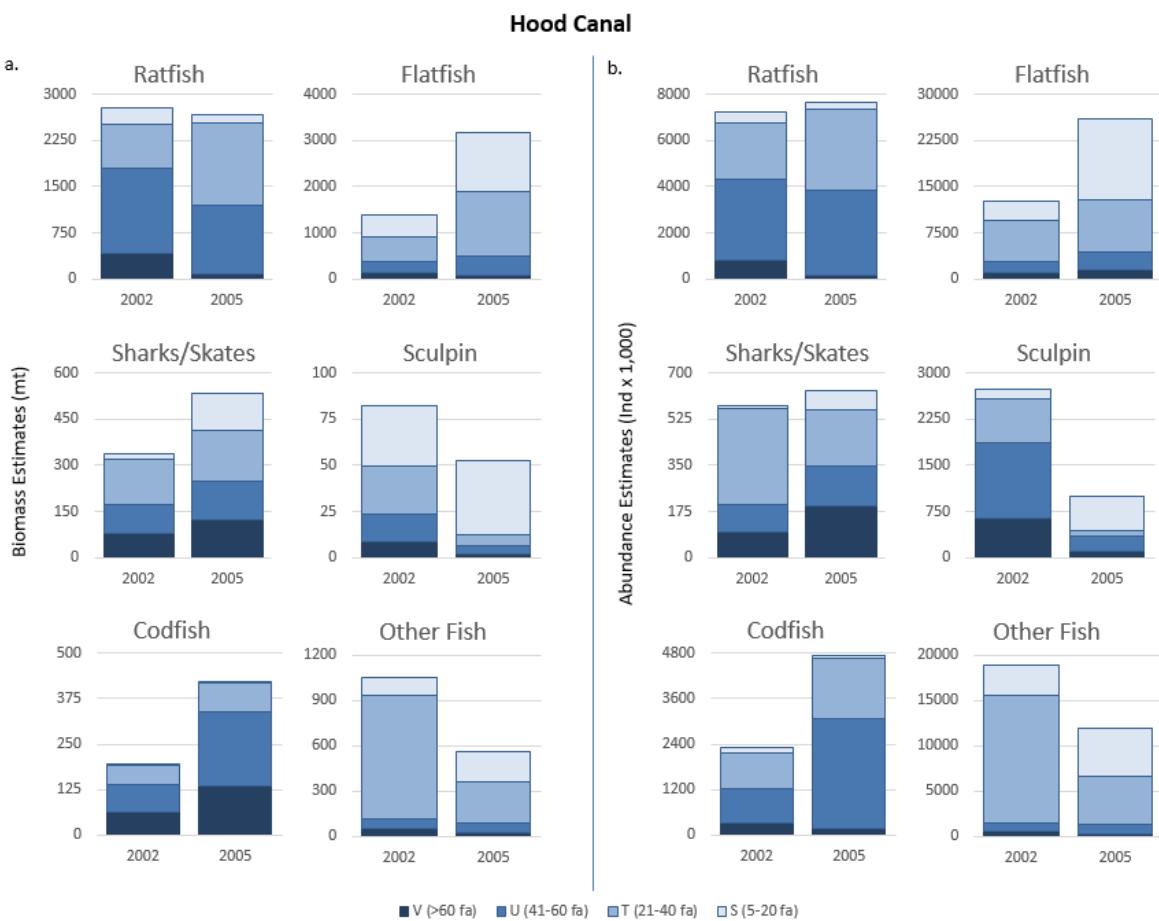


Figure 18: Biomass (a) and abundance (b) estimates by depth stratum and year for the primary fish groups in Hood Canal.

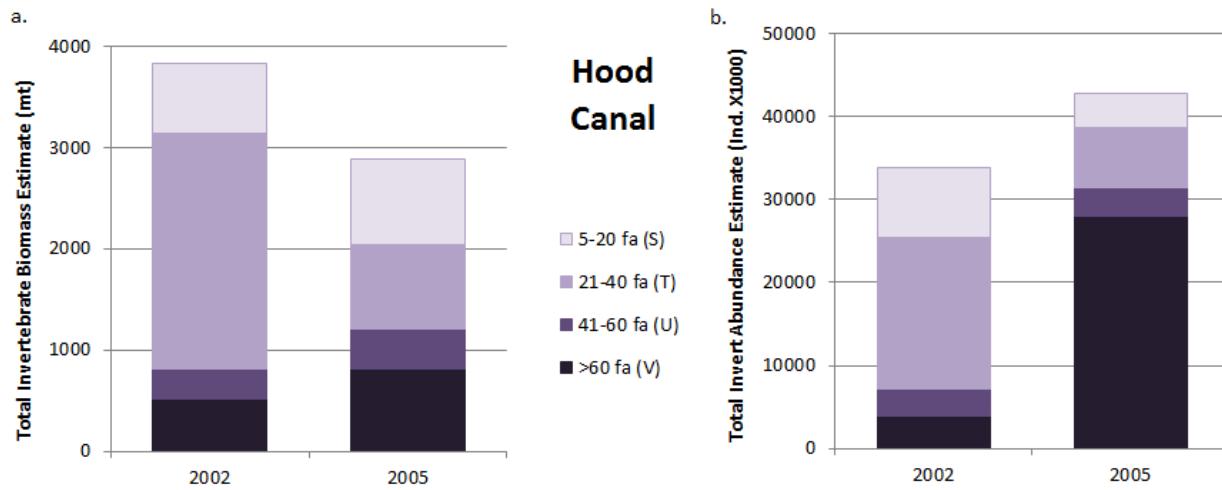


Figure 19: Total invertebrate biomass estimates (mt; a) and abundance estimates (Individuals x1000; b) for Hood Canal by depth stratum.

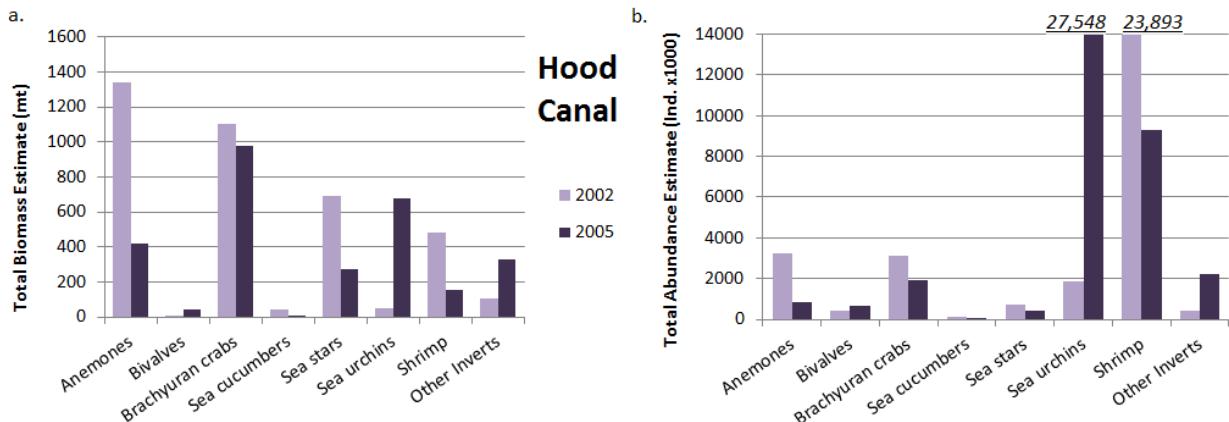


Figure 20: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in Hood Canal of the primary invertebrate groups.

Whidbey Island Basin (WI)

Survey effort increased in the Whidbey Island (WI) basin between 2002 and 2005 with 14 additional tows, which were mostly added to the 5-20 fa and >60 fa strata (Table 5). Tows in 2005 covered less area on average than tows in 2002, and in total 24.2 ha were fished in 2002 while 34.2 ha were fished in 2005.

Both biomass and abundance estimates for fish decreased in the WI basin from 2002 to 2005 (Figure 21). Biomass decreased just 7% from 5,499 mt in 2002 to 5,095 mt in 2005, but abundance dropped 39% from 86.6 million to 52.7 million, respectively. On average, the fish composition of WI was very similar to HC, and was dominated by ratfish (38%) and flatfish (33%) in terms of biomass, and by flatfish (29%) and “other fish” (47%) in terms of abundance (Figure 22).

Separated by year, however, flatfish were more dominant than ratfish by biomass in 2002 at 2,002 mt while ratfish were the more dominant group in 2005 at 2,571 mt (Figure 23). Other than ratfish, almost all other species groups decreased in both biomass and abundance estimates between years (Figure 24). In particular, the 39% decline in overall fish abundance was primarily due to abundance changes in the flatfish, codfish, and “other fish” categories. The flatfish community in WI was dominated by English Sole both years, distantly followed by Slender Sole (both years), and Rock Sole (2002) or Speckled Sanddab (*Citharichthys stigmaeus*) (2005). Of the 13 species of flatfish identified in WI, nine declined in abundance estimates between years; English Sole abundance estimates in particular dropped 50% (biomass also dropped 44%). Among the codfish community, the dominant species in WI was Pacific Hake, whose abundance estimates declined 76% between years, from 14.6 million individuals to 3.5 million; Hake biomass also decreased 60%. Shiner Perch comprised 74% of both biomass and abundance estimates in the “other fish” group, and also decreased in abundance by 38% between years. Perch, however, are not designed to be caught with the trawl and their estimates can be highly variable, based on whether the net encountered a school of them, likely as it was being retrieved.

Both biomass and abundance estimates decreased for invertebrates as well, but to a lesser degree than fish estimates. Overall invertebrate biomass decreased from 4,179 mt in 2002 to 3,866 mt in 2005 (-8%), and estimated abundance decreased from 27.9 million individuals to 22.1 million (-21%) (Figure 25). The WI invertebrate population was dominated by Metridium anemones and

Dungeness Crab in terms of biomass, and by those two species and shrimp in terms of abundance (Figure 26). The key shrimp species of the region were Alaskan Pink (*Pandalus eous*), Sidestriped (*Pandalus dispar*), and Spot Prawns; between years, Alaskan Pink Shrimp increased slightly in abundance, but the other species' estimates declined substantially, which were the primary drivers in the overall decline of the invertebrate abundance estimate.

Table 5: Summary of sampling effort by stratum in Whidbey Island for surveys conducted in 2002 and 2005.

WHIDBEY ISLAND

DEPTH YEAR	NUMBER TOWS	Avg. TOW MINUTES	Avg. Tow Distance (m)	Avg. Tow Depth (fa)	Avg. Tow Area Swept (m ²)	Total Area Surveyed (ha)
5-20 fa (S)						
2002	7	10.14	788.42	11.00	8106.28	5.67
2005	12	10.75	731.54	12.83	7840.06	9.41
21-40 fa (T)						
2002	6	10.33	750.06	29.83	8942.66	5.37
2005	9	9.78	660.55	29.22	8007.00	7.21
41-60 fa (U)						
2002	6	11.00	796.36	49.50	10224.89	6.13
2005	8	10.25	678.30	53.13	9002.62	7.20
>60 fa (V)						
2002	7	10.57	748.74	81.43	10092.18	7.06
2005	11	10.82	698.71	84.91	9436.11	10.38

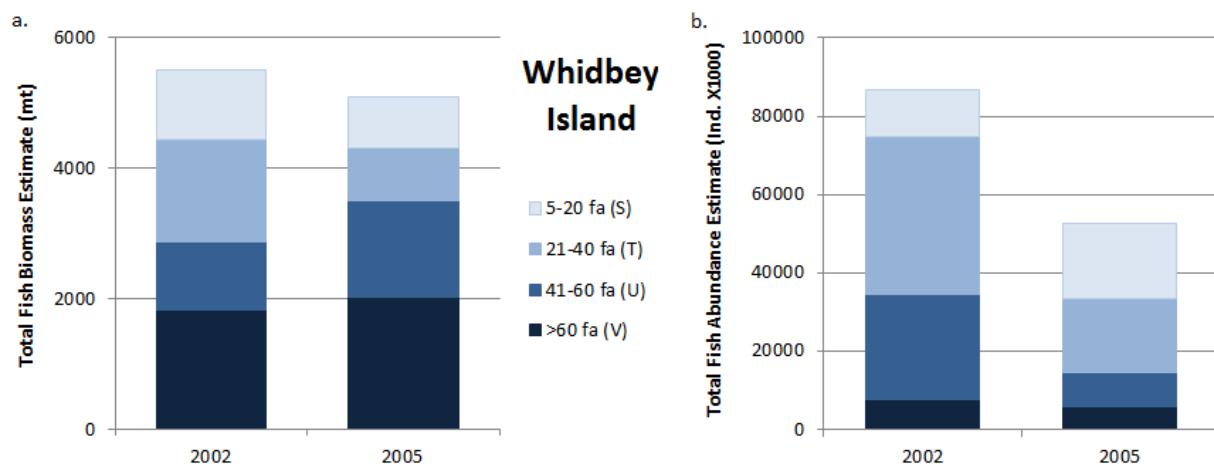


Figure 21: Total fish biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for Whidbey Island by depth stratum.

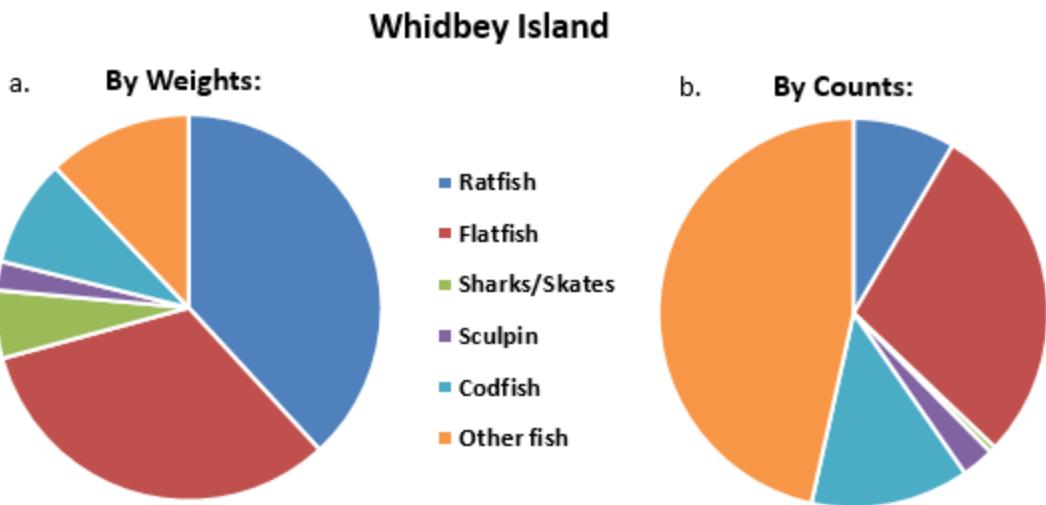


Figure 22: Average proportion between years of each fish group in the overall fish biomass (22a, “by weights”) and abundance (22b, “by counts”) in Whidbey Island.

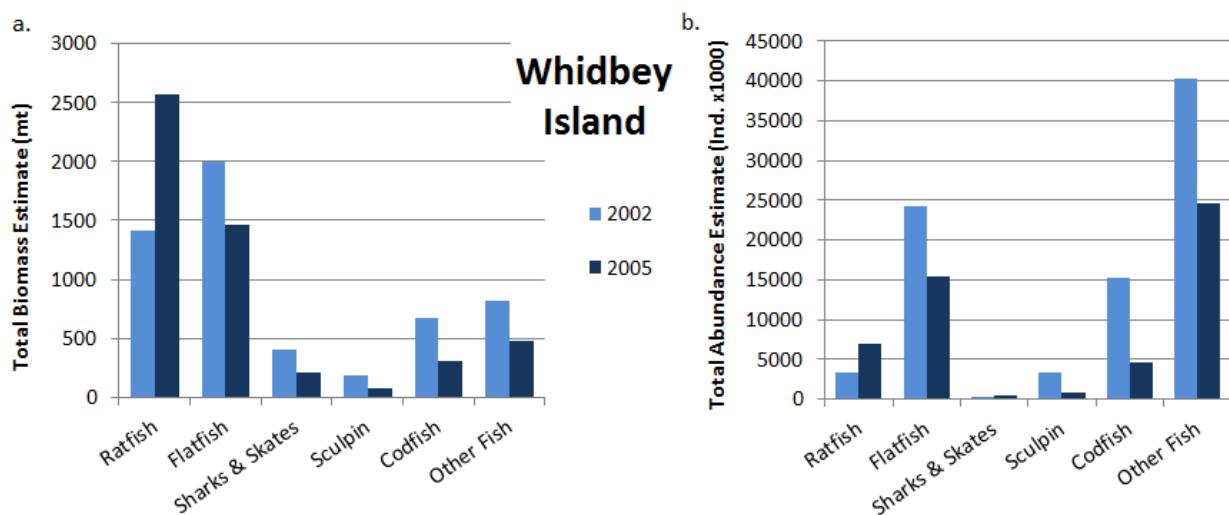


Figure 23: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in Whidbey Island of the primary fish groups.

Whidbey Island

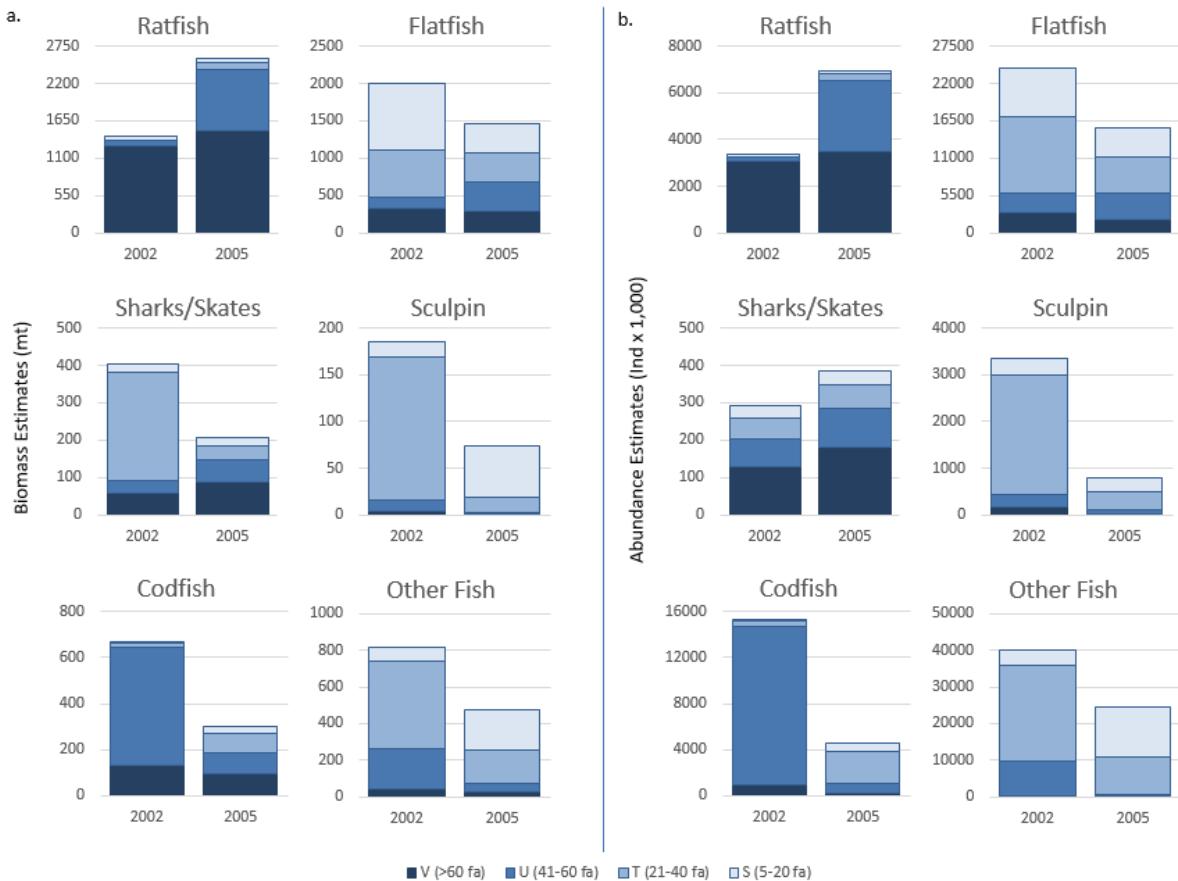


Figure 24: Biomass (a) and abundance (b) estimates by depth stratum and year for the primary fish groups in Whidbey Island.

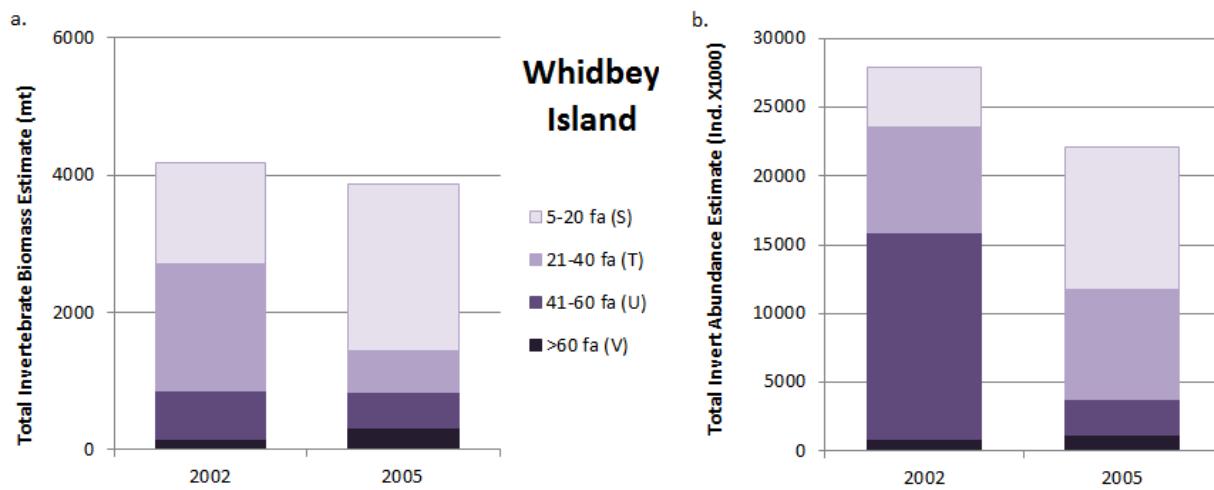


Figure 25: Total invertebrate biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for Whidbey Island by depth stratum.

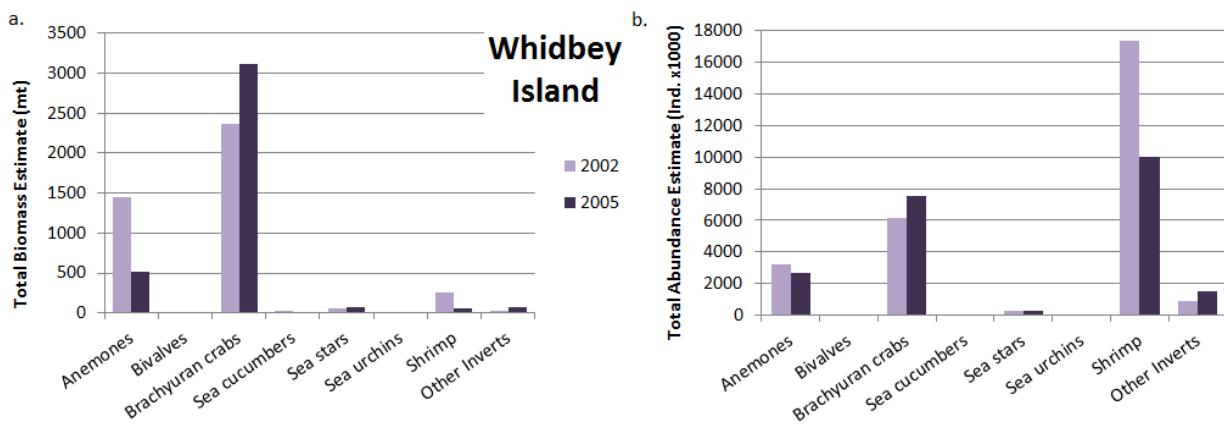


Figure 26: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in Whidbey Island of the primary invertebrate groups.

Discovery Bay (DB)

Discovery Bay (DB), the smallest of the regions in the survey, contained only the shallower two depth strata, 5-20 fa and 21-40 fa (Table 6) and was sampled independently because it differs significantly in habitat and fish community from the adjacent Eastern Strait of Juan de Fuca region. In 2003, four tows were conducted in the 5-20 fa stratum while 10 were conducted in the 21-40 fa stratum. In 2007, overall survey effort decreased from 14 total tows to 12, but effort was evenly split between the two strata. Overall, 9.98 ha were fished in 2003 and 8.27 ha were fished in 2007.

While overall fish biomass estimates increased slightly (6%) from 244 mt to 259 mt between years, abundance estimates dropped 56% from 5.2 million individuals to 2.3 million (Figure 27). The majority of fish biomass and abundance were found in the 21-40 fa stratum. Flatfish and sharks/skates were the most dominant species groups by biomass, particularly in 2007 after increasing 64% and 31%, respectively, from 2003 (Figure 29, Figure 30). Overall, flatfish and sharks/skates averaged a respective 39% and 38% of the total (Figure 28). By abundance, “other fish” dominated at 53% of the total on average, while flatfish averaged 32%.

The “other fish” group in DB was dominated by Pacific Herring (*Clupea pallasii*) in 2003, during which multiple tows caught greater than 1,000 individuals; however, in 2007, no tow captured more than 160 individuals, so the resultant lower estimate was the primary driver of the decline in the overall fish abundance estimate. Although herring are regularly caught in the trawl, the trawl survey is not the most reliable for estimates due to this species’ tendency to school in midwater depths rather than be consistently near the bottom. Flatfish, on the other hand, are better suited to estimation via trawl survey. Of the 12 flatfish species caught in DB, Starry Flounder comprised the majority of the biomass while English Sole dominated the abundance, and both species’ population estimates increased between years. Sharks/skates was also a primary group in terms of biomass and almost solely consisted of North Pacific Spiny Dogfish both years.

Invertebrate biomass and abundance estimates decreased a respective 36% and 49% between years (Figure 31). While multiple invertebrate groups saw declines in estimates between years,

shrimp had the highest declines and thus the largest effect on the overall drop in estimates. The shrimp abundance estimate, in particular, was 12.4 million individuals lower in 2007 compared to 2003—a decline of 50% (Figure 32). Alaskan Pink, Coonstripe (*Pandalus hypsinotus*), and Dock (*P. danae*) Shrimp all experienced declines in population estimates, but the drop in Spot Prawn estimates was the largest and most impactful. Other than shrimp, the invertebrate community of DB was dominated by Metridium anemones and Dungeness crab by both biomass and abundance, as well as by Butter Clam (*Saxidomus giganteus*) by abundance.

Table 6: Summary of sampling effort by stratum in Discovery Bay for surveys conducted in 2003 and 2007.

DISCOVERY BAY

DEPTH YEAR	NUMBER TOWS	Avg. TOW MINUTES	Avg. Tow Distance (m)	Avg. Tow Depth (fa)	Avg. Tow Area Swept (m ²)	Total Area Surveyed (ha)
5-20 fa (S)						
2003	4	9.25	588.01	15.00	6359.03	2.54
2007	6	8.83	552.51	14.67	5383.58	3.23
21-40 fa (T)						
2003	10	9.60	622.27	24.50	7440.45	7.44
2007	6	10.33	694.50	26.33	8404.44	5.04

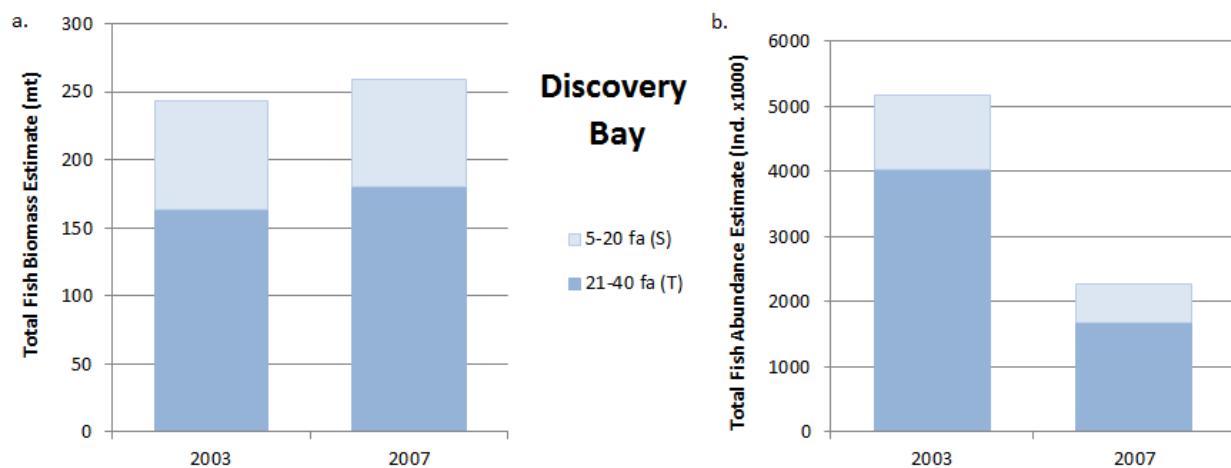


Figure 27: Total fish biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for Discovery Bay by depth stratum.

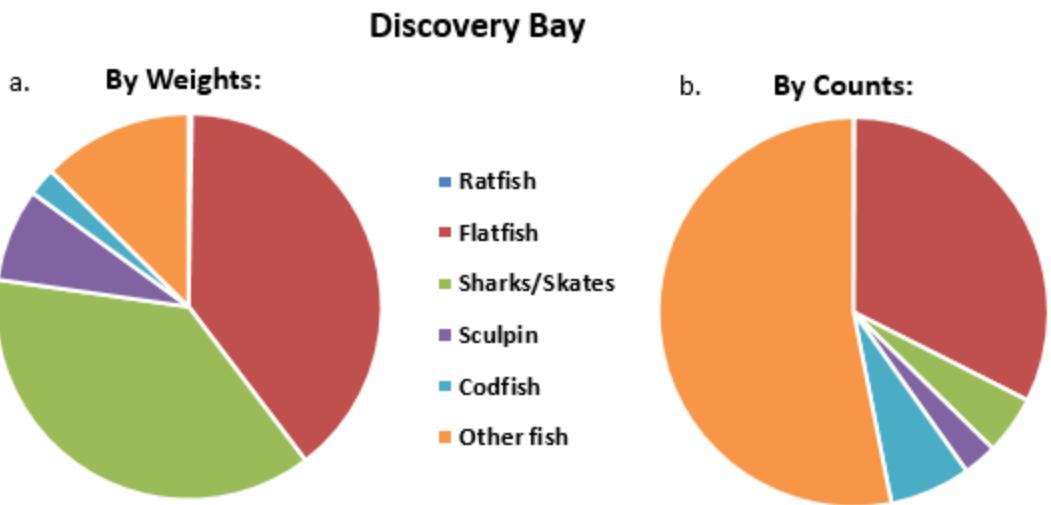


Figure 28: Average proportion between years of each fish group in the overall fish biomass (28a, “by weights”) and abundance (28b, “by counts”) in Discovery Bay.

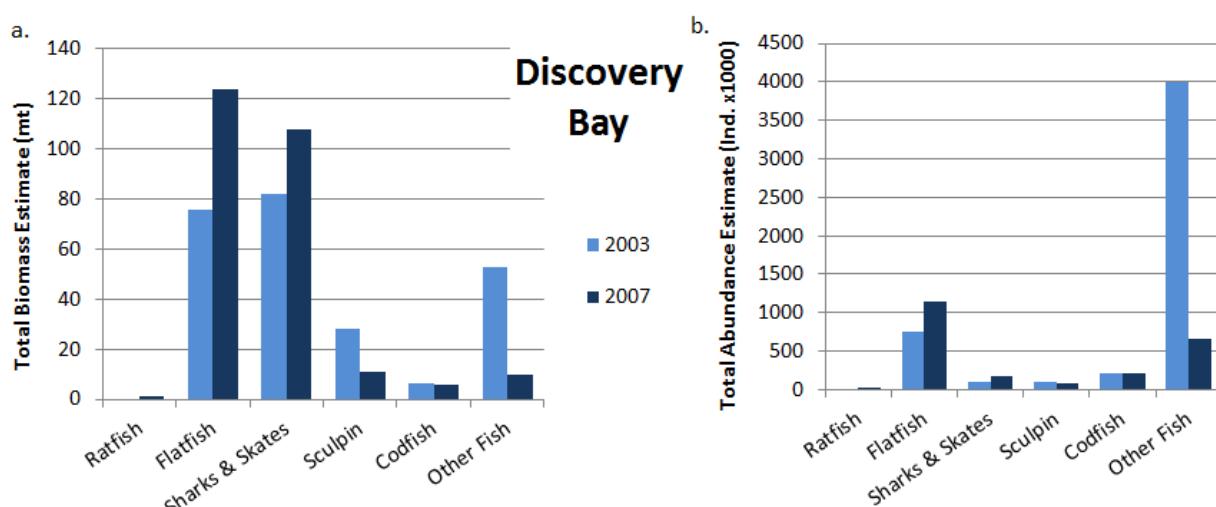


Figure 29: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in Discovery Bay of the primary fish groups.

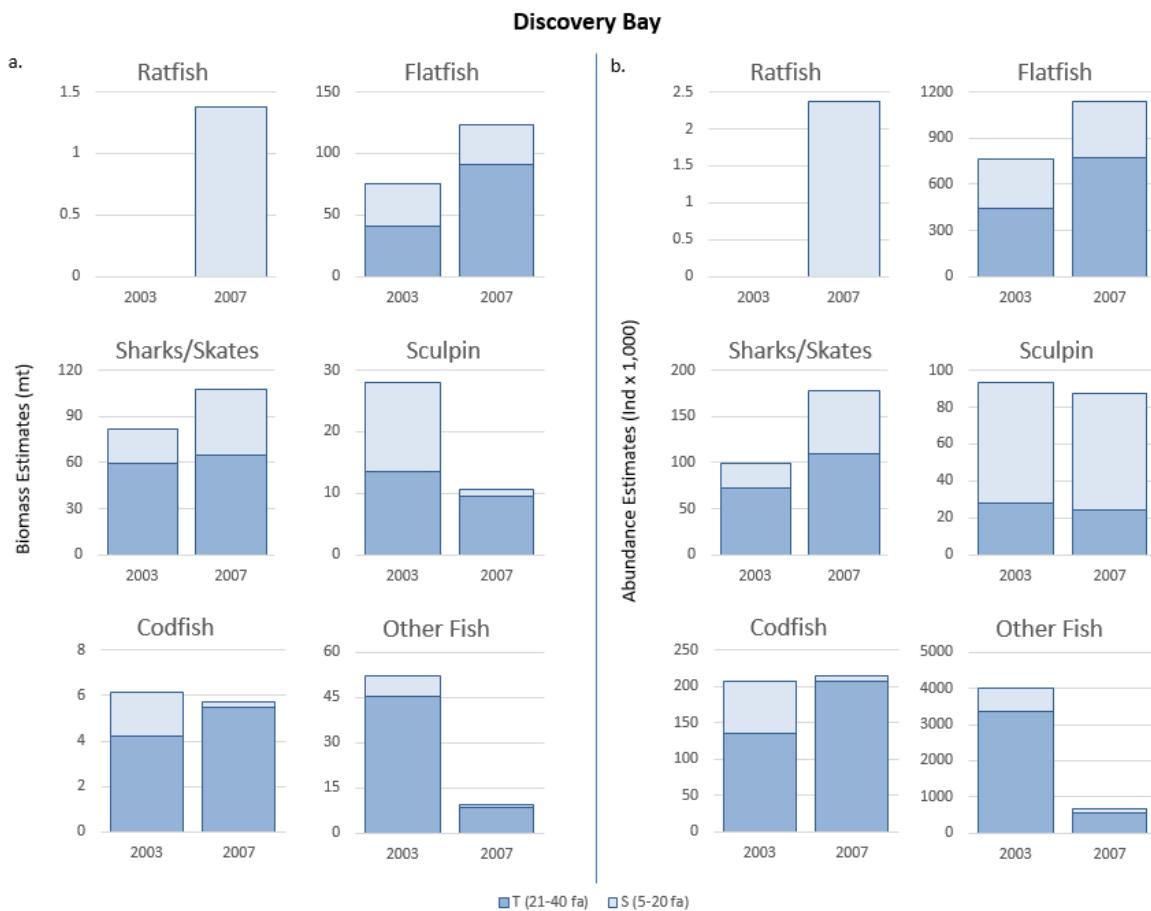


Figure 30: Biomass (a) and abundance (b) estimates by depth stratum and year for the primary fish groups in Discovery Bay.

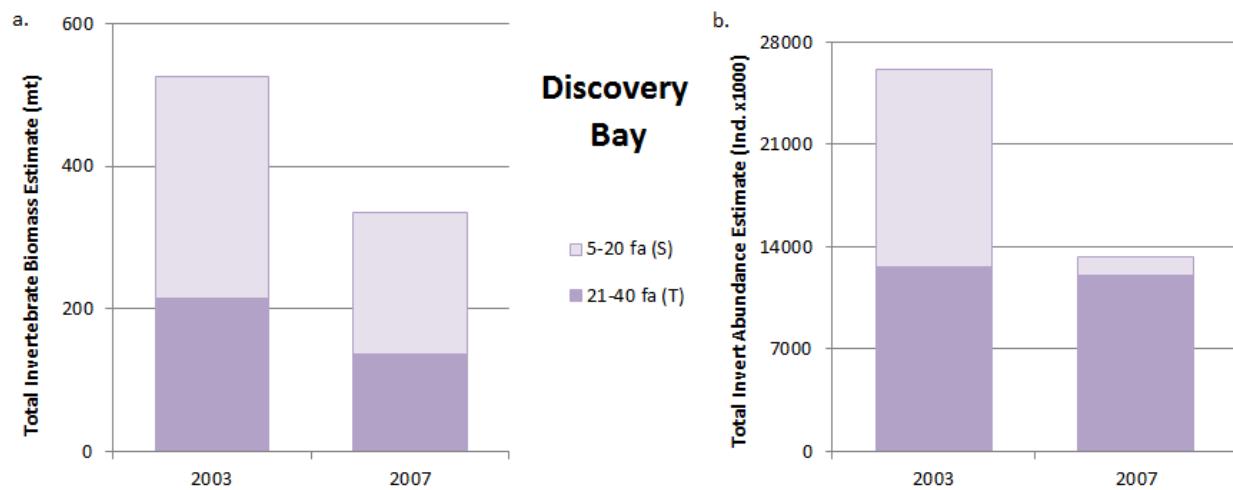


Figure 31: Total invertebrate biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for Discovery Bay by depth stratum.

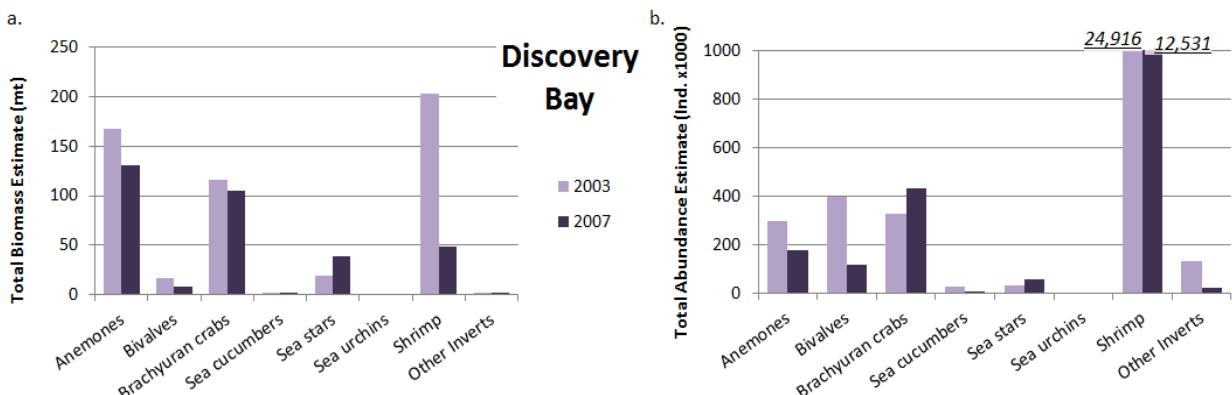


Figure 32: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in Discovery Bay of the primary invertebrate groups.

Eastern Strait of Juan de Fuca (JE)

The Eastern Strait of Juan de Fuca (JE), the largest survey region, was sampled in 2003 with 39 tows (28.42 ha), 2004 with 41 tows (33.61 ha), and 2007 with 44 tows (37.03 ha) (Table 7). On average, more tows were conducted and more area was surveyed in the deeper two strata than the shallower two.

Overall fish biomass estimates were nearly equal between 2003 and 2004 at 20,781 and 20,841 mt, respectively, and dropped slightly in 2007 to 19,061 mt (Figure 33). Despite the steady biomass estimates between 2003 and 2004, abundance estimates between those years declined 34% from 126 million to 82.6 million individuals; in 2007, abundance estimates rebounded partially to 97 million individuals. Walleye Pollock, which comprised over 90% of the codfish abundance each year, was responsible for the drastic drop in abundance observed for codfish that also primarily influenced the trends in overall fish abundance estimates (Figure 35).

On average overall, JE was dominated by ratfish (68%), flatfish (11%), and sharks/skates (14%) in terms of biomass, and ratfish (36%), flatfish (26%), and codfish (25%) in terms of abundance (Figure 34). Ratfish declined a bit overall in both estimates while flatfish increased, particularly in abundance between 2003 and 2004 (Figure 36). Fifteen species of flatfish were found in JE, of which English Sole and Pacific Sanddab were the most dominant overall; Rock Sole and Starry Flounder were also key species in flatfish biomass and Rex Sole (*Glyptocephalus zachirus*) was a key species in abundance. The increase in flatfish abundance between 2003 and 2004, however, was fairly widespread, as 12 of the 15 species' populations increased. JE was also one of just a few regions in which Petrale Sole (*Eopsetta jordani*) was regularly found; Sandpaper Skates (*Bathyraja kincaidi*), another less-frequently encountered species in the survey, was also found in JE. North Pacific Spiny Dogfish and Big Skates, however, were the more dominant sharks/skates in the region.

Like the fish estimates, overall invertebrate biomass estimates were also relatively equal in 2003 (4,788 mt) and 2004 (4,870 mt) but decreased in 2007 (3,754 mt); abundance estimates, on the other hand, dropped 63% between 2003 and 2004, but remained relatively equal between 2004 and 2007 (Figure 37). Overall, brachyuran crabs (primarily Dungeness Crab) and sea stars (primarily Sunflower Stars, *Pycnopodia helianthoides*) were the most consistently dominant species groups contributing to overall invertebrate biomass (Figure 38). Shrimp was clearly the

most abundant species group and also was the most dominant by biomass in 2003 only. In 2003, the primary shrimp species were Alaskan Pink Shrimp, Spot Prawns, and Dock Shrimp, but between 2003 and 2004, each of these species experienced substantial declines according to the expanded population estimates. However, the base of the high 2003 estimates stems from just a few tows that randomly encountered a large school of shrimp. The best example is one T-stratum station that caught an estimated 3,600 Alaskan Pink Shrimp, 3,400 Dock Shrimp, and 18,000 Spot Prawns; no other tow in the 3-year survey caught more than 550 Spot Prawns in one haul. Therefore, the large variability in shrimp estimates is likely more a factor of patchy distribution rather than true population trends.

Table 7: Summary of sampling effort by stratum in the Eastern Strait of Juan de Fuca for surveys conducted in 2003, 2004, and 2007.

EASTERN STRAIT OF JUAN DE FUCA

DEPTH YEAR	NUMBER TOWS	Avg. Tow Minutes	Avg. Tow Distance (m)	Avg. Tow Depth (fa)	Avg. Tow Area Swept (m ²)	Total Area Surveyed (ha)
5-20 fa (S)						
2003	8	8.88	534.77	13.25	5887.02	4.71
2004	7	10.57	672.01	10.86	7070.41	4.95
2007	9	9.56	631.74	14.00	6878.04	6.19
21-40 fa (T)						
2003	10	9.60	575.97	28.90	6964.76	6.96
2004	9	9.56	602.93	26.78	7308.67	6.58
2007	8	9.75	625.05	25.75	7536.83	6.03
41-60 fa (U)						
2003	10	10.30	592.64	47.80	7713.32	7.71
2004	10	10.40	677.83	50.30	8965.42	8.97
2007	12	11.08	709.93	51.67	9270.34	11.12
>60 fa (V)						
2003	11	10.18	609.48	82.00	8214.44	9.04
2004	15	10.73	649.43	77.87	8742.19	13.11
2007	15	10.67	679.07	75.73	9129.08	13.69

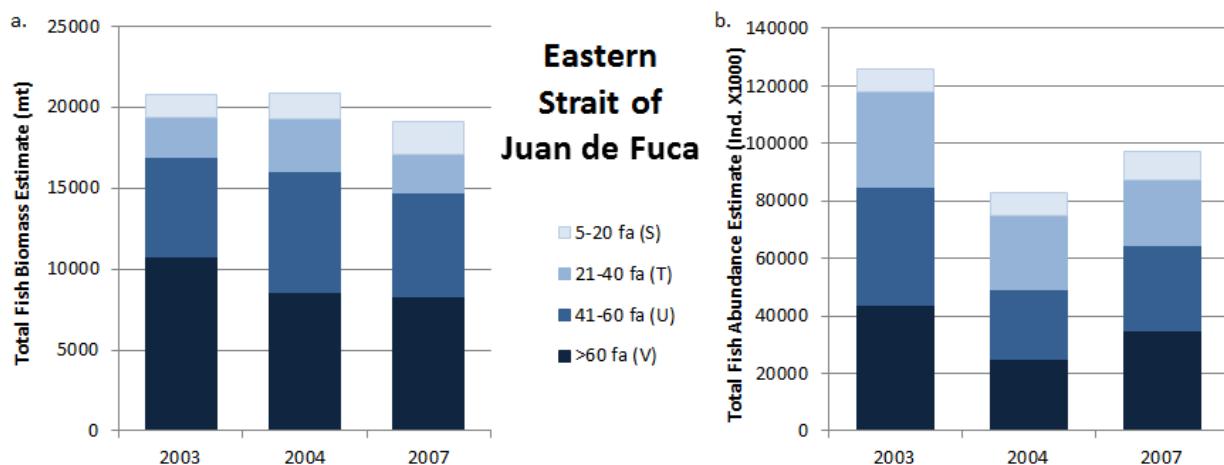


Figure 33: Total fish biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for the Eastern Strait of Juan de Fuca by depth stratum.

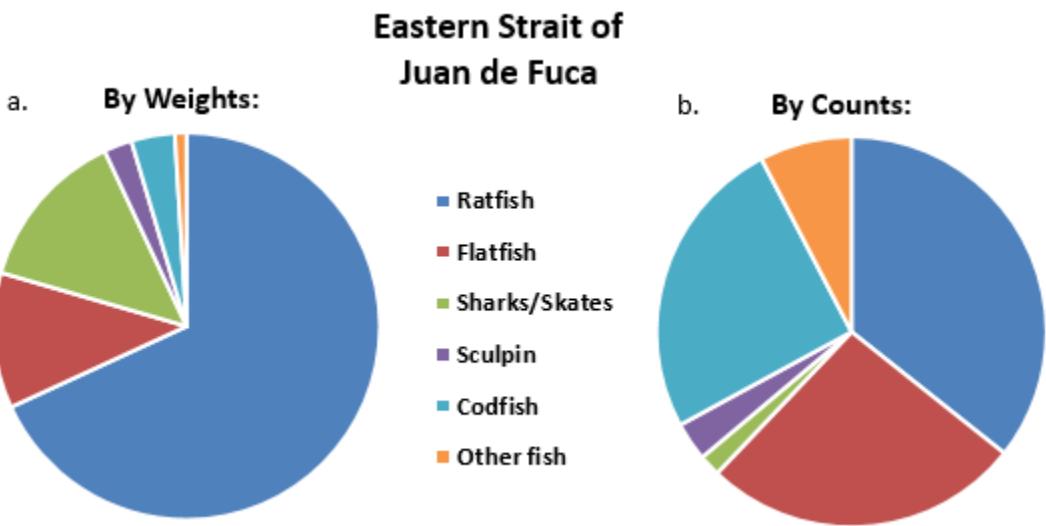


Figure 34: Average proportion among years of each fish group in the overall fish biomass (34a, “by weights”) and abundance (34b, “by counts”) in the Eastern Strait of Juan de Fuca.

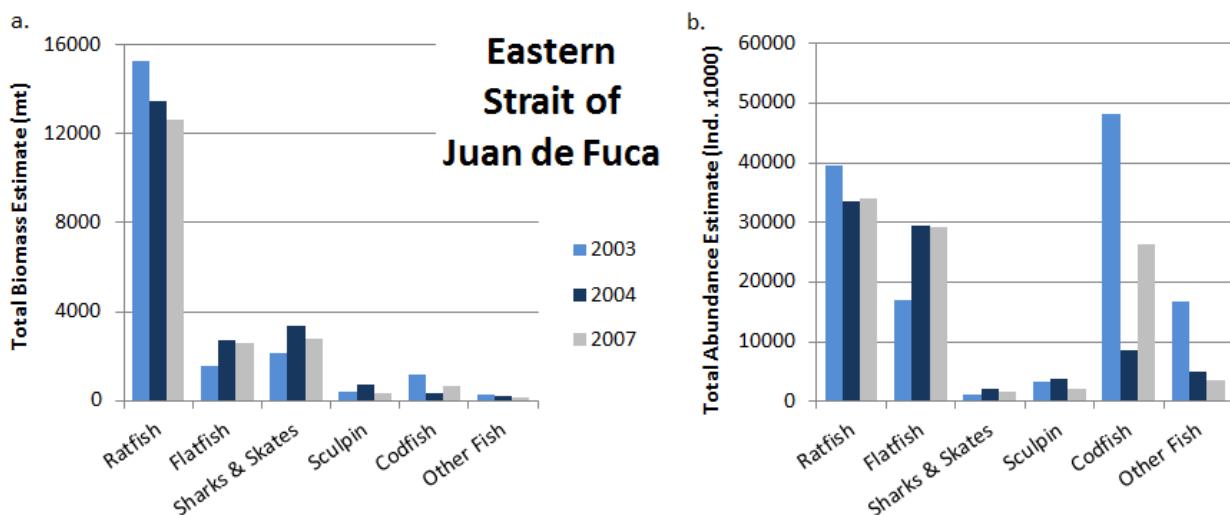


Figure 35: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in the Eastern Strait of Juan de Fuca of the primary fish groups.

Eastern Strait of Juan de Fuca

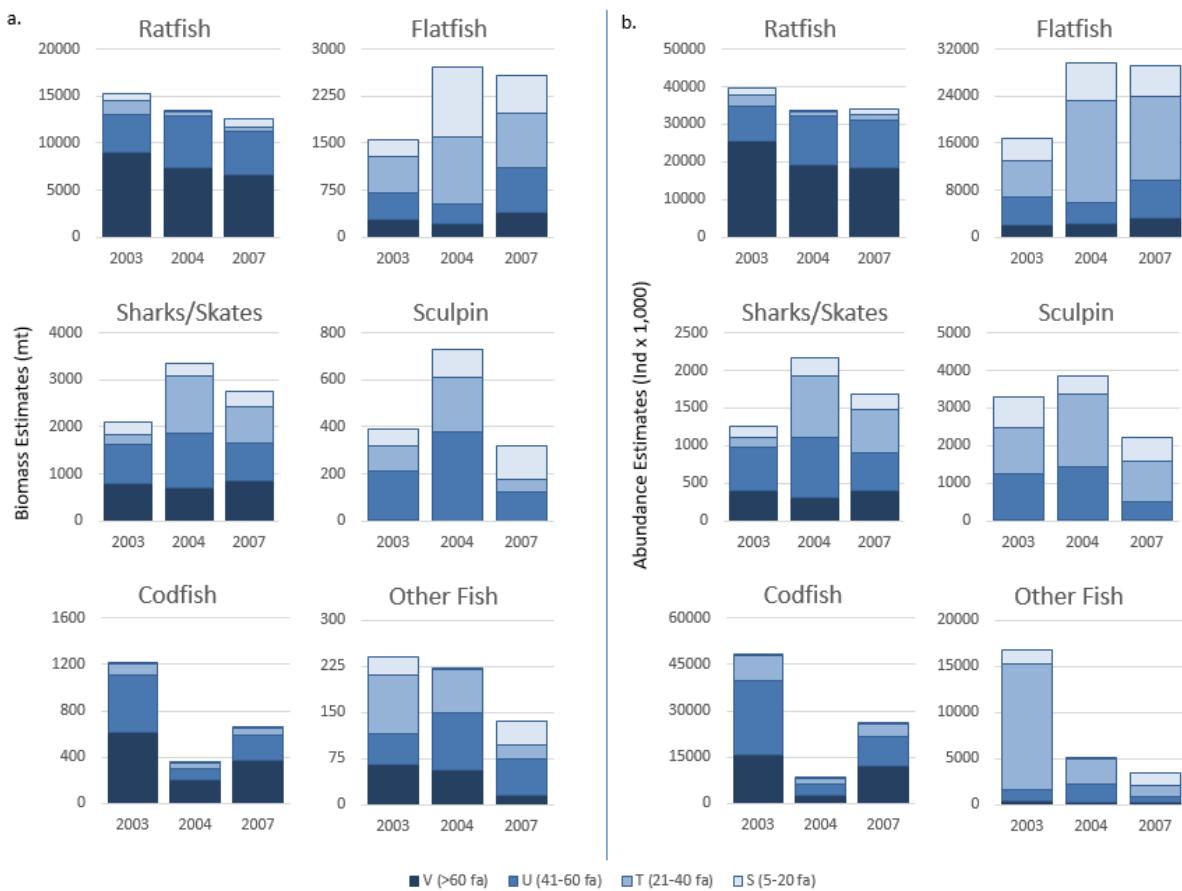


Figure 36: Biomass (a) and abundance (b) estimates by depth stratum and year for the primary fish groups in the Eastern Strait of Juan de Fuca.

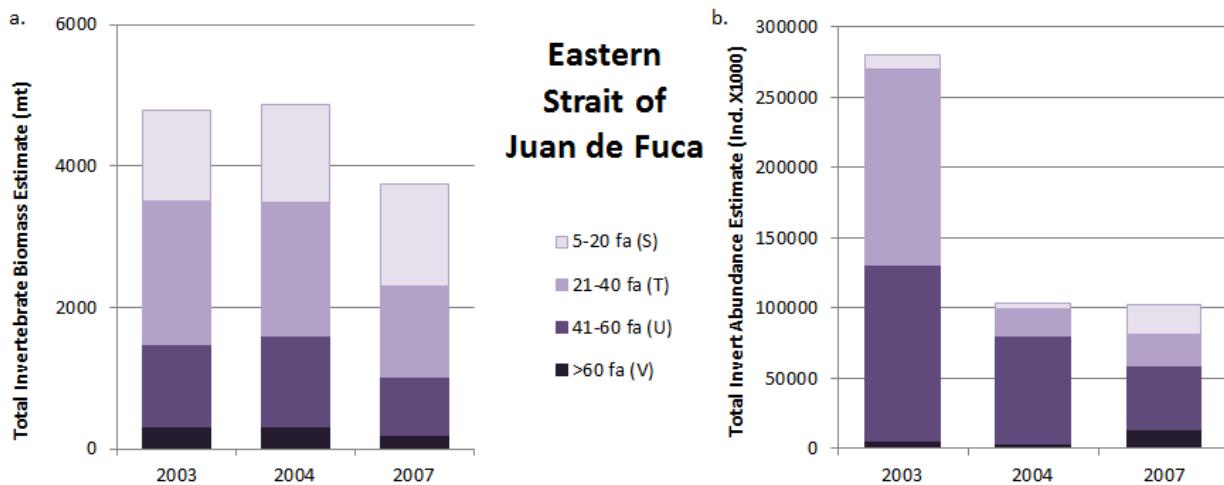


Figure 37: Total invertebrate biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for the Eastern Strait of Juan de Fuca by depth stratum.

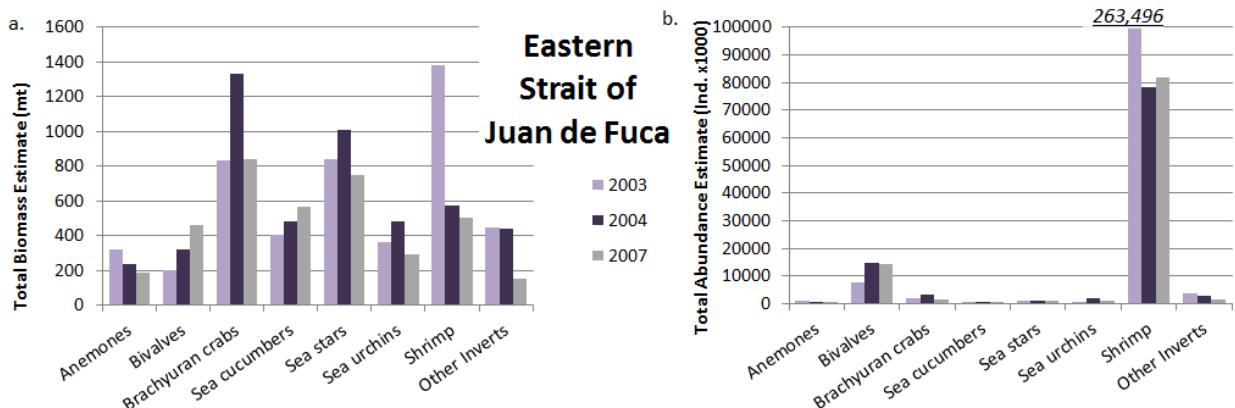


Figure 38: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in the Eastern Strait of Juan de Fuca of the primary invertebrate groups.

Western Strait of Juan de Fuca (JW)

Annual sampling effort in the Western Strait of Juan de Fuca (JW) was similar to the Eastern Strait, with 39 tows conducted in 2003, 40 tows in 2004, and 41 tows in 2007 (Table 8). As the majority of the area within the region consists of deeper waters, 69%-78% of the tows each year were conducted in the deeper two depth strata. Additionally, the number of tows conducted in the deepest stratum (>60 fa) increased each year from 15 to 20 to 22, thus increasing the total area surveyed in that stratum from 12.73 ha in 2003 to 21.91 ha in 2007.

Estimated fish biomass increased each sampling year by an average of 20%; 12,761 mt were estimated in 2003, 15,538 mt in 2004, and 18,439 mt in 2007 (Figure 39). Fish abundance estimates were essentially unchanged between 2003 (41.3 million) and 2004 (42 million) but increased 32% in 2007 to 55.6 million. Given that the majority of available habitat in JW is in the deepest stratum (>60 fa), the dominant species was, unsurprisingly, Spotted Ratfish, which on average comprised 71% of the fish biomass and 59% of the abundance (Figure 40).

Following ratfish, codfish and flatfish were the primary species groups, both in terms of biomass and abundance (Figure 41). By biomass, the codfish group was primarily split between Pacific Cod (*Gadus macrocephalus*) (49% average) and Walleye Pollock (42% average), and estimates for almost all codfish species (including Pacific Hake and Pacific Tomcod, *Micromesistius proximus*) declined each year. Pollock comprised the majority of the abundance (86% average) overall despite a drop in 2004, and Pacific Cod abundance estimates declined each year (890,600 individuals in 2003 to 445,900 in 2007). Unlike codfish, biomass estimates of flatfish increased each year (Figure 41, Figure 42). Of the 15 species found in the region, Arrowtooth Flounder (*Atheresthes stomias*) and Dover Sole were the most dominant by both biomass and abundance.

Overall estimated invertebrate biomass in 2007 was 1,077 mt, just 176 mt lower than the estimate of 1,253 mt in 2003, but in 2004, estimates jumped to 2,505 mt (Figure 43). Estimated invertebrate abundance increased each year, particularly in the deepest stratum in 2007. The invertebrate community biomass in JW was dominated by sea urchins, which saw a spike in biomass estimates in 2004 to 1,732 mt compared to 717 mt in 2003 and 477 mt in 2007 (Figure 44). However, this is likely more a factor of patchy distribution, as is common with invertebrates, rather than true population trends. In this case, while Green Sea Urchins

(*Strongylocentrotus droebachiensis*) were the most commonly and consistently encountered urchin throughout the three years of sampling, in 2004, one tow caught 1,000 Red Sea Urchins (*S. franciscanus*), which subsequently drove the urchin biomass estimates up. Similarly, the spike in shrimp abundance observed in 2007 was a factor of just two large tows of Alaskan Pink Shrimp; this was the most dominant shrimp species outside of these tows, but Sidestriped Shrimp also comprised a substantial amount of the shrimp population. Bivalves were also a key invertebrate group in terms of abundance and was comprised almost entirely by Pink Scallops (*Chlamys* spp.).

Table 8: Summary of sampling effort by stratum in the Western Strait of Juan de Fuca for surveys conducted in 2003, 2004, and 2007.

WESTERN STRAIT OF JUAN DE FUCA

DEPTH YEAR	NUMBER TOWS	Avg. TOW MINUTES	Avg. Tow Distance (m)	Avg. Tow Depth (fa)	Avg. Tow Area Swept (m ²)	Total Area Surveyed (ha)
5-20 fa (S)						
2003	6	6.67	382.75	12.00	4177.59	2.51
2004	5	10.40	696.35	11.60	6835.40	3.42
2007	4	10.00	620.42	13.00	6835.50	2.73
21-40 fa (T)						
2003	6	8.83	574.12	33.00	7186.62	4.31
2004	5	9.60	611.16	30.60	7593.72	3.80
2007	5	11.00	651.90	33.40	8024.05	4.01
41-60 fa (U)						
2003	12	10.67	709.93	46.92	9335.30	11.20
2004	10	10.50	661.16	48.20	8696.66	8.70
2007	10	11.00	650.05	50.10	8577.37	8.58
>60 fa (V)						
2003	15	10.87	625.98	94.07	8484.07	12.73
2004	20	11.30	738.95	85.15	9978.17	19.96
2007	22	11.68	734.07	95.95	9960.83	21.91

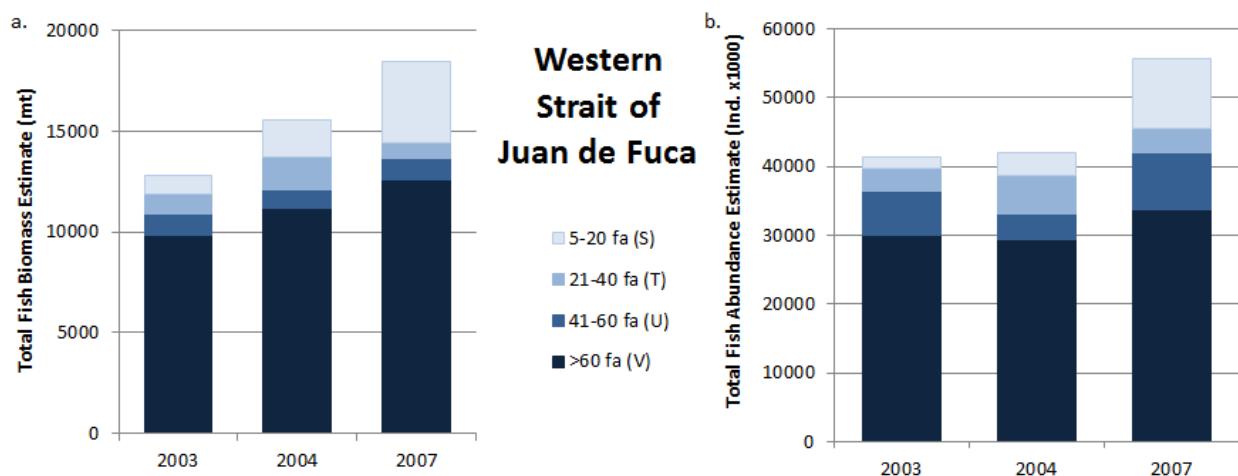


Figure 39: Total fish biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for the Western Strait of Juan de Fuca by depth stratum.

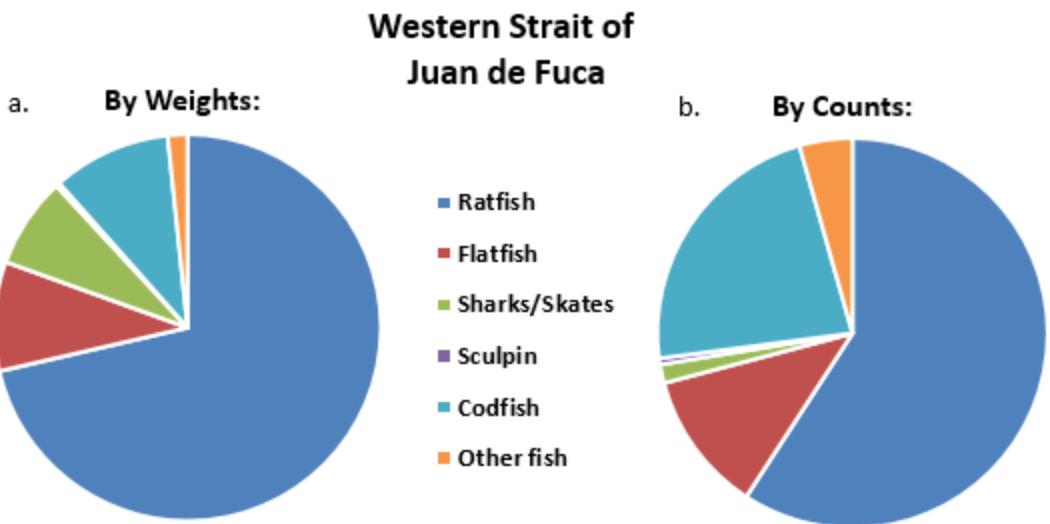


Figure 40: Average proportion among years of each fish group in the overall fish biomass (40a, “by weights”) and abundance (40b, “by counts”) in the Western Strait of Juan de Fuca.

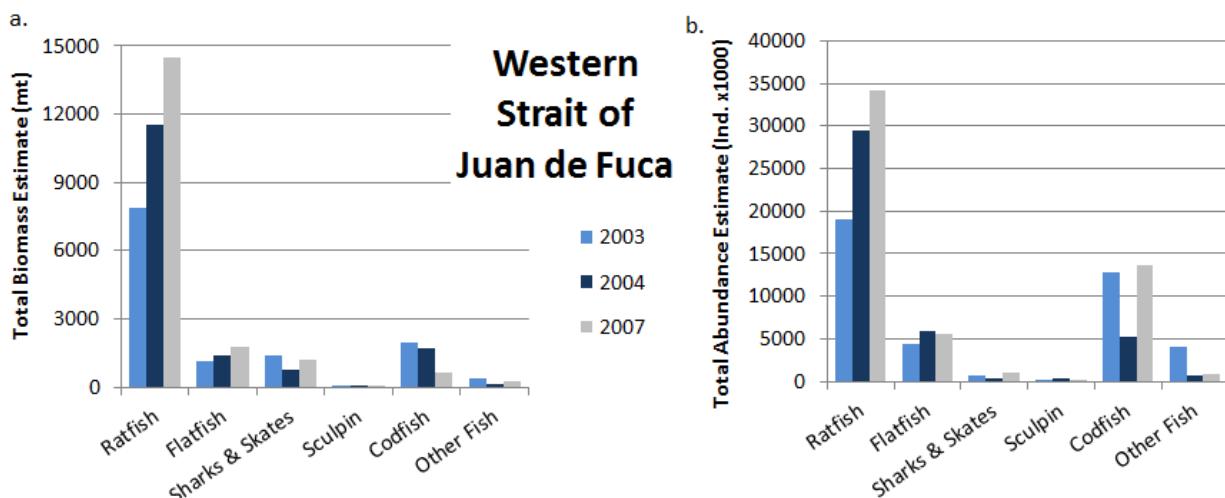


Figure 41: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in the Western Strait of Juan de Fuca of the primary fish groups.

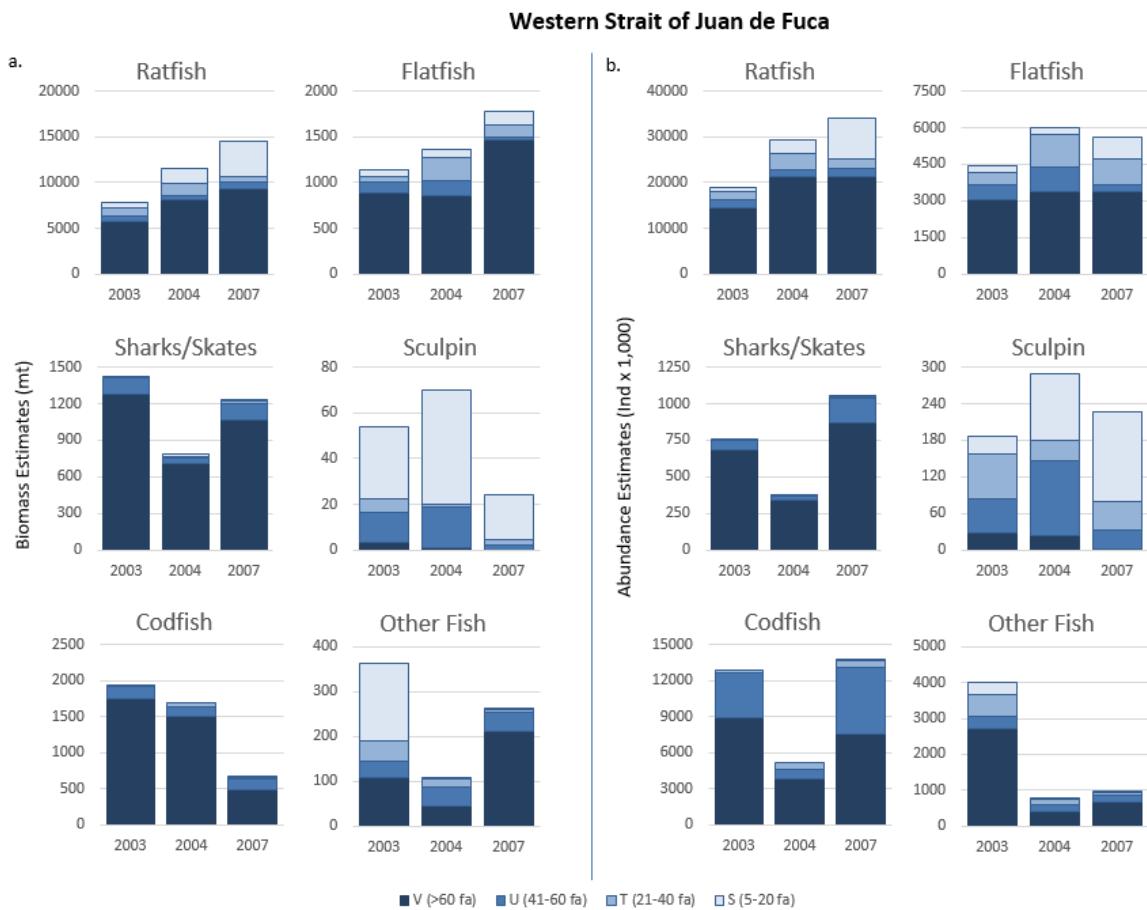


Figure 42: Biomass (a) and abundance (b) estimates by depth stratum and year for the primary fish groups in the Western Strait of Juan de Fuca.

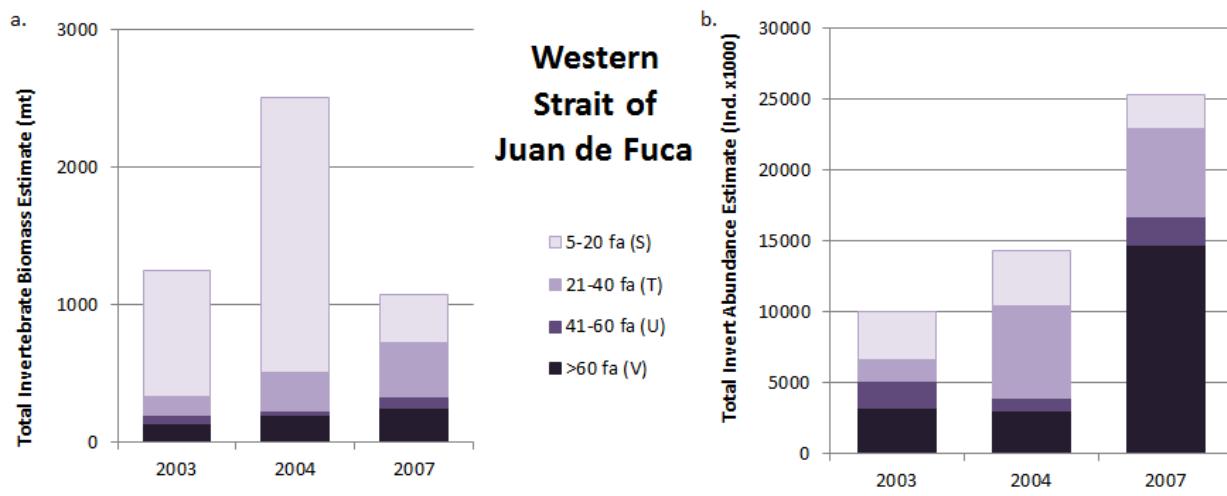


Figure 43: Total invertebrate biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for the Western Strait of Juan de Fuca by depth stratum.

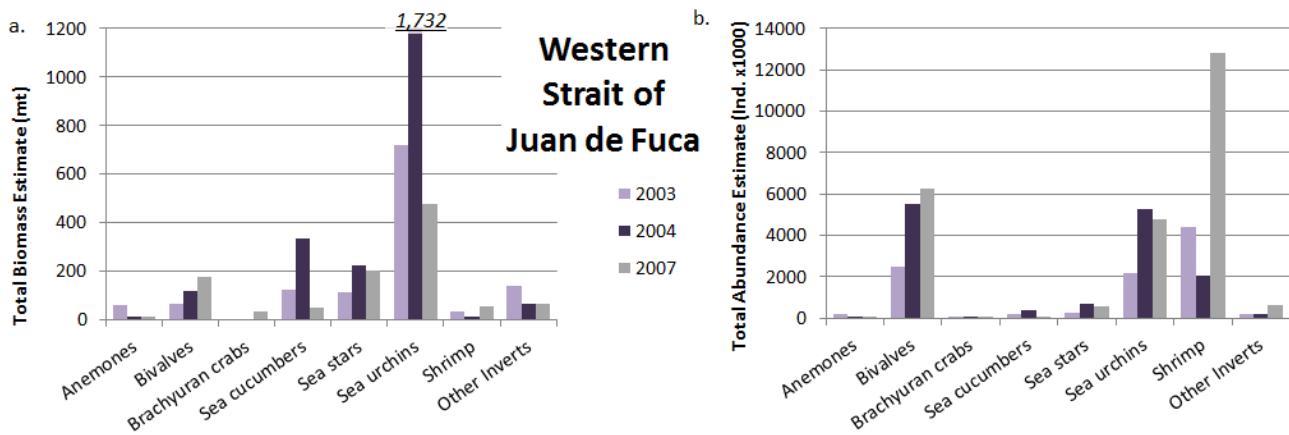


Figure 44: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in the Western Strait of Juan de Fuca of the primary invertebrate groups.

San Juan Islands (SJ)

The San Juan Islands (SJ) were surveyed with 37 tows in 2004 and 44 tows in 2006, covering a total of 31 ha and 33 ha, respectively (Table 9). Around 40% of the total area surveyed each year was from tows in the deepest stratum (>60 fa), while the remaining area was split relatively equally among the other strata.

Overall fish biomass estimates increased 30% from 8,559 mt in 2004 to 11,184 mt in 2006, and fish abundance estimates decreased just 6% between years, averaging around 47 million individuals (Figure 45). Both estimates, however, more than doubled in the 41-60 fa stratum, which was due to increases in that stratum of multiple species groups, but particularly of ratfish (Figure 48). On average, ratfish comprised 38% of the fish biomass and 18% of the abundance while flatfish comprised 18% of the abundance and 34% of the biomass (Figure 46). In terms of biomass, the second most dominant species group was sharks/skates at 27% on average, and in terms of abundance, it was codfish at 24%.

Among the 16 species of flatfish identified, the most dominant were English Sole and Rock Sole, followed by Pacific Sanddab. Rex Sole was also fairly prominent in terms of abundance in 2004, comprising 26% of the flatfish total, but not as many were encountered in 2006. Between years, sharks/skates increased in biomass from 1,887 mt to 3,548 mt, and in abundance from 1.2 million individuals to 2.7 million (Figure 47). Although five species were caught, including a Bluntnose Sixgill Shark (*Hexanchus griseus*) in 2004, the marked increase in population estimates was due to increased catches of North Pacific Spiny Dogfish, which comprised 76-91% of the shark/skate biomass and abundance each year. Walleye Pollock comprised the vast majority of codfish in SJ, but both biomass and abundance estimates decreased by over 50% between years.

Overall invertebrate biomass and abundance estimates both increased between years (Figure 49). Biomass almost doubled from 5,844 mt in 2004 to 10,282 mt in 2006 while abundance jumped from 232 million individuals to 555 million. Bivalves and brachyuran crabs were the most dominant invertebrate species on average by biomass, and bivalves and shrimp were the most abundant (Figure 50). Both estimates of these species groups, as well as most others, increased

between years. The Northern Horse Mussel was the most consistently dominant bivalve species, but in 2006, one tow encountered a bed of Bent-Nose Macoma (*Macoma nasuta*), catching over 70,000 individuals and exaggerating the overall bivalve estimates. Key shrimp species included Alaskan Pink Shrimp and Dock Shrimp, and Spot Prawns by biomass or Humpy Shrimp (*Pandalus goniurus*) by abundance; of these, all but Alaskan Pinks increased in population between years.

Table 9: Summary of sampling effort by stratum in the San Juan Islands for surveys conducted in 2004 and 2006.

SAN JUAN ISLANDS

DEPTH YEAR	NUMBER TOWS	Avg. TOW MINUTES	Avg. Tow Distance (m)	Avg. Tow Depth (fa)	Avg. Tow Area Swept (m ²)	Total Area Surveyed (ha)
5-20 fa (S)						
2004	8	9.63	664.41	14.75	7176.41	5.74
2006	11	8.82	577.49	13.27	6012.75	6.61
21-40 fa (T)						
2004	8	10.63	592.64	32.13	7399.92	5.92
2006	9	10.22	637.91	31.44	7747.45	6.97
41-60 fa (U)						
2004	7	10.43	706.41	47.71	9293.04	6.51
2006	9	9.56	609.10	47.56	7799.60	7.02
>60 fa (V)						
2004	14	10.21	678.63	97.64	9184.49	12.86
2006	15	10.40	613.63	97.60	8297.23	12.45

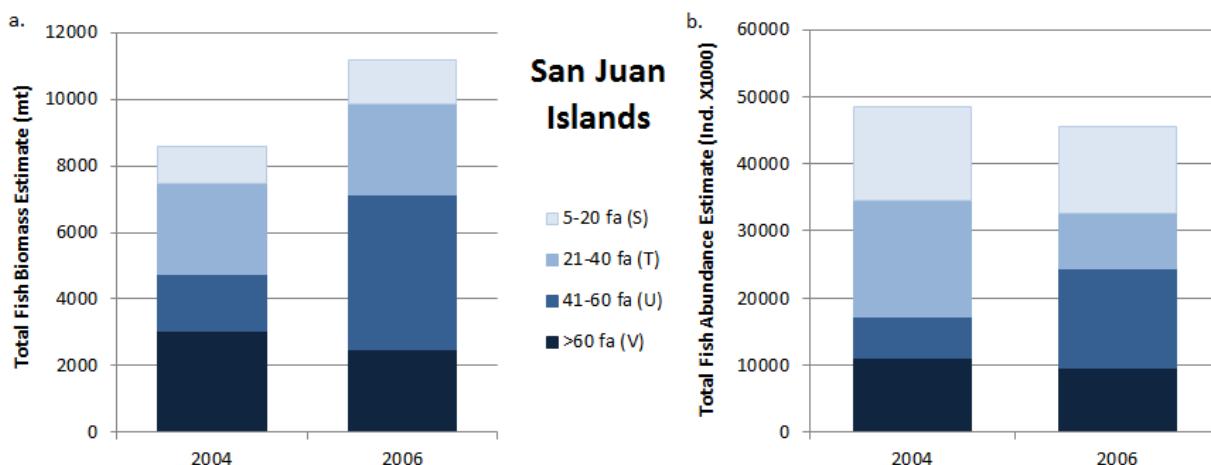


Figure 45: Total fish biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for the San Juan Islands by depth stratum.

San Juan Islands

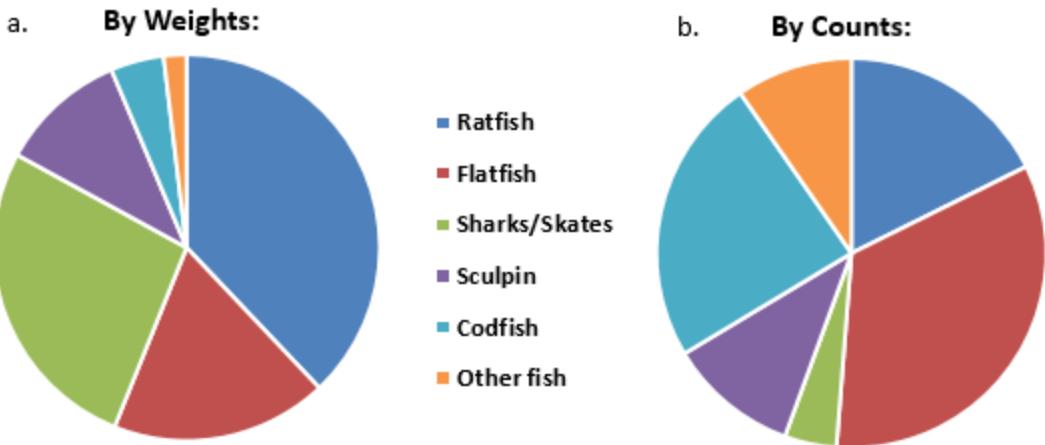


Figure 46: Average proportion between years of each fish group in the overall fish biomass (46a, “by weights”) and abundance (46b, “by counts”) in the San Juan Islands.

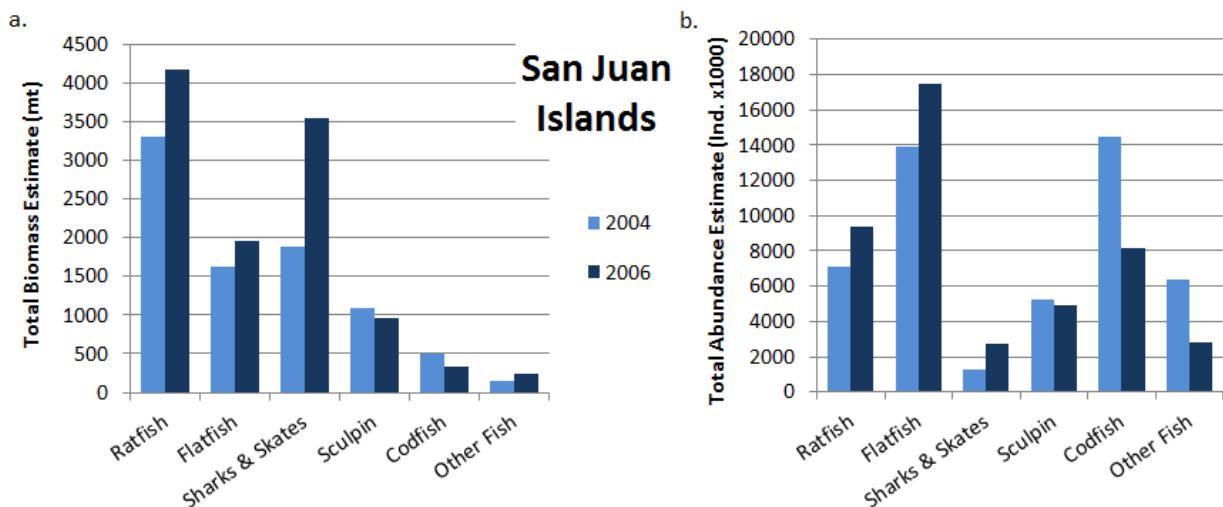


Figure 47: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in the San Juan Islands of the primary fish groups.

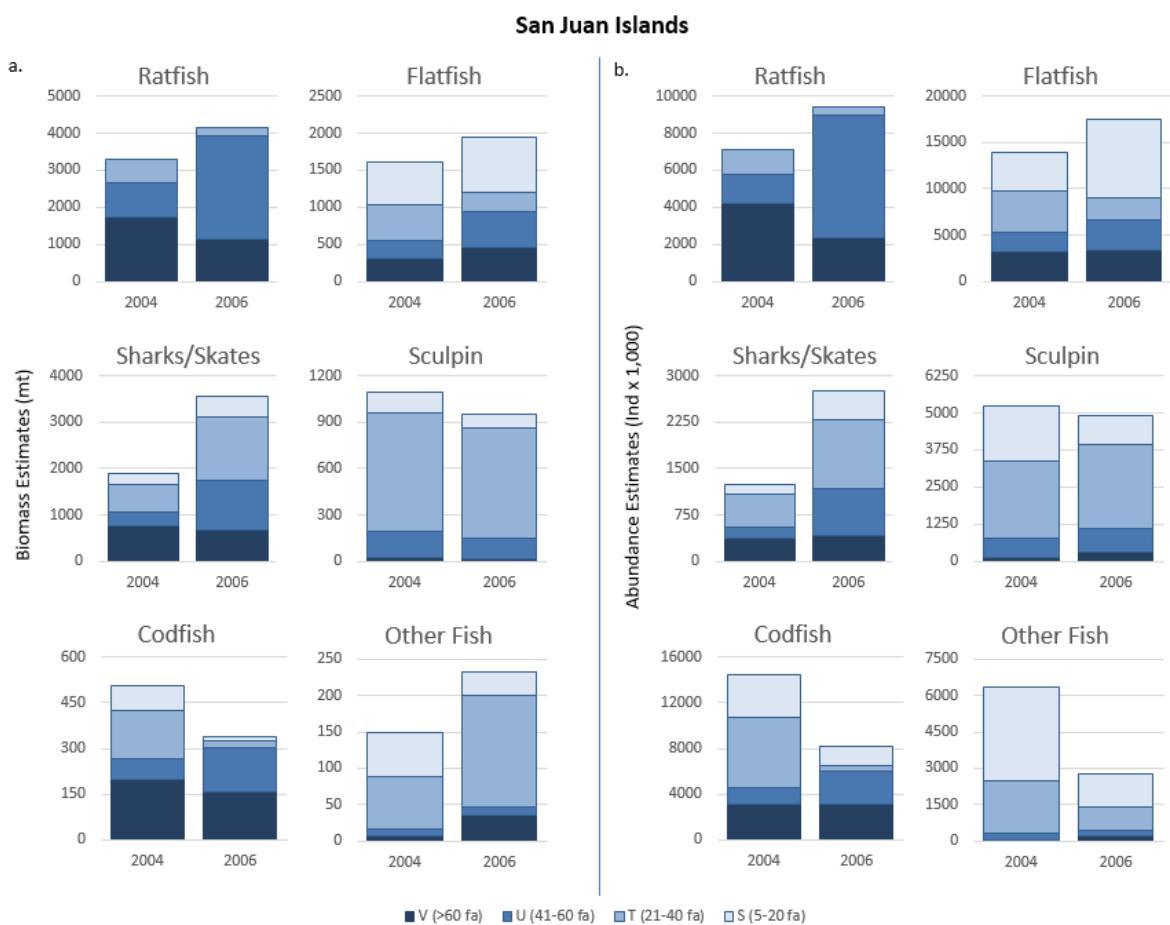


Figure 48: Biomass (a) and abundance (b) estimates by depth stratum and year for the primary fish groups in the San Juan Islands.

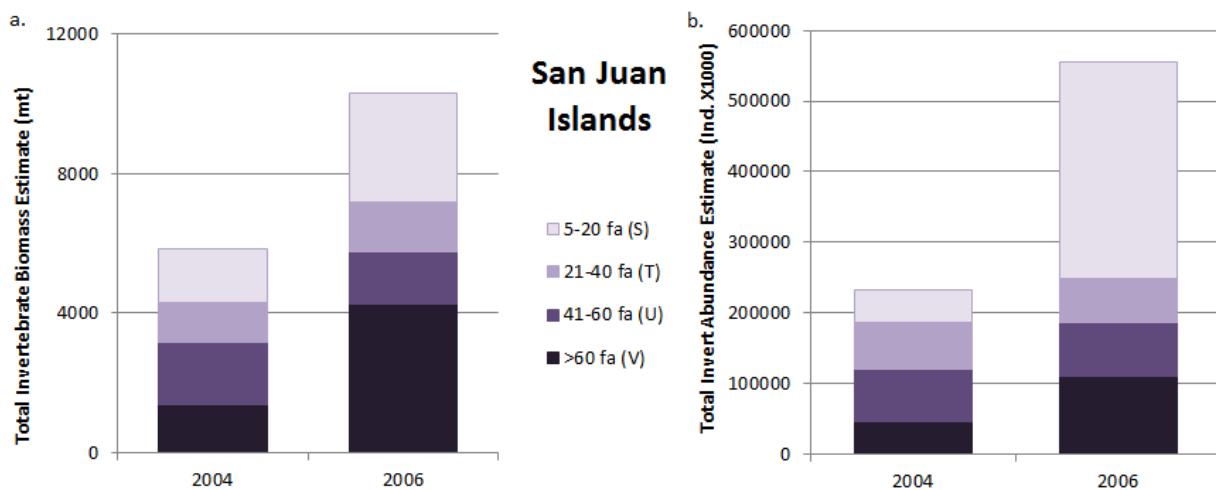


Figure 49: Total invertebrate biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for the San Juan Islands by depth stratum.

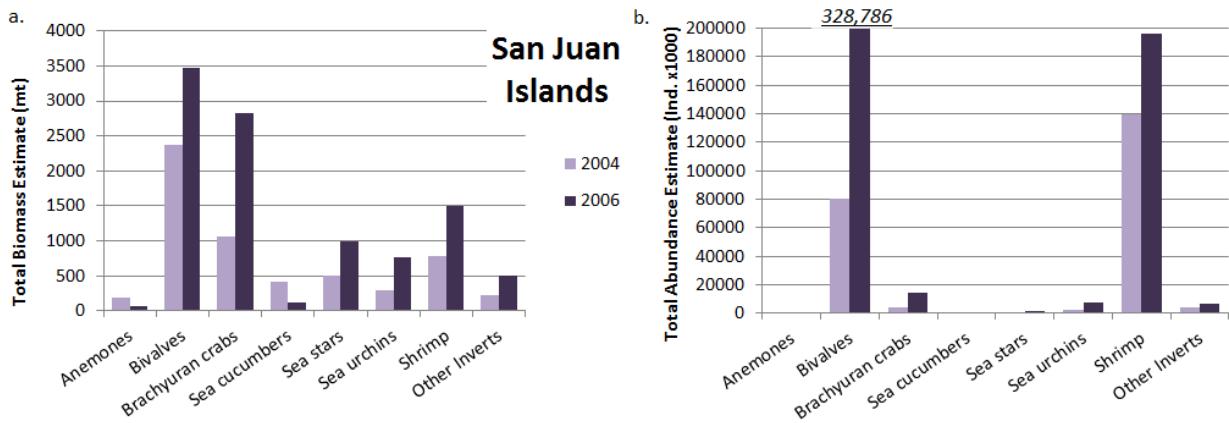


Figure 50: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in the San Juan Islands of the primary invertebrate groups.

Georgia Basin (GB)

The Georgia Basin (GB) was surveyed in 2004 and 2006 with 50 tows annually, covering a total of 43 ha each year (Table 10). Survey effort among depth strata also was relatively consistent between years, and 70% of tows were conducted in the shallowest and deepest depth strata combined.

Overall fish biomass estimates decreased 35% between years, from 18,477 mt in 2004 to 11,874 mt in 2006, but abundance estimates increased 54% from 71.5 million to 110 million (Figure 51). Flatfish, of which English Sole and Starry Flounder were the most dominant species, accounted for almost 50% of both fish biomass and abundance in GB on average (Figure 52). Although the biomass estimate for English Sole decreased slightly between years, the abundance estimate increased, implying a great number of smaller individuals; abundance estimates for nine other of the 15 total flatfish species also increased.

After flatfish, ratfish comprised 25% of the biomass, while “other fish” comprised 25% of the abundance. Each species group except “other fish” decreased in biomass between years, particularly ratfish, whose estimates dropped from 6,200 mt in 2004 to 1,980 mt in 2006 (Figure 53, Figure 54). The “other fish” group in GB was dominated by Plainfin Midshipman, Pacific Herring, and Longfin Smelt (*Spirinchus thaleichthys*) in 2004, but Shiner Perch replaced Pacific Herring in dominance in 2006. The abundance estimate for this species group jumped 500% between years, but this is again likely an overestimate influenced by patchy distributions and random large catches. Longfin Smelt, for example, was rarely caught in numbers greater than 50 in a tow, but three tows in 2006 caught >1,000 in each. Plainfin Midshipman and Shiner Perch both seemed to experience a legitimate population increase between years – both were found in twice as many tows in 2006 than in 2004, and the average fish/tow for each species increased by 100 fish/tow – although there was still an unusually large tow or two in 2006 that drove up estimates. From this result we infer that the increased abundance estimates between years for these species reflect true increases in population size, although the increases are likely lower than suggested by our estimates.

Both overall invertebrate biomass and abundance estimates increased between years, from 9,716 mt and 67 million individuals in 2004 to 11,777 mt and 226 million individuals in 2006 (Figure 55). The majority of the biomass (79% on average) was attributed to brachyuran crabs, which were almost entirely Dungeness Crab, as Dungeness biomass was estimated at over 8,000 mt each year (Figure 56). By abundance, crabs were still a key species group, but shrimp was the most dominant. Abundance estimates for shrimp jumped 400% to 181 million in 2006; this was attributed to large increases in *Crangonid* spp., Dock Shrimp, Humpy Shrimp, Sidestriped Shrimp, and Spot Prawns. Each of these appeared to have widespread increases, with several large catches rather than just a few; however, the increase in Crangonids was less consistent, as just one catch in 2006 caught 25,000 individuals versus the second-highest catch of 425 individuals. Therefore, as with the “other fish” group, abundance estimates for shrimp likely did increase quite a bit, but to a lesser extent than extrapolated.

Table 10: Summary of sampling effort by stratum in Georgia Basin for surveys conducted in 2004 and 2006.

GEORGIA BASIN

DEPTH YEAR	NUMBER TOWS	Avg. TOW MINUTES	Avg. Tow Distance (m)	Avg. Tow Depth (fa)	Avg. Tow Area Swept (m ²)	Total Area Surveyed (ha)
5-20 fa (S)						
2004	15	9.73	660.55	11.33	6947.51	10.42
2006	18	10.44	702.73	13.11	7498.32	13.50
21-40 fa (T)						
2004	9	10.44	672.89	30.44	8312.37	7.48
2006	7	10.57	724.93	30.86	8712.20	6.10
41-60 fa (U)						
2004	6	11.33	750.06	52.00	9929.10	5.96
2006	6	10.67	685.24	51.83	9085.88	5.45
>60 fa (V)						
2004	20	11.15	718.58	93.65	9738.26	19.48
2006	19	11.11	727.15	88.16	9831.89	18.68

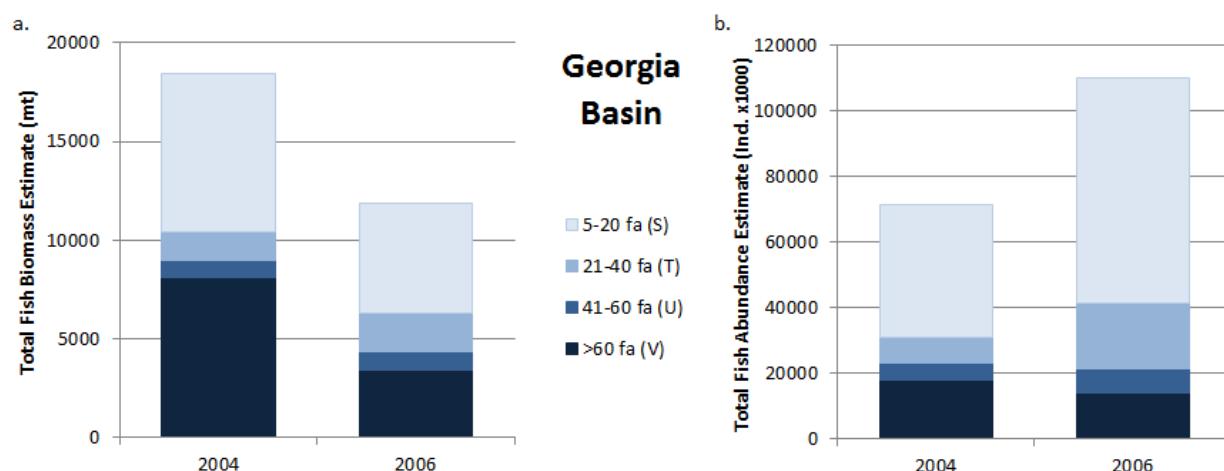


Figure 51: Total fish biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for Georgia Basin by depth stratum.

Georgia Basin

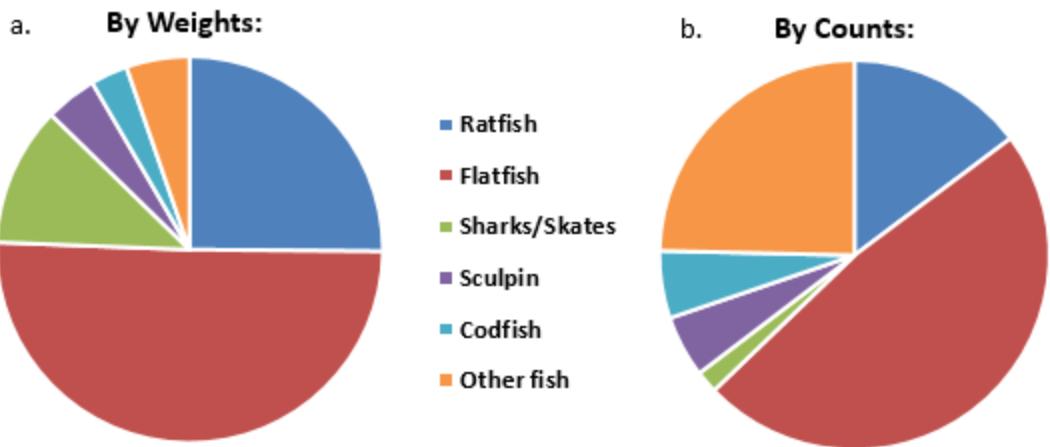


Figure 52: Average proportion between years of each fish group in the overall fish biomass (52a, “by weights”) and abundance (52b, “by counts”) in the Georgia Basin.

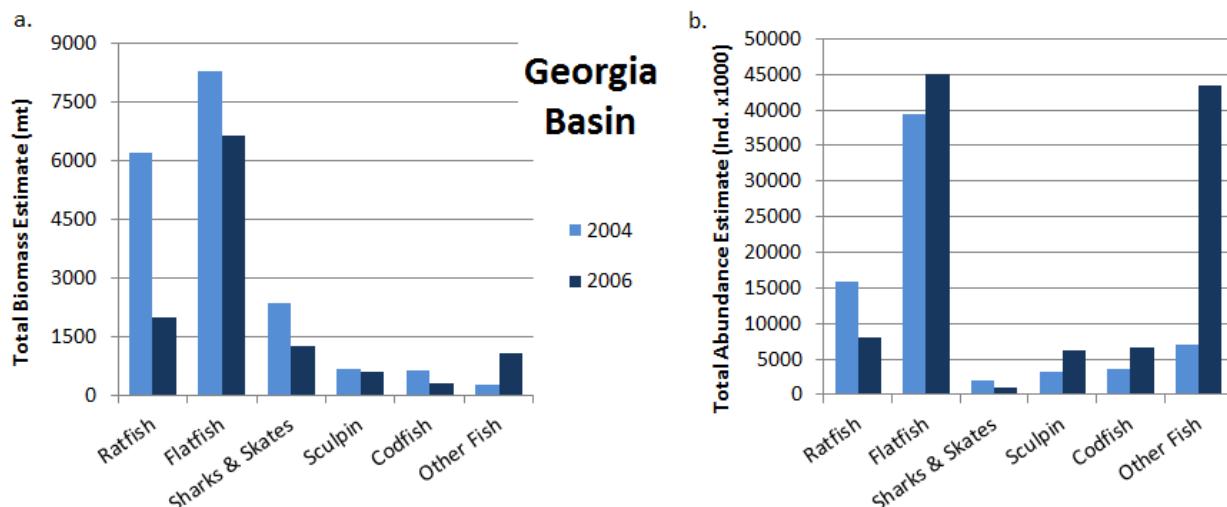


Figure 53: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in Georgia Basin of the primary fish groups.

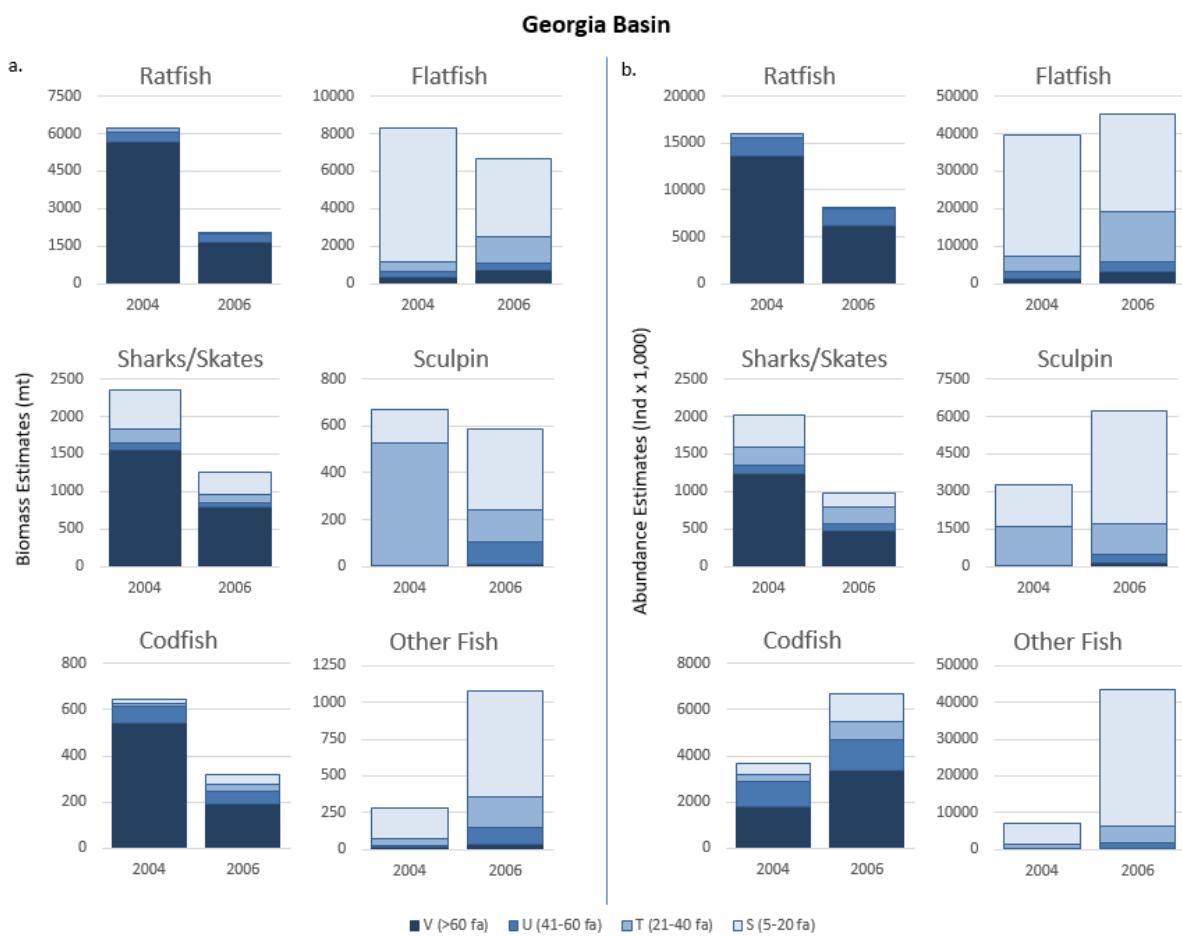


Figure 54: Biomass (a) and abundance (b) estimates by depth stratum and year for the primary fish groups in the Georgia Basin.

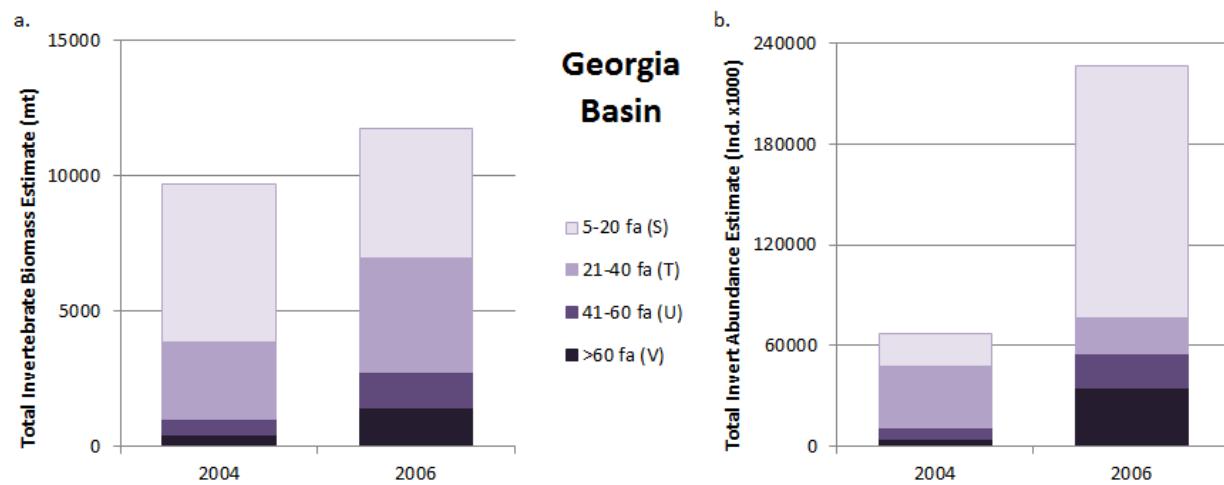


Figure 55: Total invertebrate biomass (mt) estimates (a) and abundance (Individuals x1000) estimates (b) for Georgia Basin by depth stratum.

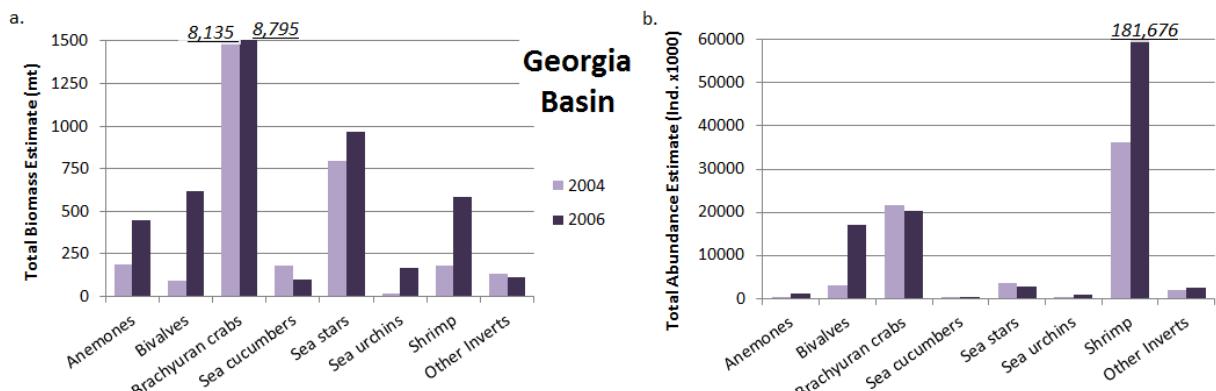


Figure 56: Biomass (mt; a) and abundance (Ind.x1000; b) estimates in Georgia Basin of the primary invertebrate groups.

Southern Salish Sea-Wide Results Summary

Because the regions and depth strata among regions vary substantially in size, density estimates were used to compare population trends across regions and years. Central Sound supported an overall fish biomass density of just under 500 kg/ha in both 2002 and 2005, which was twice as high as any other region in any year (Figure 57). Whidbey Island supported the highest average population density (1,845 ind/ha) despite a large decrease in densities between sampling years. Discovery Bay had the lowest average biomass density (81 kg/ha) but the second highest average population density (1,203 ind/ha), consistent with it being a shallow embayment that contains a variety of juvenile fishes.

Overall, there were no clear trends in fish biomass or abundance increases or decreases for any of the regional groupings (e.g., biomass estimates didn't all increase or all decrease in the Core Sound regions CS, HC, SS, and WI between 2002 and 2005) (Figure 57). One potential pattern that did appear, however, is that larger regions with deeper and wider channels and more direct access to ocean input (e.g., JE, JW, and CS) tended to support higher biomass to abundance ratios, implying their populations might consist of more large, heavier fish. In contrast, regions with more protected waters, such as HC, SS, WI, and DB, supported higher abundances compared to biomasses, implying populations include more small, lighter fish. “Bigger” and “smaller” fishes could imply “older” and “younger” fishes of same or similar species, or it could result from differing species compositions of “typically smaller” versus “typically larger” species, or even from a combination of factors.

Comparing species group densities among the regions, it is clear that while CS had the highest biomass density of all regions, most of it can be attributed to ratfish, as ratfish densities were twice as high in CS (average = 368 kg/ha) than in any other region (Figure 58). Flatfish were present in all regions but had the smallest populations (less than 23 kg/ha) in JE, JW, and SJ. Sculpins were unquestionably most abundant in SS (~300 ind/ha on average), and HC and JW had the smallest sculpin populations, particularly in terms of biomass. Codfish populations were variable among regions as well, with WI having the combined highest biomass and population densities on average. Sharks/skates populations had higher biomass densities in the more northerly regions, while DB supported the highest abundance rate. And lastly, “Other fish,” comprised mostly of small species not particularly well-suited to being caught with the net, were most prevalent in the more protected regions of HC, SS, WI, and DB.

To compare regions based on their species assemblages and catch rates, an analysis of bootstrap averages was performed in PRIMER 7 (PRIMER-e 2015). Biomass densities (kg/ha) for each fish species were calculated for each tow and treated with a fourth-root transformation prior to calculating the Bray-Curtis similarity matrix. Bootstrap averages were then calculated from the resemblance matrix and plotted on a non-metric MDS by factor (i.e., Region or Region-Year); detailed analysis parameters can be found in Appendix D. Half of the regions (JW, DB, CS, GB, and SS) were completely isolated from other regions and only overlapped with other years within the same region, indicating the fish compositions between regions are consistently different (Figure 59). However, the small overlap in the variability clouds for JE and SJ, and a greater overlap for HC and WI, indicate that the fish communities in these region pairs show varying degrees of similarity. Overall, the relatively high degree of overlap within most regions indicates that no major shifts in regional fish communities occurred between sampling years. The largest shift, i.e., the region that overlaps least between years, occurred with GB; however, this is largely a factor of the spike in “other fish” in 2006.

In addition to the overlap/isolation of the variability clouds, the distribution of each region’s cloud on the n-MDS plot is meaningful. In the orientation depicted, the horizontal axis can be interpreted as a proxy for depth, as the regions distribute fairly cleanly by percentage of deep (>41 fa) vs shallow (<40 fa) waters. The region with the highest percentage of deep water, JW, is on the far left, while the region with the lowest percentage of deep water, DB, is on the far right, and the other regions mostly fall appropriately in between (Figure 2 for depths, Figure 59). The vertical axis roughly corresponds to distance to the open waters of the Pacific Ocean. The regions along the top – JW, JE, SJ, DB – are the closest regions to the Pacific Ocean and thus receive the greatest flux of seawater. GB and CS are the next regions along the path of seawater influx, followed by HC, WI, and SS, which are all more isolated with just narrow inlets connecting them to CS.

To further examine the species driving these trans-regional patterns, a two-way crossed SIMPER analysis was performed on the data, also using PRIMER 7 (PRIMER-e 2015); detailed parameters and group results can be found in Appendix D. When the catches of each depth stratum are examined by biomass across all regions, it is evident that the species assemblages become increasingly similar across regions as the strata get deeper. The deepest stratum (>60 fa) had the highest similarity at 61%, and 70% of the stratum’s composition could be described by just six species, the fewest of any strata. Spotted Ratfish and Dover Sole comprised 41%, while the remaining was described by Walleye Pollock, North Pacific Spiny Dogfish, Longnose Skate and English Sole, in order of relative contribution. The 41-60 fa stratum had a 51% similarity rate across regions and 10 species described 70% of the stratum’s composition. Spotted Ratfish was still the top contributor, but to a lesser degree than it was in the deepest stratum. Dover Sole’s contribution was also still present but lesser, while Walleye Pollock and English Sole had higher contribution rates. Other flatfish, including Pacific Sanddab, Rex Sole, and Slender Sole, were low on the list but present, as were Pacific Hake. The 21-40 fa stratum had a 48% similarity across regions and it took 14 species to describe 70% of the composition, which was the most of all the strata. While Spotted Ratfish again had the highest contribution rate, it was at 11% compared to close or over 30% in the previous two strata. English Sole was the second highest contributor, and other flatfish species included (in order of contribution rate) Pacific Sanddab, Rock Sole, Starry Flounder, and Dover Sole. Other species included a couple of sculpins (Great and Pacific Staghorn), codfish (Pollock and Tomcod), and a few “other fish,” including Pacific Herring, Blackbelly Eelpout, and Plainfin Midshipman. The shallowest stratum (5-20 fa) had the

least similarity across regions at 46% and had 11 species comprise 70% of its assemblage. Flatfish were the top contributors, with English Sole, Starry Flounder, and Rock Sole each contributing at least 11%. Sand Sole and Speckled Sanddab were also present, as were some species found in the 21-40 fa stratum including Plainfin Midshipman, Great Sculpin, Pacific Staghorn Sculpin, and Pacific Herring. Overall, three species contributed to 70% of the composition in all strata: Spotted Ratfish, English Sole, and North Pacific Spiny Dogfish. Spotted Ratfish's contribution rate increased with increasing depth, ranging from 4%-30%, while English Sole's decreased, ranging from 13%-5%; dogfish, however, had a more consistent rate, ranging between 6 and 8%.

Species assemblages within each region were also examined by biomass across all depth strata in the SIMPER analysis. Walleye Pollock and Dover Sole were found in each of the 70% compositions of the northerly regions of JW, JE, SJ, and GB, but were mostly absent in the other regions' compositions, aside from Dover Sole in CS. The more southerly regions (WI, CS, HC, SS) had no specific species other than Spotted Ratfish and English Sole in common among them. The drivers behind the strong similarity between HC and WI were both the contribution rates of English Sole and Spotted Ratfish as well as the comparable composition of other species. English Sole contributed 14% to the composition of HC and 13% to that of WI, while Spotted Ratfish contributed 13% to HC and 14% to WI. Additionally, of the six other species that comprised 70% of HC's typical assemblage, five were also present in WI's 70%; these include Plainfin Midshipman, Slender Sole, Longnose Skate, Pacific Hake, and Blackbelly Eelpout. Ultimately, while every major species group was found in each region, the combination of individual species that comprised the fish assemblages of each region were unique based first on the region's depth of available habitat and potentially further influenced by its distance from the open ocean.

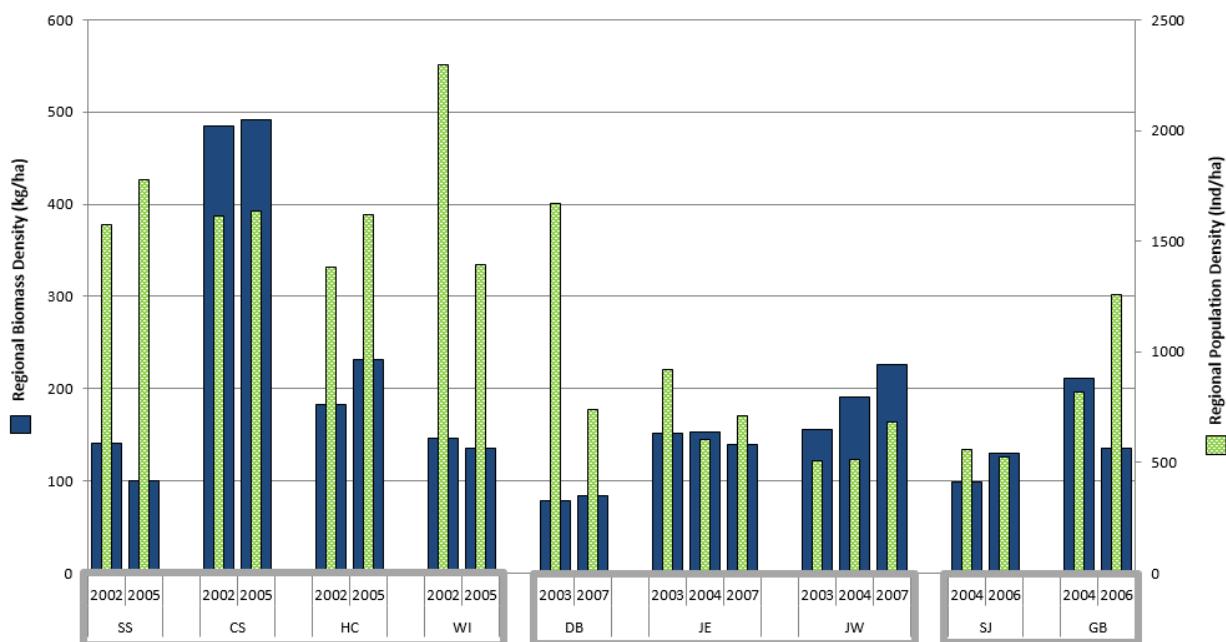


Figure 57: Regional fish biomass density (kg/ha; primary y-axis; blue bars) and population density (ind/ha; secondary y-axis; green bars) in each sampling year (x-axis). Gray boxes along x-axis group regions sampled on the same schedule.

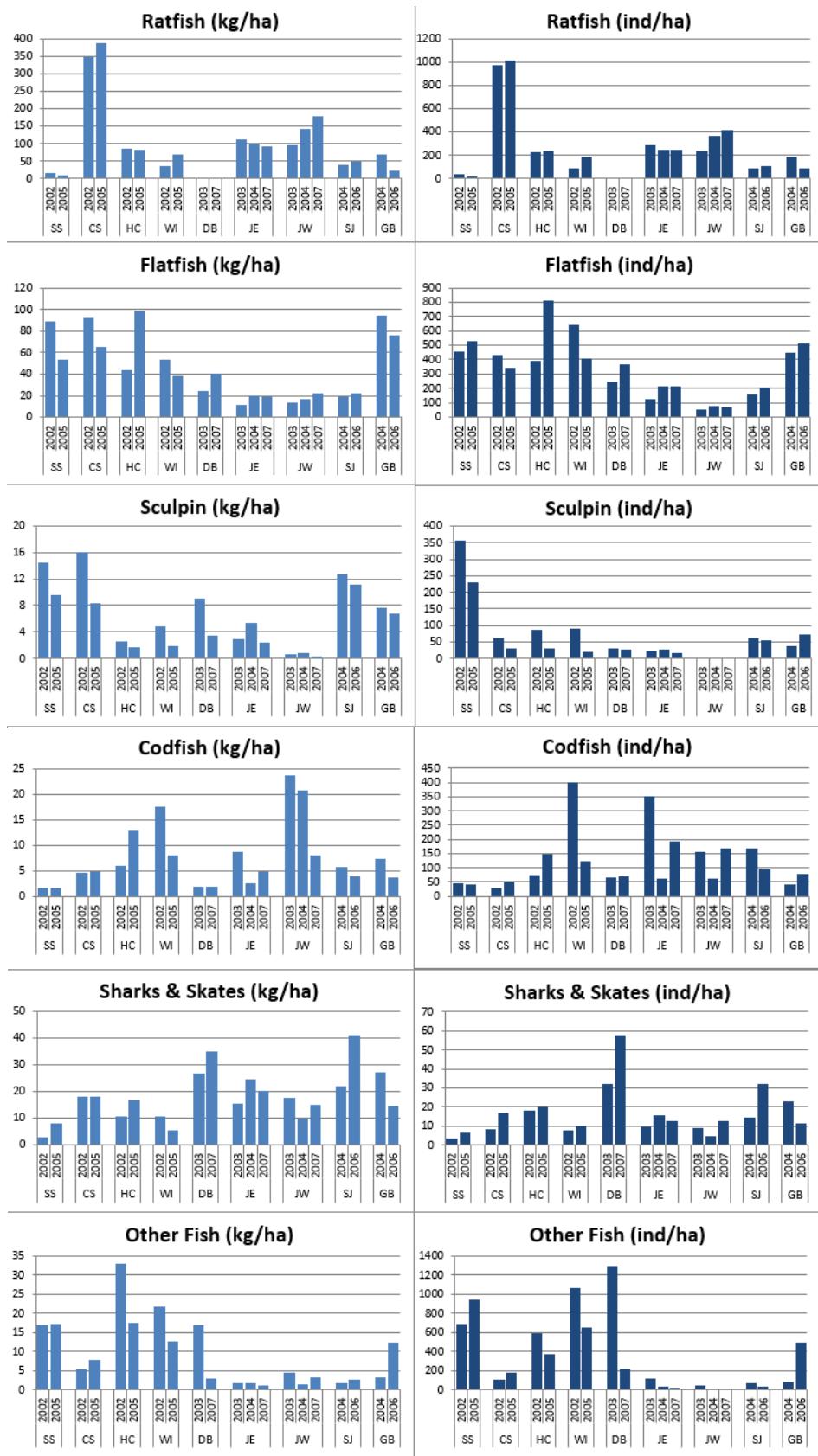


Figure 58: Biomass and count density summaries for key species and species groups across all survey years and regions.

02-07 Tow Biomass Densities (kg/ha) of Fish Species
 Bootstrap Averages on Non-metric MDS

Transform: Fourth root
 Resemblance: S17 Bray-Curtis similarity

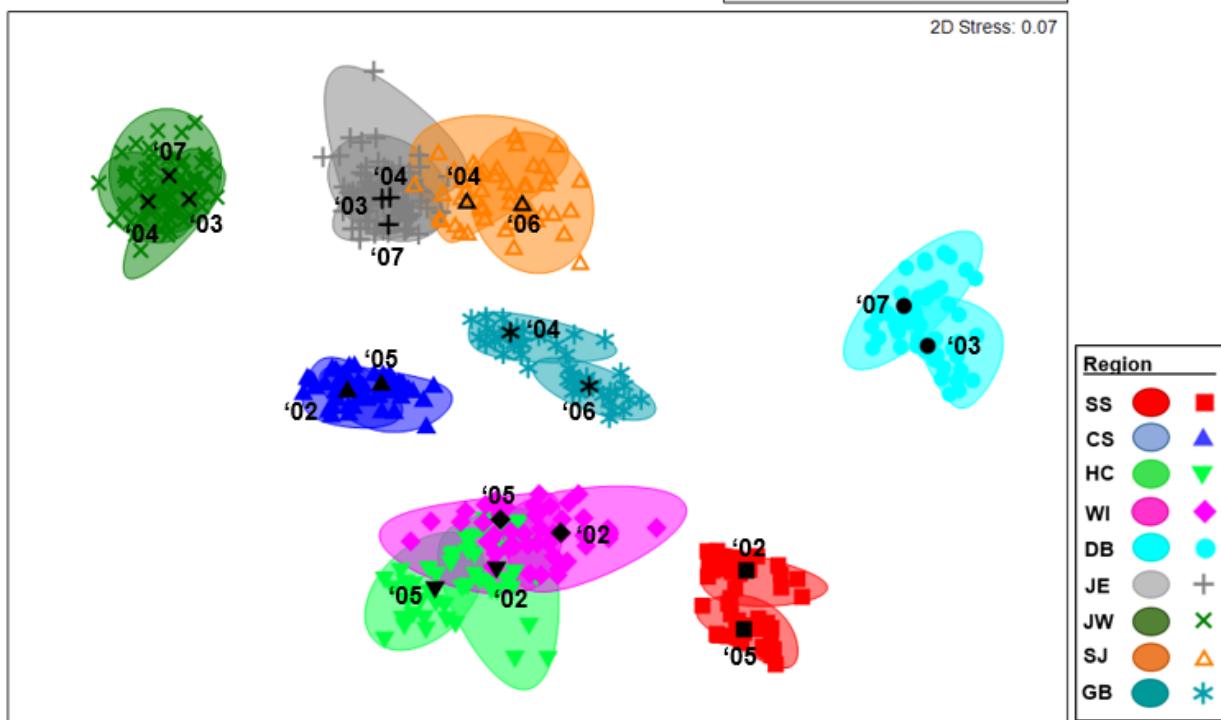


Figure 59: Bootstrap averages on non-metric MDS plot based on individual tow densities (kg/ha) of fish species by Region-Year. Each black mark represents the overall average for each Region-Year variability cloud and are labeled with the respective sampling year. All regions were sampled two years of the survey except JE and JW, which were sampled three. Detailed parameters and metrics from Bootstrap Average can be found in Appendix D.

RESULTS--SPECIES

In total, 139 fish species were encountered in the trawl survey between 2002 and 2007. While ecologically relevant, 91% of these species contributed less than 2% to the overall biomass or abundance estimates, making it difficult to examine patterns in their abundance and distribution. Catch rates for all species are available in Appendix E and by contacting the Puget Sound Marine Fish Science Unit, but detailed profiles for the most commonly encountered and/or commercially impacted species are provided below, among further details on each major species group. Often these species are of relevance to fisheries, either as target species or bycatch, in addition to being ecologically important.

Ratfish (*Hydrolagus colliei*)

Spotted Ratfish were considered their own species “group” due to the sheer abundance and biomass present in Puget Sound. An estimated total of over 76 mt and 203,000 individuals were caught and handled during the survey period. The largest tow captured over 13,000 individuals, and almost 50 tows caught between 1,000 and 5,000 individuals. The majority of ratfish, in terms of both biomass and abundance, was found in the deepest depth stratum, >60 fa (Figure 60). This depth distribution is in contrast to that noted by Quinn et al. (1980), which found ratfish to be most prevalent from 55-95 m (i.e., 30-52 fa, or T & U strata); they also found smaller individuals to be deeper than larger individuals, which was also not observed in the current study. The current study did, however, cover a much broader area with a higher sample size, so these differences could be a result of that or an indication of distributional shifts from the 1980s. As previously mentioned, CS supported the largest ratfish population, in which densities were at least twice as high as any other region in any other year (Figure 61). JW and JE supported the next highest densities, while DB supported the least. The latter is not surprising, however, given that DB only contained the shallowest two depth strata. Indeed, when the biomass densities were subjected to a Getis-Ord Hot Spot Analysis, DB appears as a statistical cold spot (Figure 62). Admiralty Inlet, spanning the northern portion of CS as well as the mouth of HC was the largest hot spot; other smaller ones were found in JW by the Lower Elwha, in CS between West Seattle and Manchester, and in CS around Point Defiance and Commencement Bay. Interestingly, many of these hot spots are close to natural sills. Ratfish are not currently the target of any recreational or commercial fishery in Puget Sound, despite being targeted for oil and fish meal in the past, but they are caught as bycatch in other fisheries.

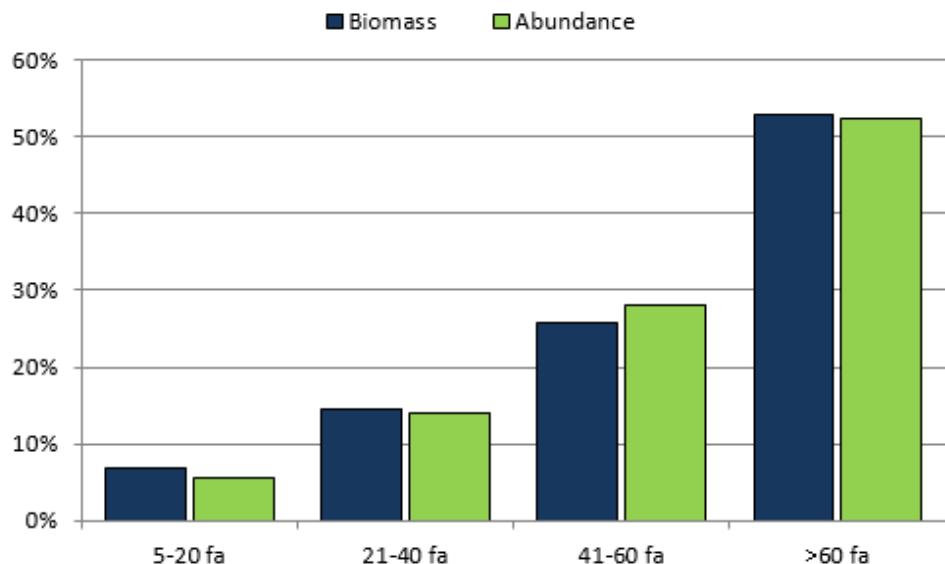


Figure 60: Proportion of Spotted Ratfish biomass and abundance occurring in each depth stratum across all survey regions and years.

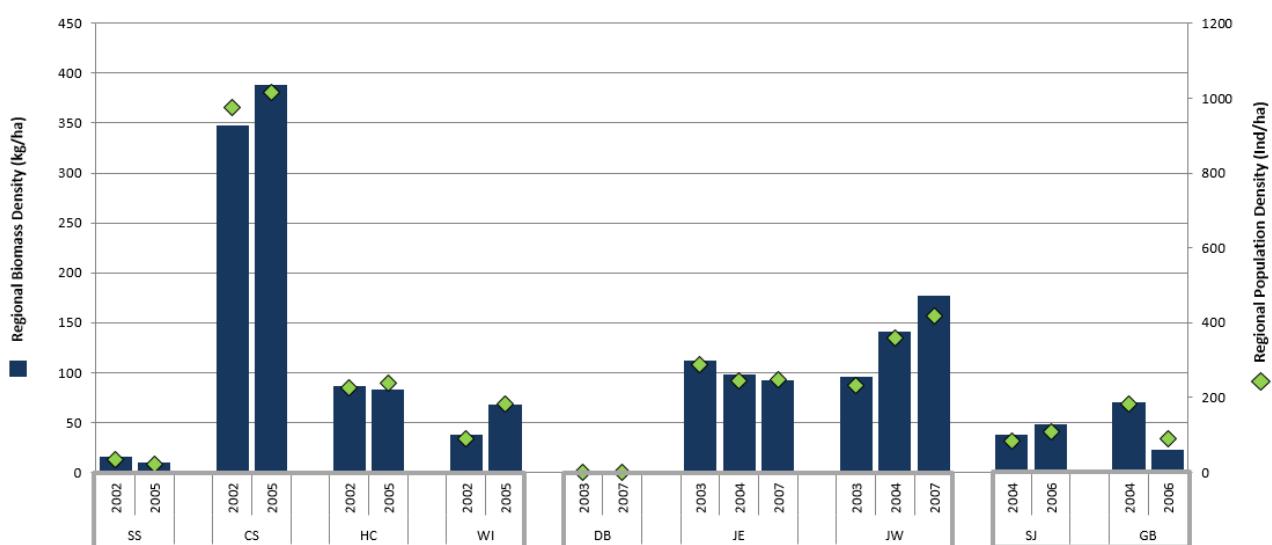


Figure 61: Biomass density (kg/ha; primary y-axis) and population density (ind/ha; secondary y-axis) of Spotted Ratfish by region and year. Gray boxes around regions indicate regions on the same or similar sampling schedules.

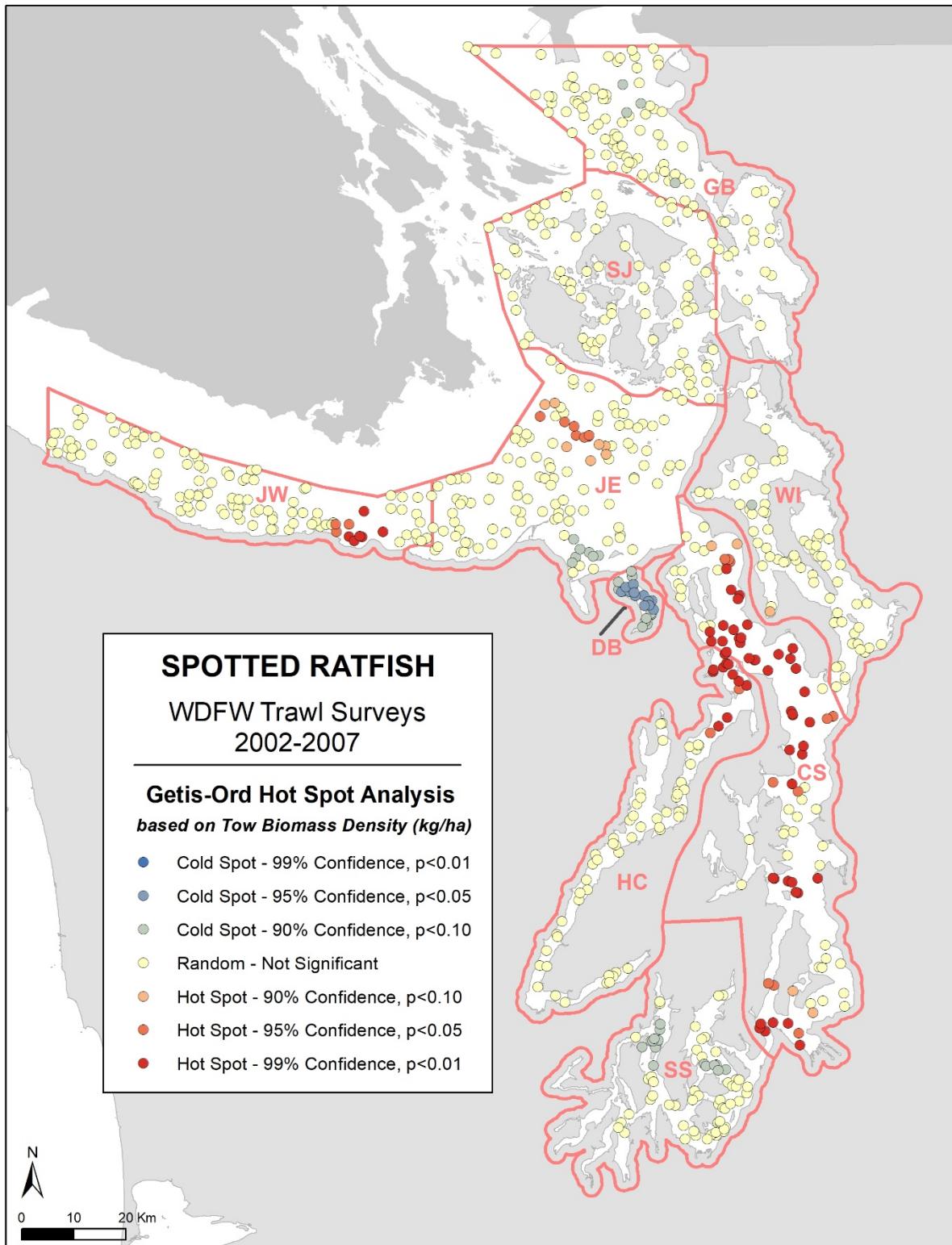


Figure 62: Getis-Ord hot spot analysis, performed in ArcGIS, based on the tow biomass densities (kg/ha) of Spotted Ratfish for all 747 tows in the 2002-2007 surveys. The analysis spatially identifies statistically significant biomass hot spots and cold spots based on the tow densities. See Methods for more details.

Flatfish (Pleuronectiformes)

Overall, 16 species of flatfish were identified, but only four constituted 10% or more of either the flatfish biomass or abundance (Figure 63). English Sole was the most prevalent and comprised 43% of the biomass and 45% of the abundance. Starry Flounder had the second highest biomass at 18%, but only contributed 5% to the overall abundance. The species with the second highest abundance, 10%, was Pacific Sanddab, which represented 7% of the abundance. Lastly, Rock Sole (Northern & Southern combined) represented 12% of the flatfish biomass and 10% of the abundance. These four species will be examined in the following detailed species profiles.

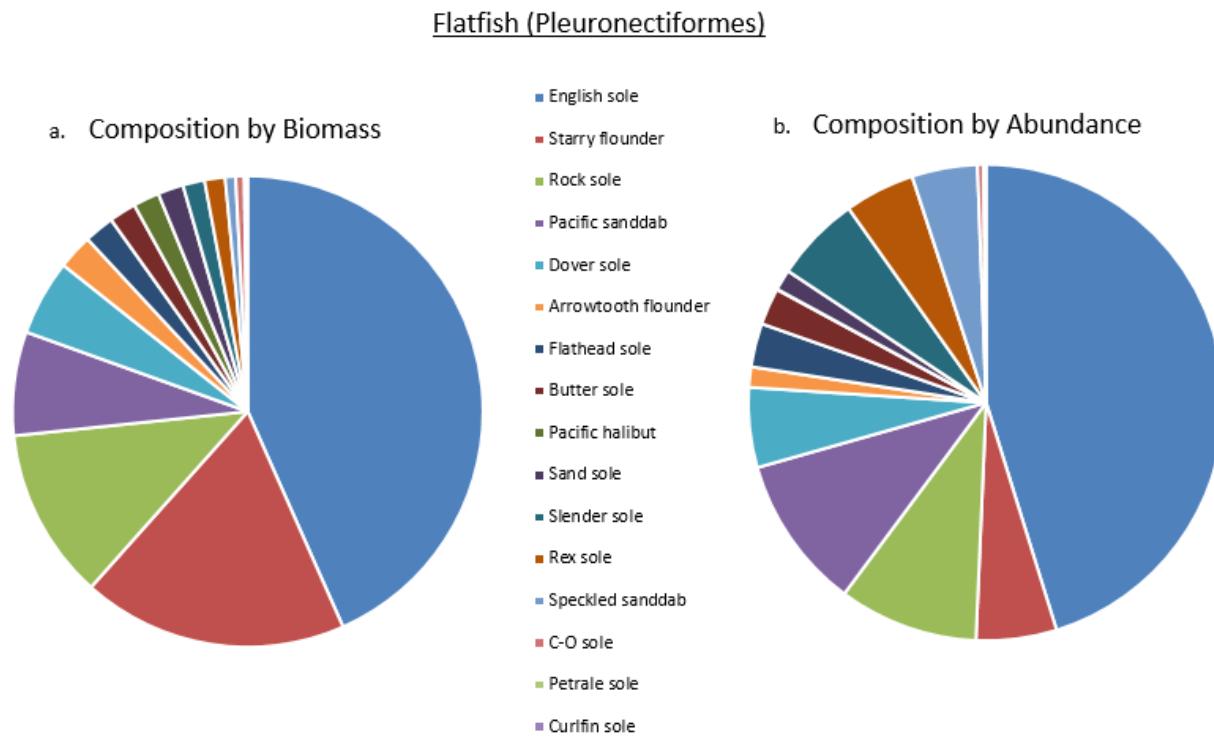


Figure 63: Proportional species composition of the flatfish species group, by both biomass (a) and abundance (b), based on population estimates from all years and regions of the 2002-2007 surveys.

English Sole (*Parophrys vetulus*)

English Sole were ubiquitous at all depths surveyed, with larger individuals generally occurring in the >60 fa stratum (Figure 64). While nearly absent in JW in any of the three years sampled, and only occurring at low levels in JE, English Sole biomass density exceeded 60 kg/ha in CS and HC in 2002 and 2005, respectively (Figure 65). CS and HC also supported the majority of the identified statistical hotspots of English Sole biomass, although one was also identified in northern GB (Figure 66). English Sole weigh only tens of grams until they reach sexual maturity, thus abundance density estimates outpaced biomass density estimates in several regions during several years (Figure 65). Average fish length was roughly comparable across regions, though a greater proportion of large fish were encountered in GB and SJ (Figure 67).

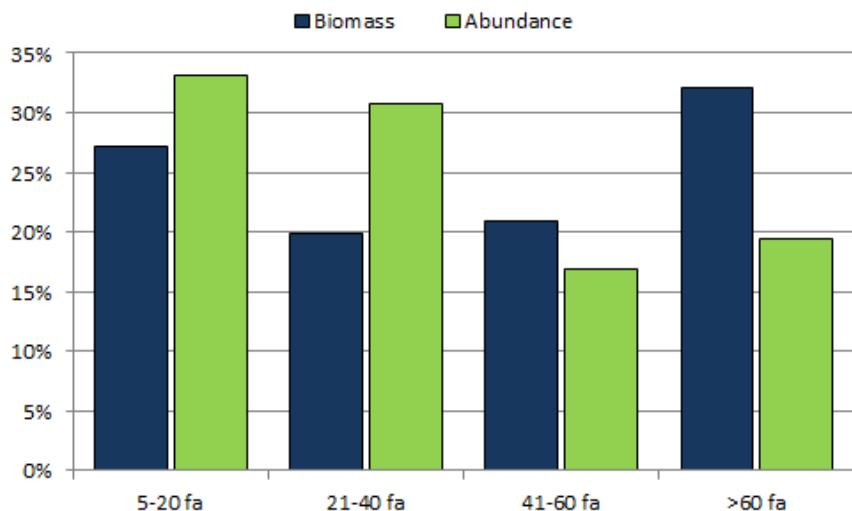


Figure 64: Proportion of English Sole biomass and abundance occurring in each depth stratum across all survey regions and years.

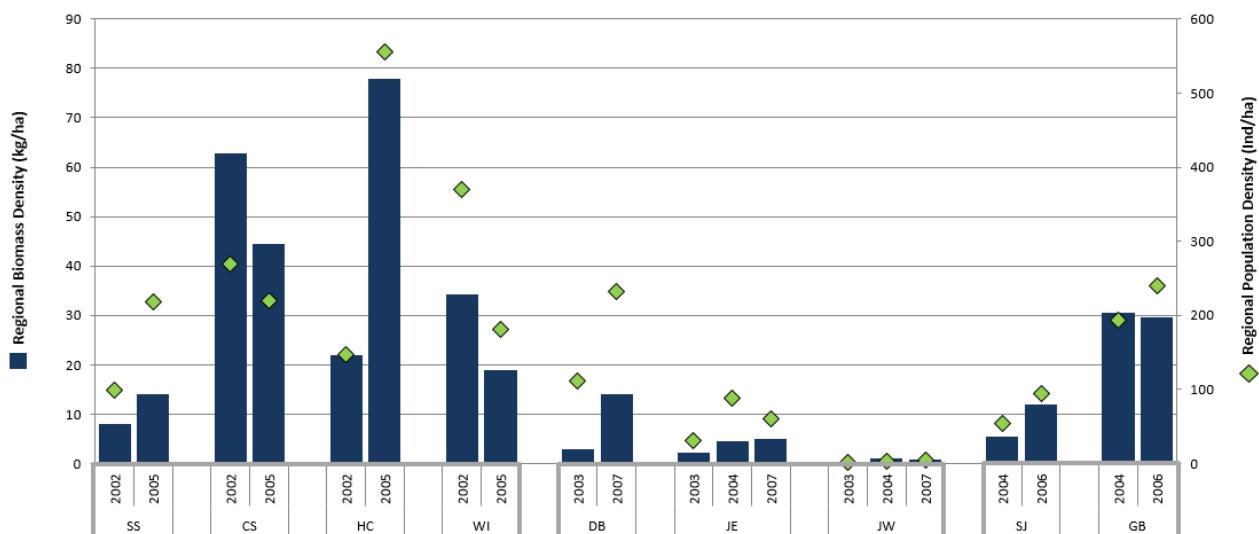


Figure 65: Biomass density (kg/ha; primary y-axis) and population density (ind/ha; secondary y-axis) of English Sole by region and year. Gray boxes around regions indicate regions on the same or similar sampling schedules.

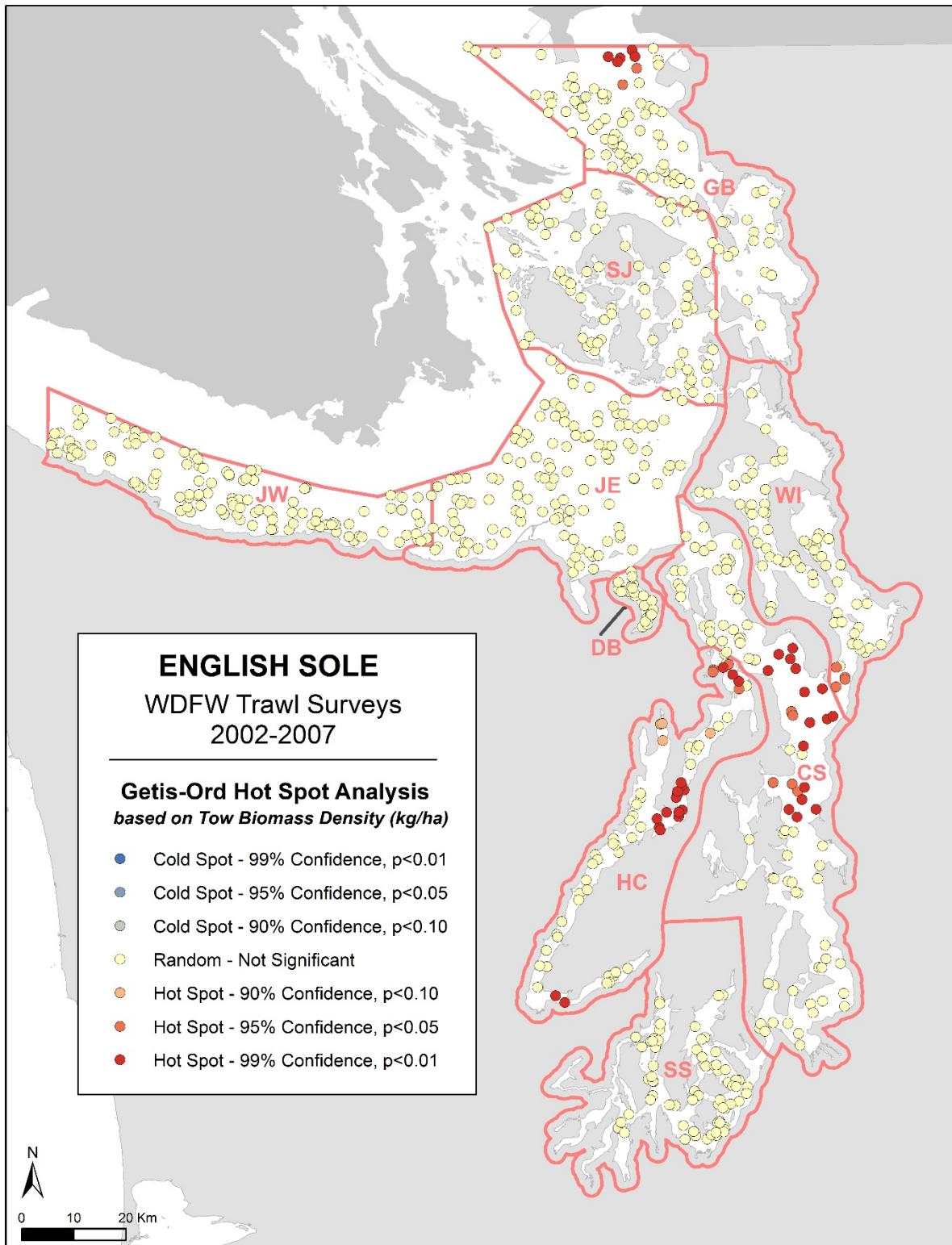


Figure 66: Getis-Ord hot spot analysis, performed in ArcGIS, based on the tow biomass densities (kg/ha) of English Sole for all 747 tows in the 2002-2007 surveys. The analysis spatially identifies statistically significant biomass hot spots and cold spots based on the tow densities. See Methods for more details.

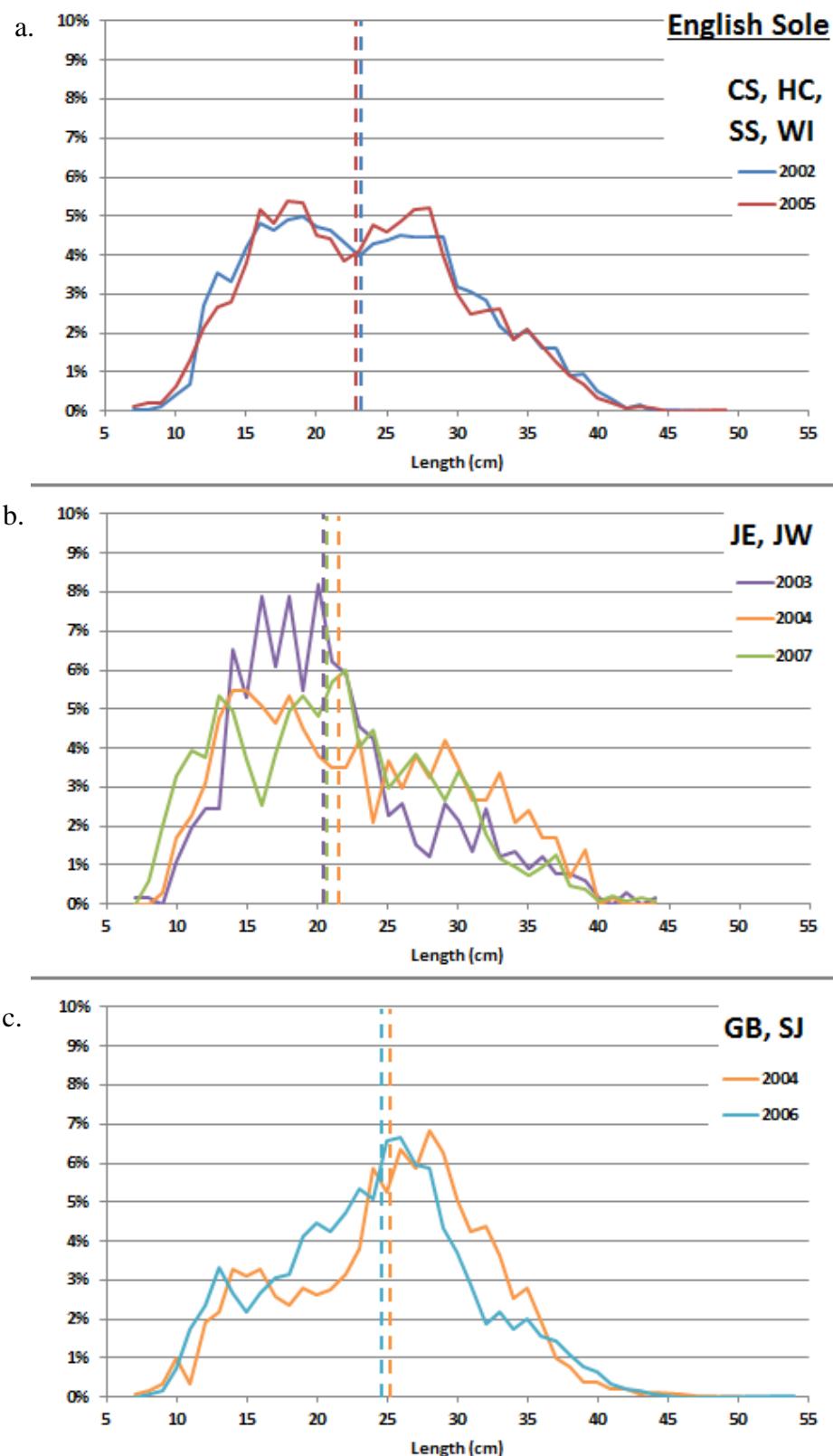


Figure 67: Percent length composition data for English Sole captured in the trawl survey. (A) Regions CS, HC, SS, and WI combined. (B) Regions JE and JW combined. (C) Regions GB and SJ combined. Dashed lines indicate mean lengths.

Starry Flounder (*Platichthys stellatus*)

Starry Flounder were the second most prevalent flatfish in terms of biomass and occurred almost exclusively in the shallowest stratum (Figure 68). They dominated flatfish biomass in waters less than 21 fa deep, which is where the species tends to be targeted by recreational anglers (WDFW creel survey data). Starry Flounder were most common in SS, GB, and DB, and GB, SS, and WI appear to serve as juvenile rearing grounds for the species, as evidenced by a preponderance of small individuals (Figure 69, Figure 71). Biomass hotspots were identified in northern SS, Bellingham Bay (GB), and outside of Blaine (GB) (Figure 70).

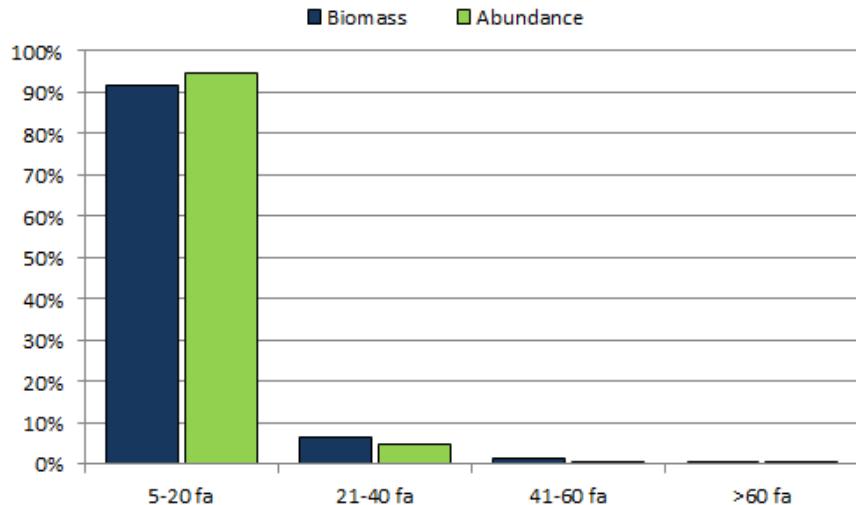


Figure 68: Proportion of Starry Flounder biomass and abundance occurring in each depth stratum across all survey regions and years.

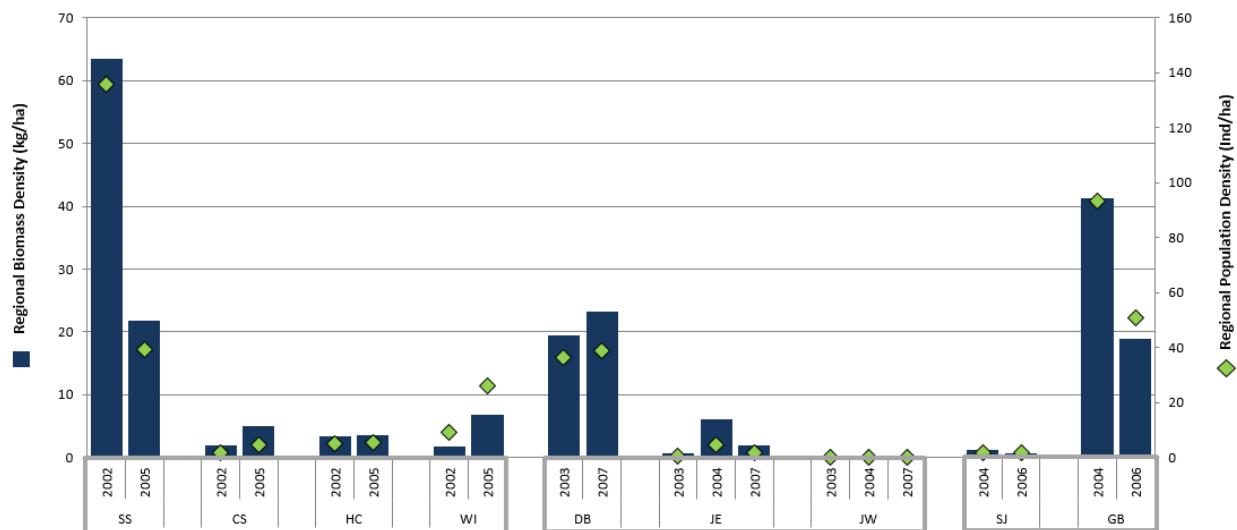


Figure 69: Biomass density (kg/ha; primary y-axis) and population density (ind/ha; secondary y-axis) of Starry Flounder by region and year. Gray boxes around regions indicate regions on the same or similar sampling schedules.

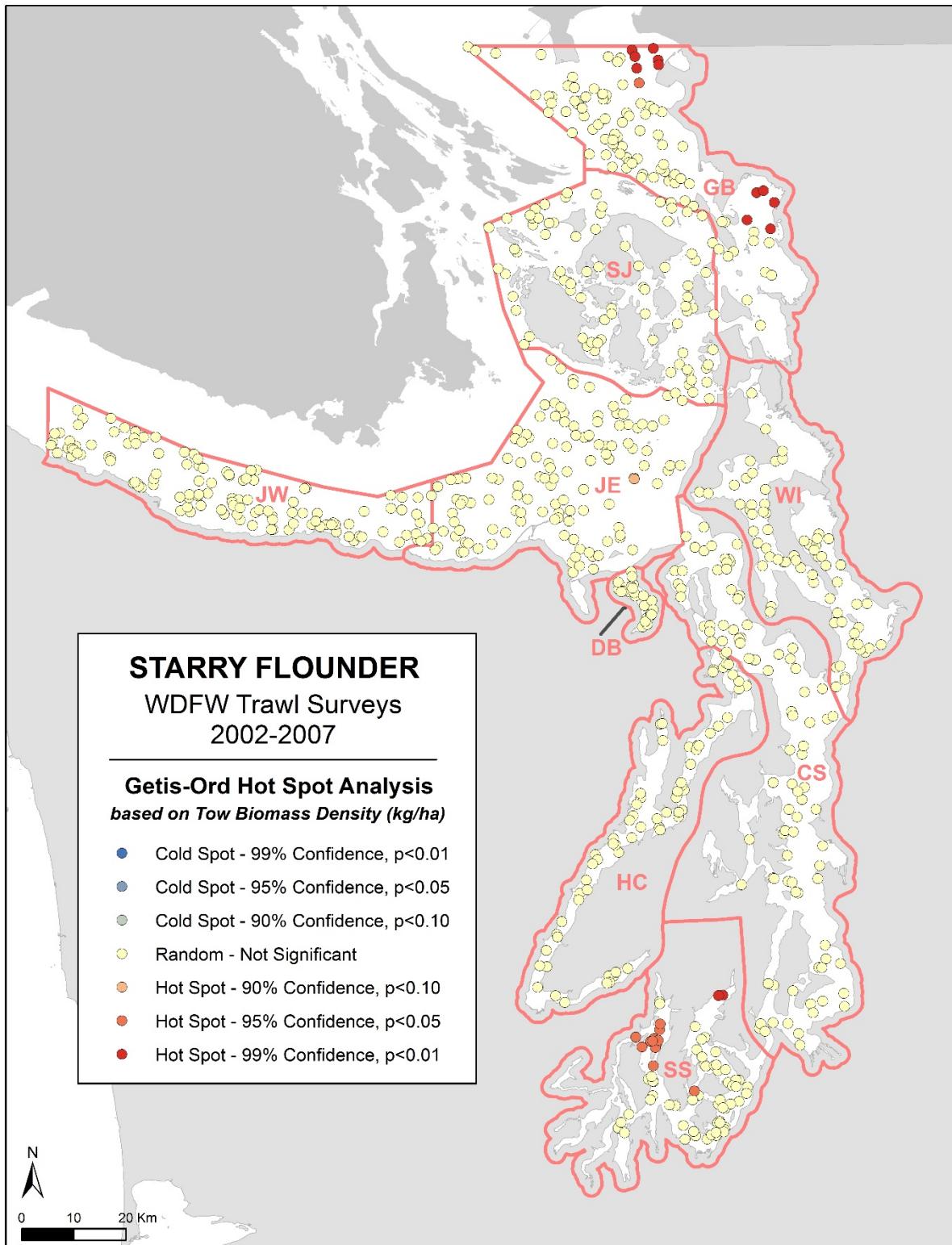


Figure 70: Getis-Ord hot spot analysis, performed in ArcGIS, based on the tow biomass densities (kg/ha) of Starry Flounder for all 747 tows in the 2002-2007 surveys. The analysis spatially identifies statistically significant biomass hot spots and cold spots based on the tow densities. See Methods for more details.

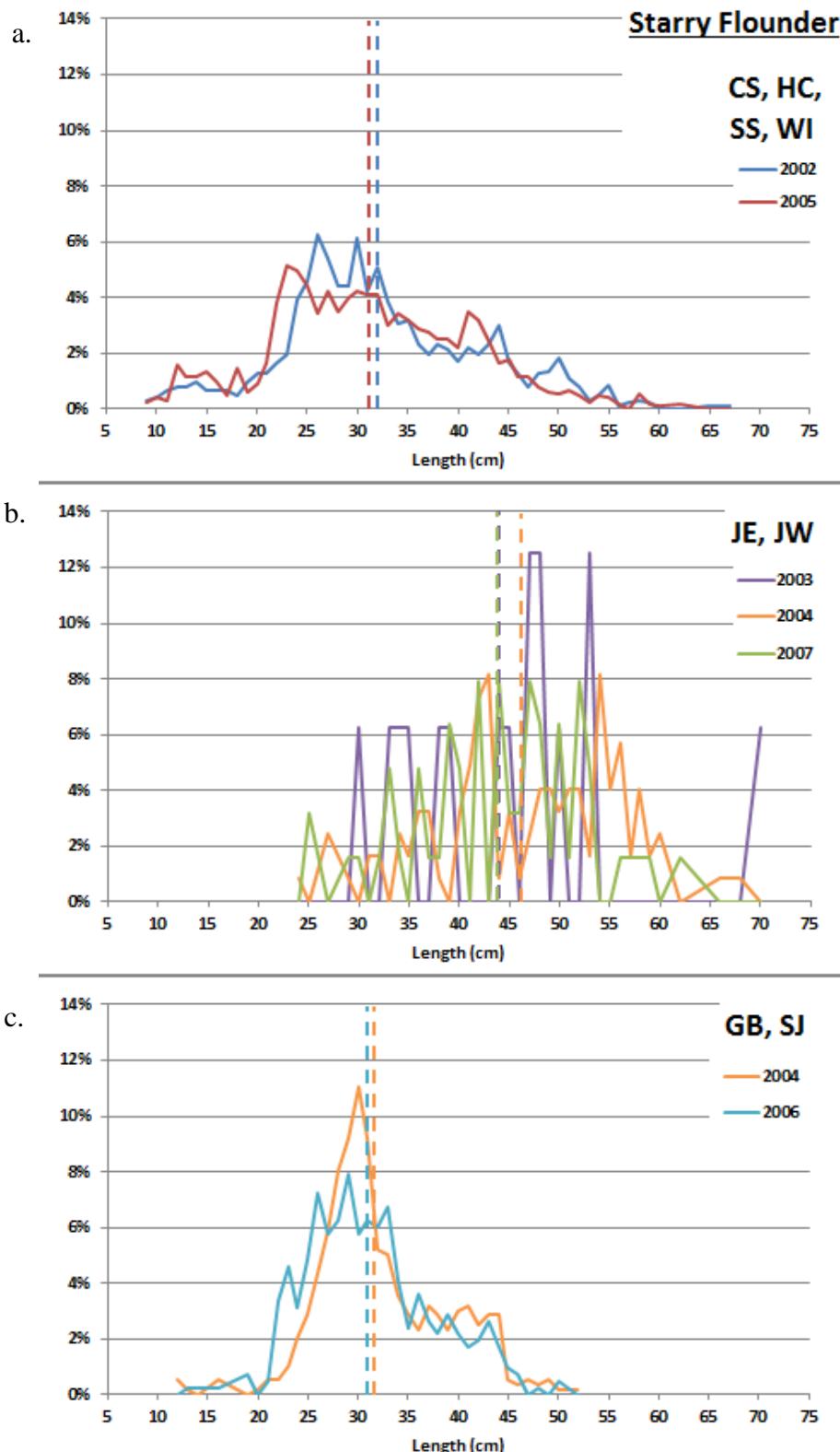


Figure 71: Percent length composition data for Starry Flounder captured in the trawl survey. (A) Regions CS, HC, SS, and WI combined. (B) Regions JE and JW combined. (C) Regions GB and SJ combined. Dashed lines indicate mean lengths.

Pacific Sanddab (*Citharichthys sordidus*)

Pacific Sanddab were the second most abundant flatfish caught during the survey period, were common throughout the shallower waters (<40 fa) of Puget Sound (Figure 72), and are commonly caught and retained for consumption by recreational anglers (WDFW creel sample data). Pacific Sanddab were most prevalent in HC and JE and numerous small individuals were caught in DB and JE (Figure 73). Biomass hotspots were present in northern GB near Birch Bay, northern HC, Possession Point (WI/CS border), and throughout JE (Figure 74). Overall, the size distribution was broader and consisted of more, smaller individuals in the Strait of Juan de Fuca (Figure 75).

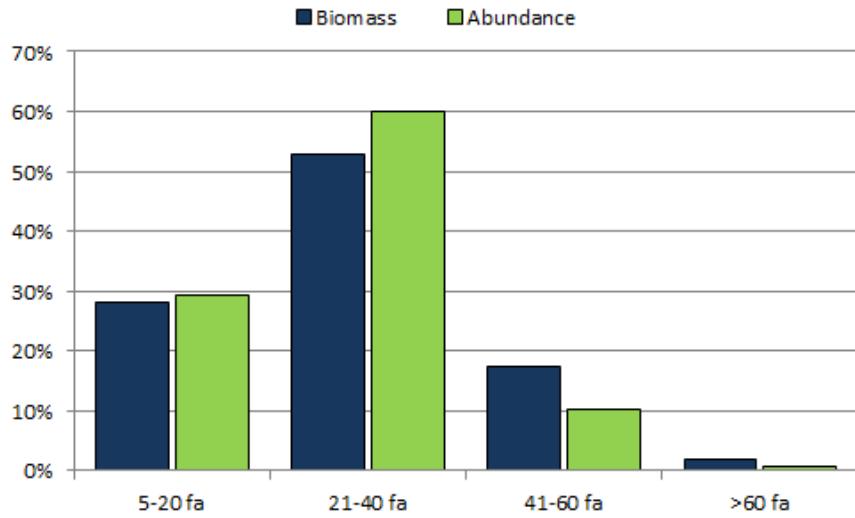


Figure 72: Proportion of Pacific Sanddab biomass and abundance occurring in each depth stratum across all survey regions and years.

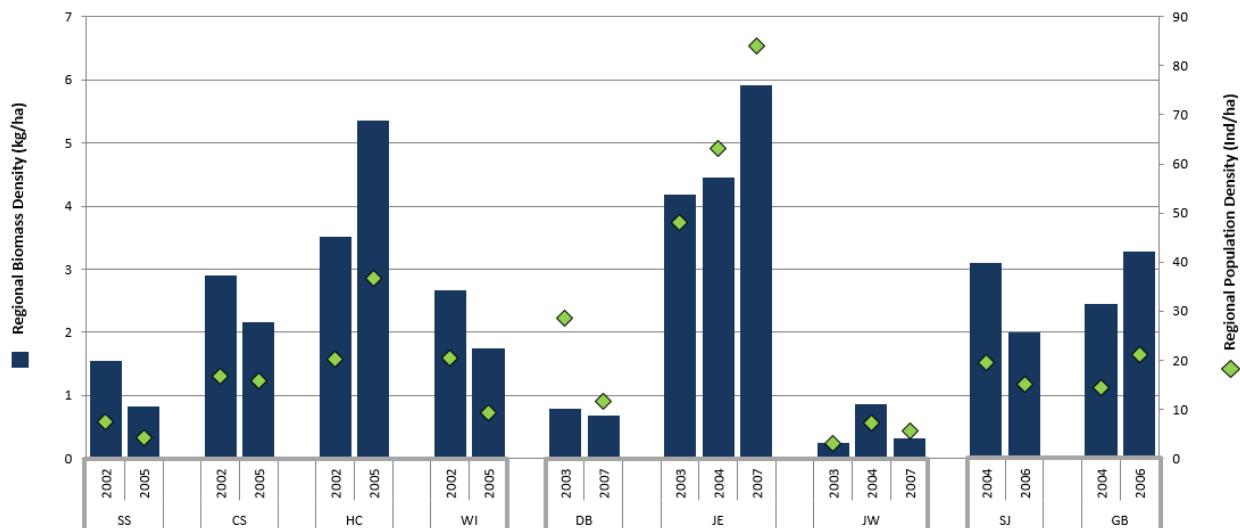


Figure 73: Biomass density (kg/ha; primary y-axis) and population density (ind/ha; secondary y-axis) of Pacific Sanddab by region and year. Gray boxes around regions indicate regions on the same or similar sampling schedules.

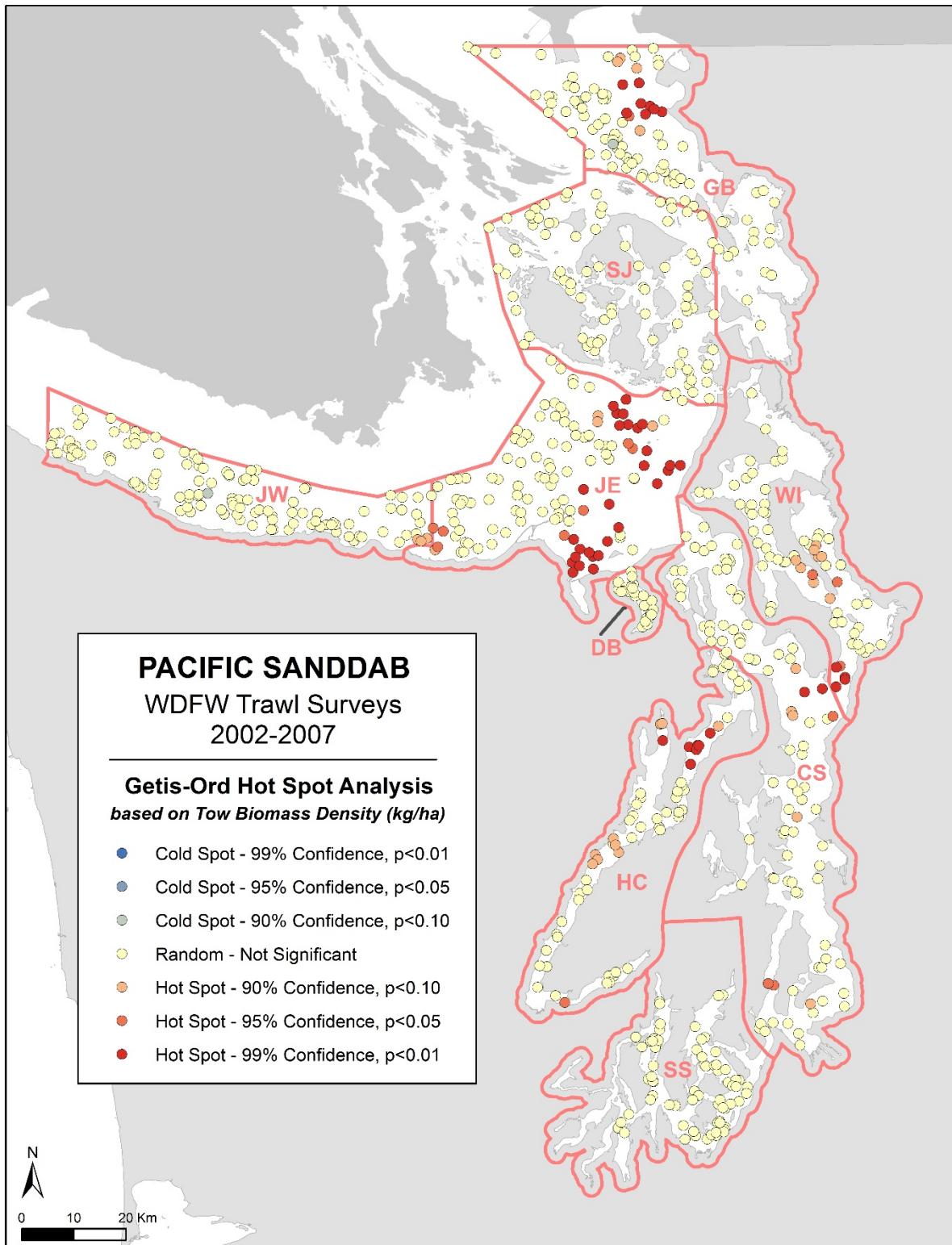


Figure 74: Getis-Ord hot spot analysis, performed in ArcGIS, based on the tow biomass densities (kg/ha) of Pacific Sanddab for all 747 tows in the 2002-2007 surveys. The analysis spatially identifies statistically significant biomass hot spots and cold spots based on the tow densities. See Methods for more details.

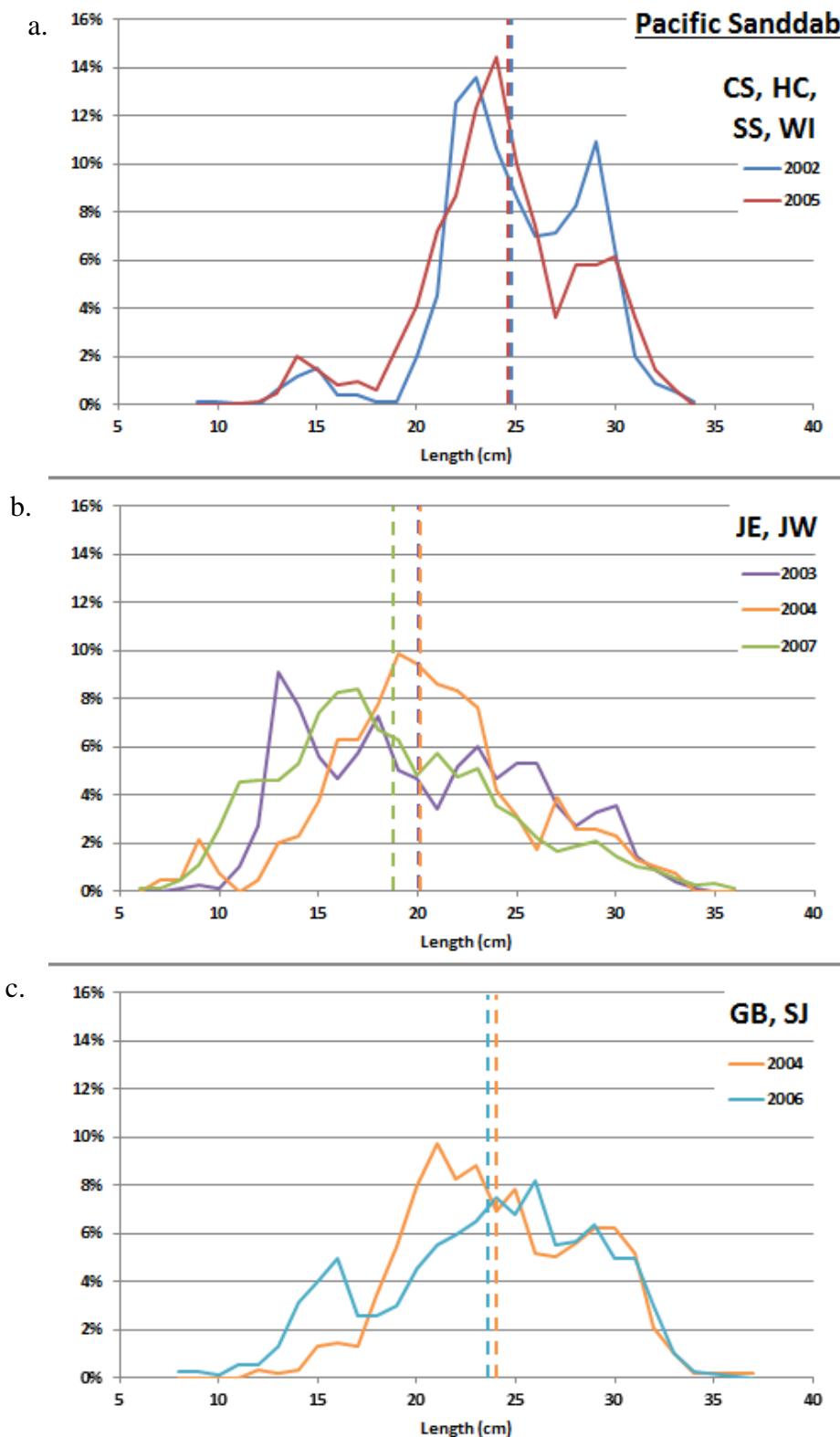


Figure 75: Percent length composition data for Pacific Sanddab captured in the trawl survey. (A) Regions CS, HC, SS, and WI combined. (B) Regions JE and JW combined. (C) Regions GB and SJ combined. Dashed lines indicate mean lengths.

Southern & Northern Rock Sole (*Lepidopsetta bilineata* & *L. polyxystra*)

Two species of Rock Sole regularly occur in Puget Sound; however, identification between the two species can be difficult in the field, and close examination of each encountered individual was not operationally feasible because of large catches and limited processing time. As a result, catch details for the two species are combined here and concrete data are not available regarding the relative dominance of either species in any given region or year. Collectively, Rock Sole were the third most prevalent flatfish by both biomass and abundance. They were almost exclusively encountered in waters shallower than 41 fa (Figure 76) and were a substantial component of the flatfish species complex in all basins except DB (Figure 77). CS and SS supported the highest abundance levels for Rock Sole, and WI was dominated by small individuals in both years (Figure 77). The strongest biomass hotspot was identified in SS, with smaller ones in CS, WI, and GB (Figure 78). The overall size distribution and average size of Rock Sole did not differ substantially among basins or years (Figure 79).

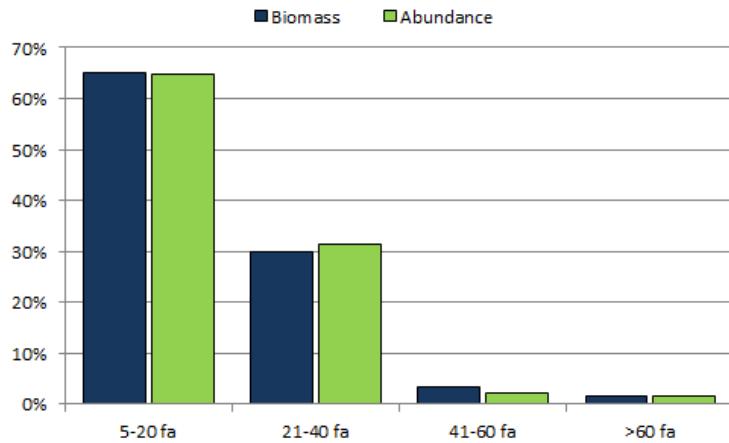


Figure 76: Proportion of Rock Sole biomass and abundance occurring in each depth stratum across all survey regions and years.

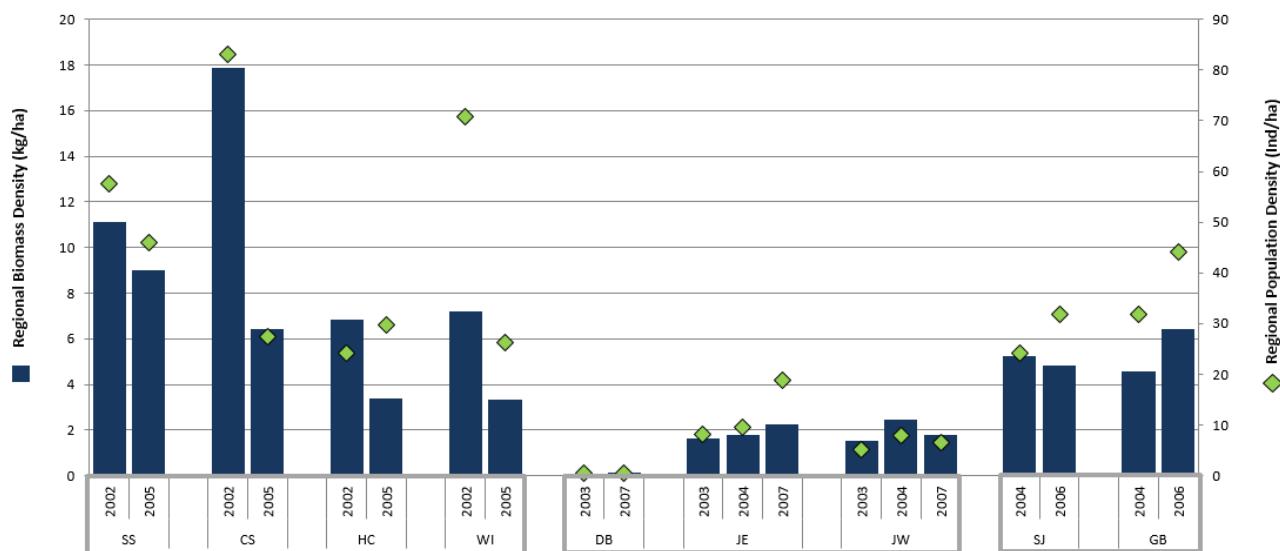


Figure 77: Biomass density (kg/ha; primary y-axis) and population density (ind/ha; secondary y-axis) of Rock Sole by region and year. Gray boxes around regions indicate regions on the same or similar sampling schedules.

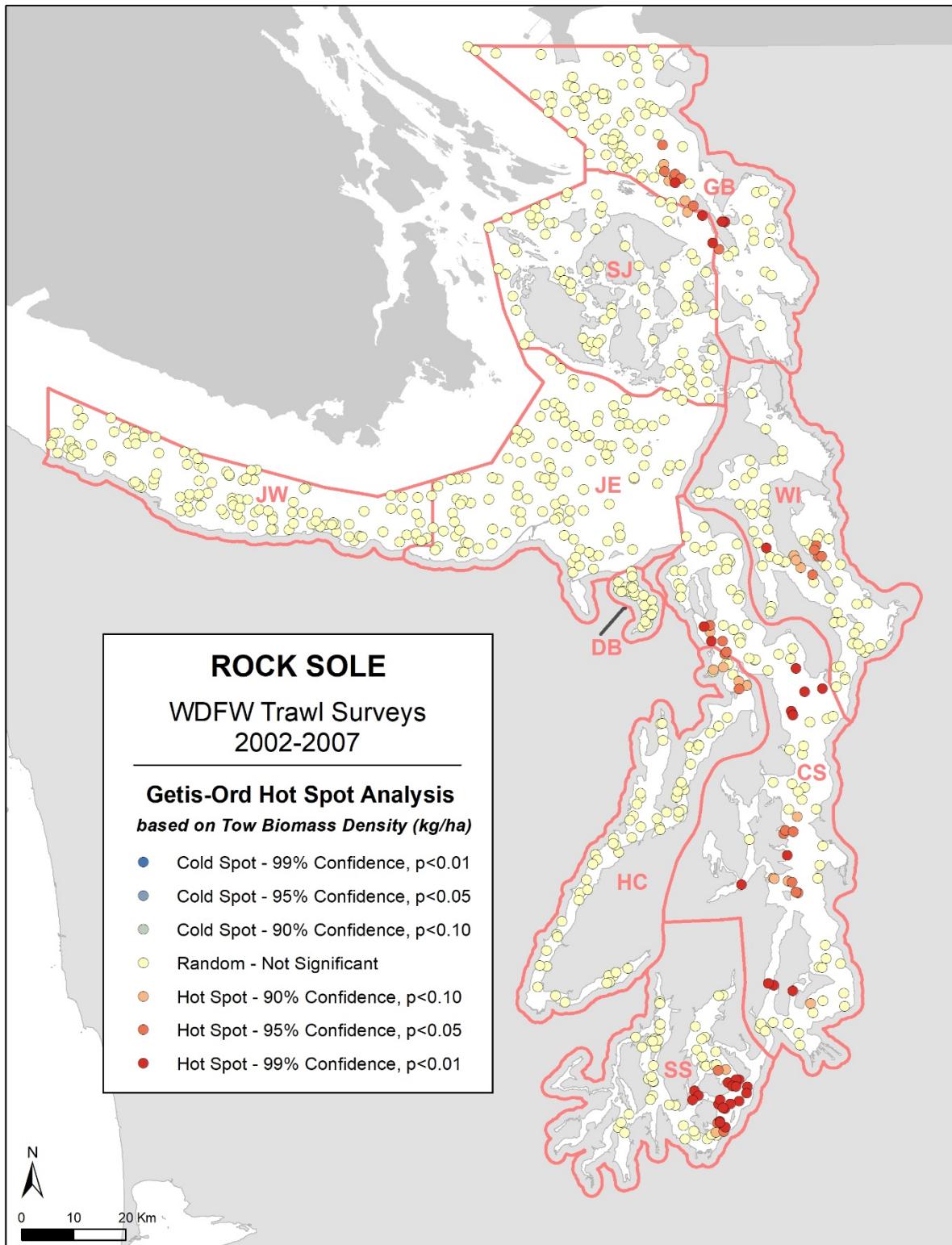


Figure 78: Getis-Ord hot spot analysis, performed in ArcGIS, based on the tow biomass densities (kg/ha) of Rock Sole for all 747 tows in the 2002-2007 surveys. The analysis spatially identifies statistically significant biomass hot spots and cold spots based on the tow densities. See Methods for more details.

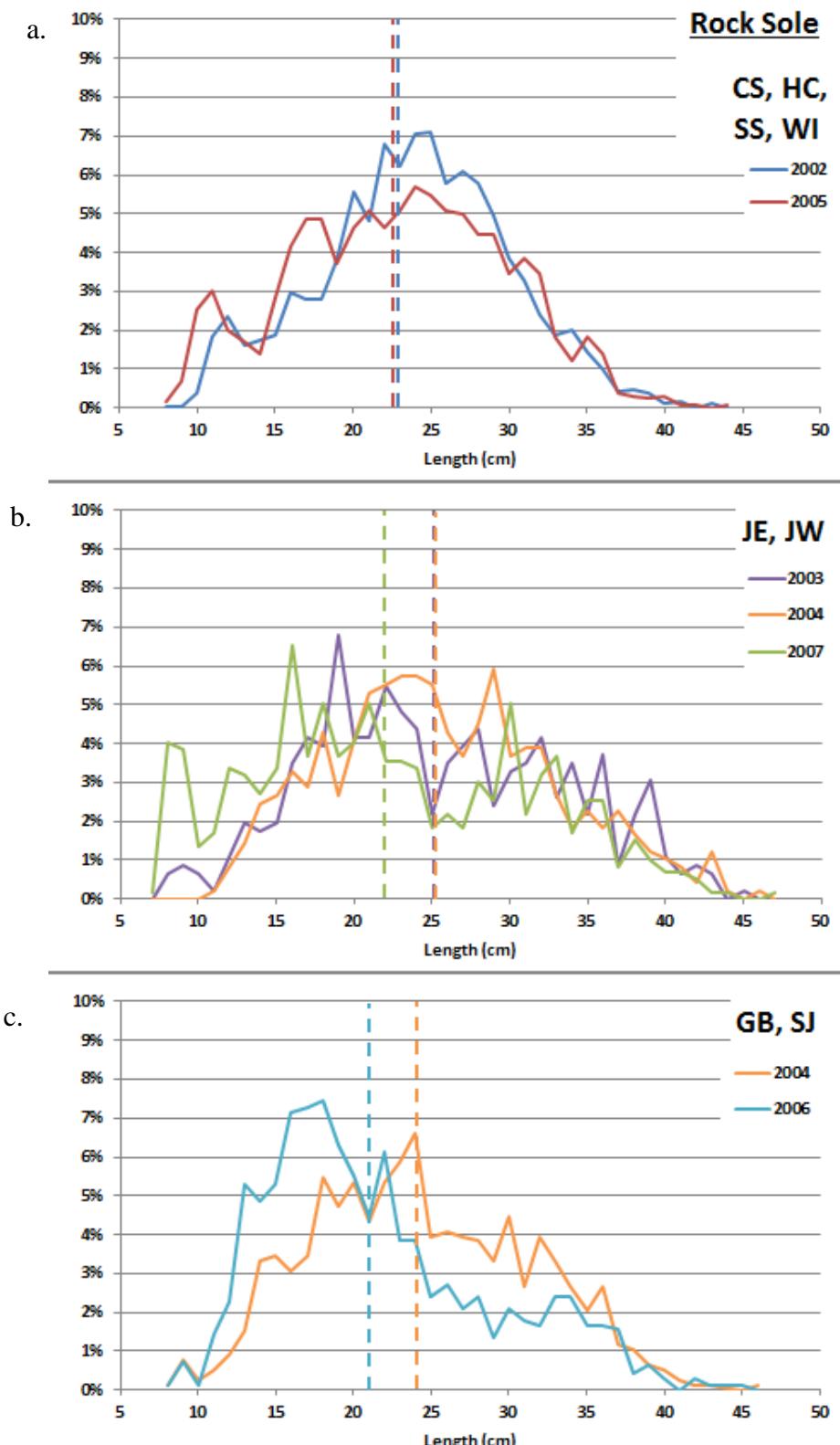


Figure 79: Percent length composition data for Rock Sole captured in the trawl survey. (A) Regions CS, HC, SS, and WI combined. (B) Regions JE and JW combined. (C) Regions GB and SJ combined. Dashed lines indicate mean lengths.

Sharks/Skates (Elasmobranchs)

Of the six species of elasmobranchs found throughout the survey, North Pacific Spiny Dogfish was by far the most common, comprising 61% of the biomass and 70% of the abundance overall (Figure 80); dogfish are discussed in more detail below. Big Skate and Longnose Skate were the most prevalent skate species and were both found in every region, with the exception that Longnose were not found in DB. Big Skates were most abundant in GB, JE, and SJ, while Longnose Skate abundance was spread more evenly throughout GB, HC, JE, JW, WI, and the highest concentration in CS. Sandpaper skates, although rarer than Big or Longnose, were found in 75 trawls in the more northerly regions of JW, JE, GB, and SJ, and a total of 232 individuals were caught throughout the survey. The two remaining elasmobranchs were much less frequently encountered; a total of 18 Brown Cat Sharks (*Apristurus brunneus*) were found in CS, GB, HC, and WI, while 11 Bluntnose Sixgill Sharks were caught in JW, SJ, CS, WI, and SS. The sixgills ranged in total length from 64 cm to 294 cm, with an average length of 183 cm. While best efforts were made to weigh the sharks if they were of a size that was safe enough to handle, most of the weights of the larger individuals were estimated.

Sharks/Skates (Elasmobranchs)

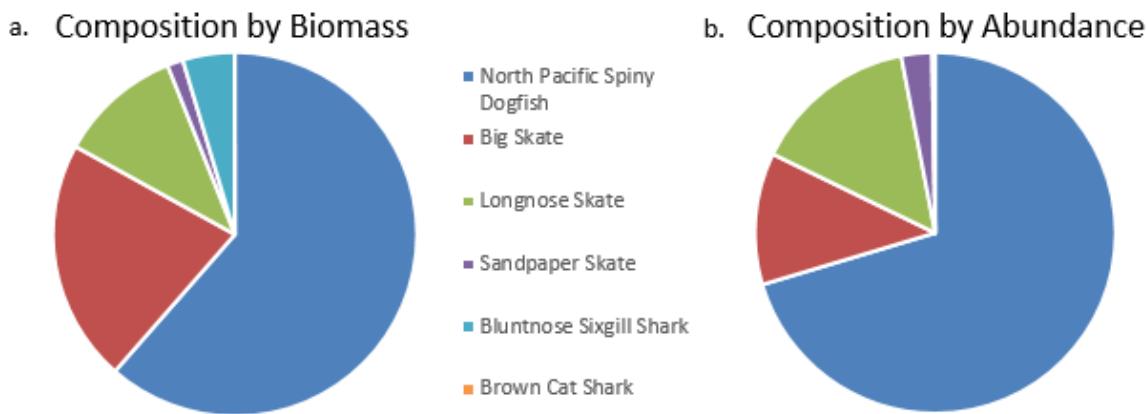


Figure 80: Proportional species composition of the sharks/skates species group, by both biomass (a) and abundance (b), based on population estimates from all years and regions of the 2002-2007 surveys.

North Pacific Spiny Dogfish (*Squalus suckleyi*)

North Pacific Spiny Dogfish were the most commonly encountered elasmobranch in this survey, and are also regularly encountered in spring and summer recreational fisheries in Puget Sound (WDFW creel sample data). Dogfish were more prevalent in waters of the 21-40-fa stratum and deeper, and were roughly equally split among the three deepest strata (Figure 81). Regionally, dogfish were most common (up to 55 kg/ha) in DB and SJ, though in 2004 they were also present at levels near 20 kg/ha in JE and GB (Figure 82). Statistical hotspots of dogfish were found in DB, SJ, GB, as well as a couple smaller-scale areas in JE and CS (Figure 83). In SS and WI dogfish were relatively rare, never occurring at levels above 2.1 kg/ha; in fact, distributional ‘cool’ spots emerged in SS and WI, and even in JW. Sharks in SS, CS, WI, and HC were, on average, smaller than sharks in more northern basins by several centimeters, but the largest individuals in the survey were encountered in southern basins (Figure 84). These included at

least two individuals (135 cm, 140 cm) exceeding the published maximum size for the species (130 cm). At 130 cm, North Pacific Spiny Dogfish have been determined to be 90 years old (DFO 2010).

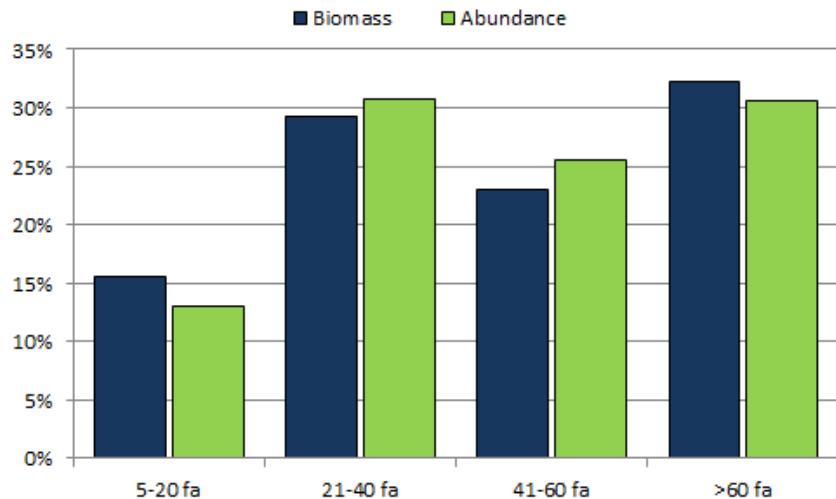


Figure 81: Proportion of North Pacific Spiny Dogfish biomass and abundance occurring in each depth stratum across all survey regions and years.

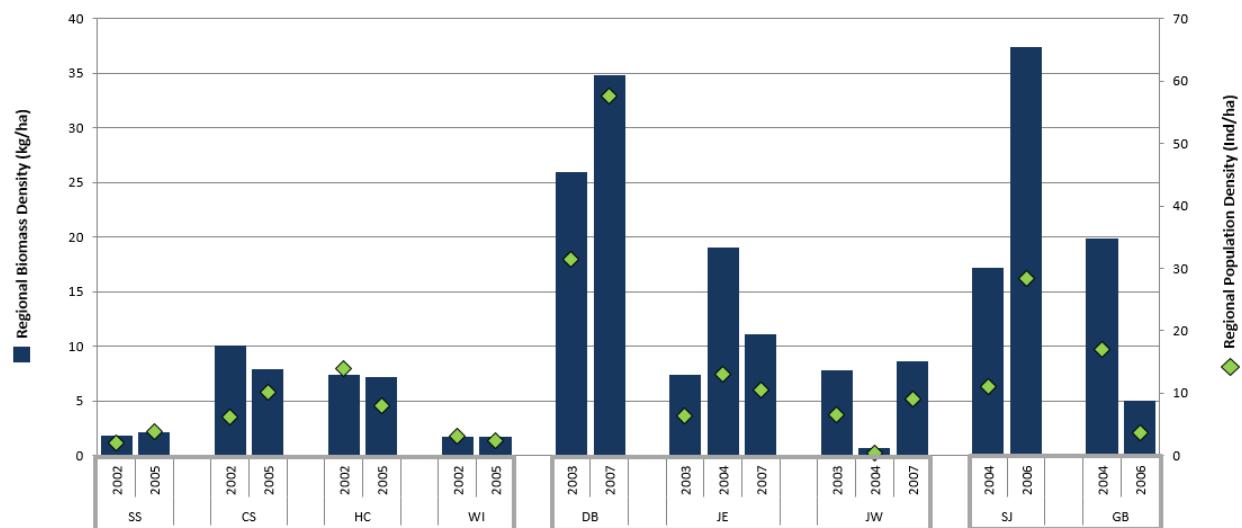


Figure 82: Biomass density (kg/ha; primary y-axis) and population density (ind/ha; secondary y-axis) of North Pacific Spiny Dogfish by region and year. Gray boxes around regions indicate regions on the same or similar sampling schedules.

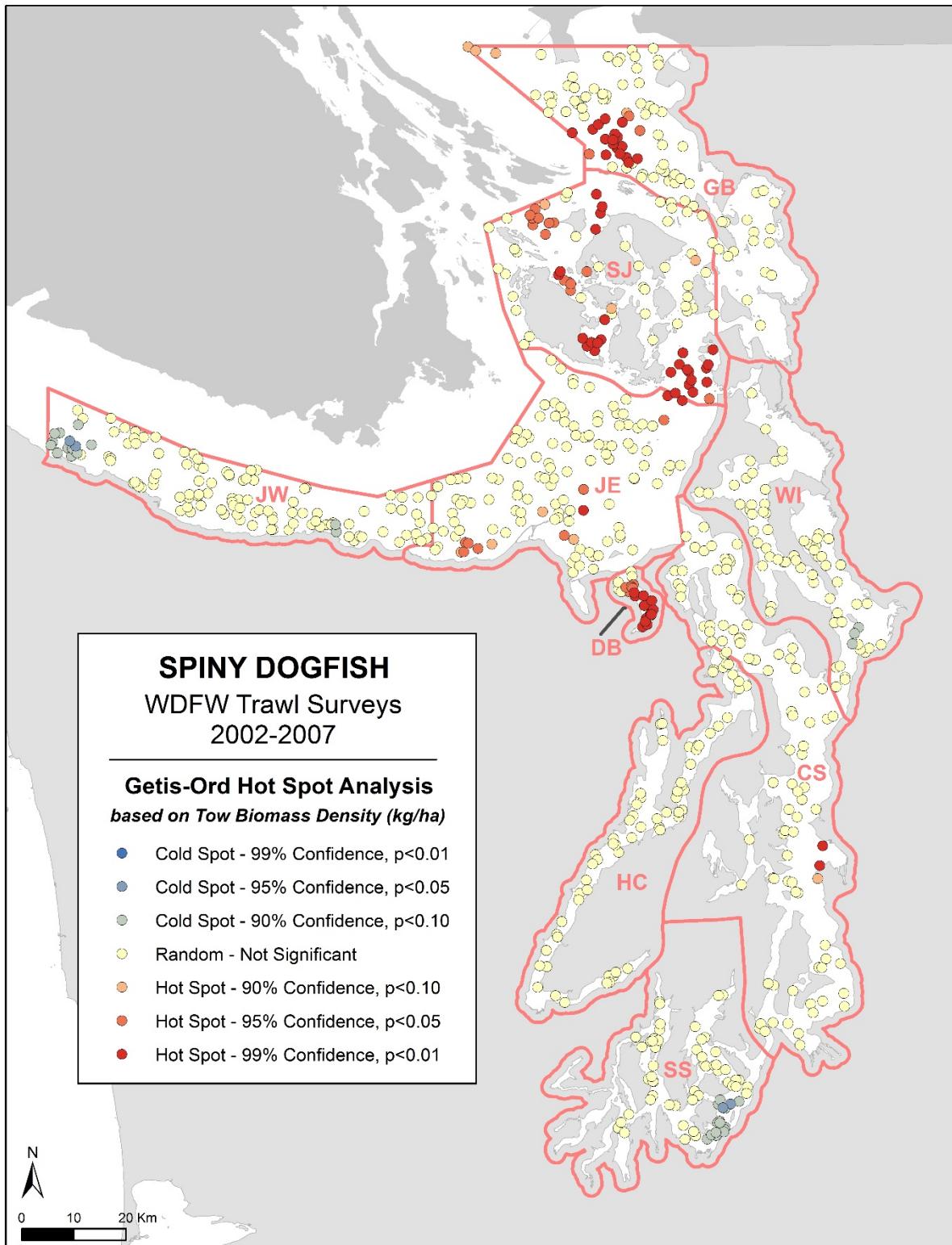


Figure 83: Getis-Ord hot spot analysis, performed in ArcGIS, based on the tow biomass densities (kg/ha) of North Pacific Spiny Dogfish for all 747 tows in the 2002-2007 surveys. The analysis spatially identifies statistically significant biomass hot spots and cold spots based on the tow densities. See Methods for more details.

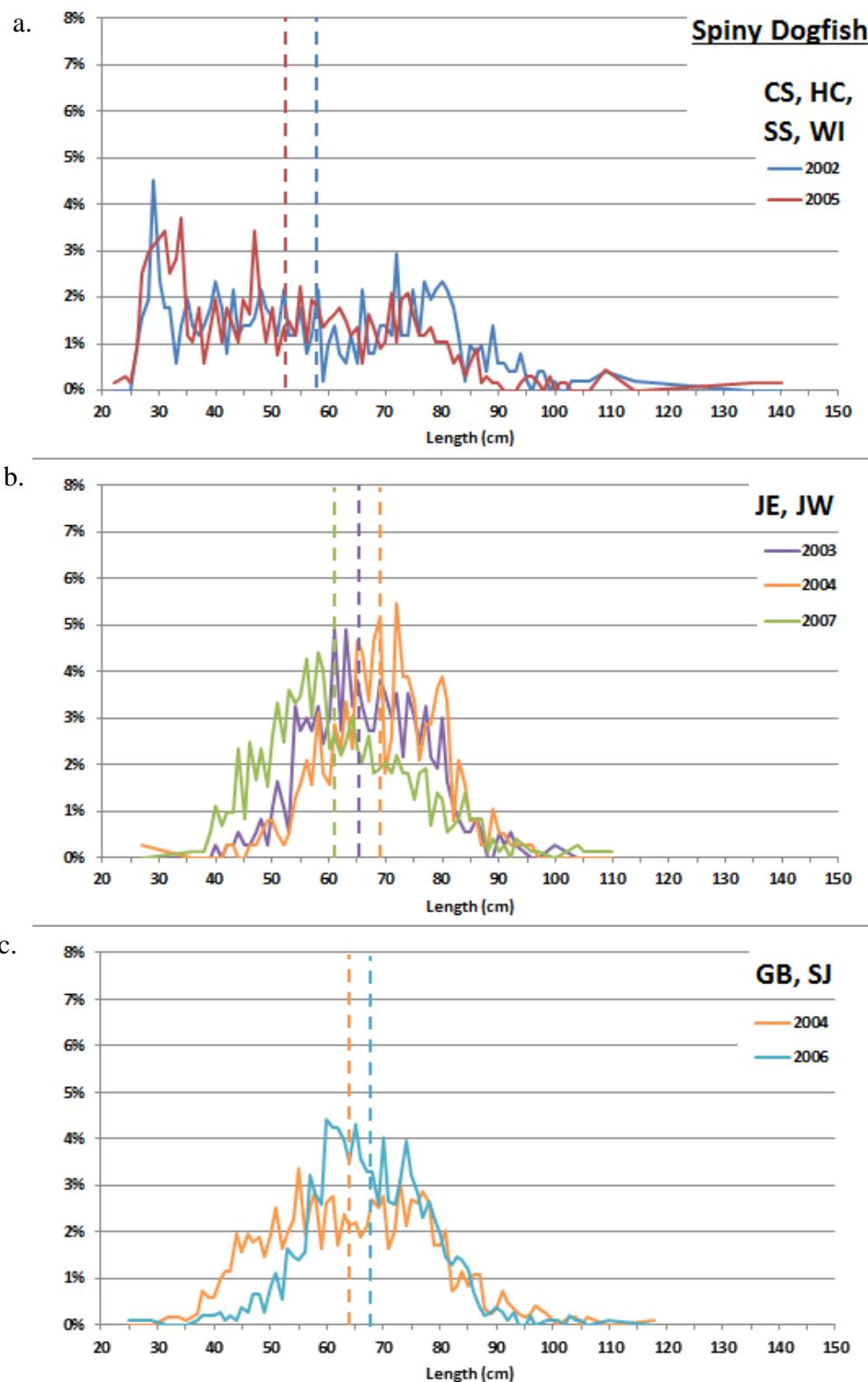


Figure 84: Percent total length composition data for North Pacific Spiny Dogfish captured in the trawl survey. (A) Regions CS, HC, SS, and WI combined. (B) Regions JE and JW combined. (C) Regions GB and SJ combined. Dashed lines indicate mean lengths.

Sculpin (Cottoidea)

Thirty-six species of sculpins and poachers (Cottoidea) were identified throughout the survey, making it the most species-rich grouping observed. Of these 36, however, none were abundant enough to warrant a detailed species profile. Cabezon (*Scorpaenichthys marmoratus*) are the only fishery-relevant species of the group, but these are not reliably caught in bottom trawls; only 47 individuals were caught in the six-year survey period. In terms of proportional contributions, the species contributing 10% or more of the total Cottoidea abundance were Roughback Sculpin (*Chitonotus pugetensis*) (19%), Great Sculpin (14%), Buffalo Sculpin (12%), and Ribbed Sculpin (*Triglops pingelii*) (12%) (Figure 85). Great Sculpin (53%), Buffalo Sculpin (13%), and Red Irish Lord (12%) contributed 10% or more of the Cottoidea biomass.

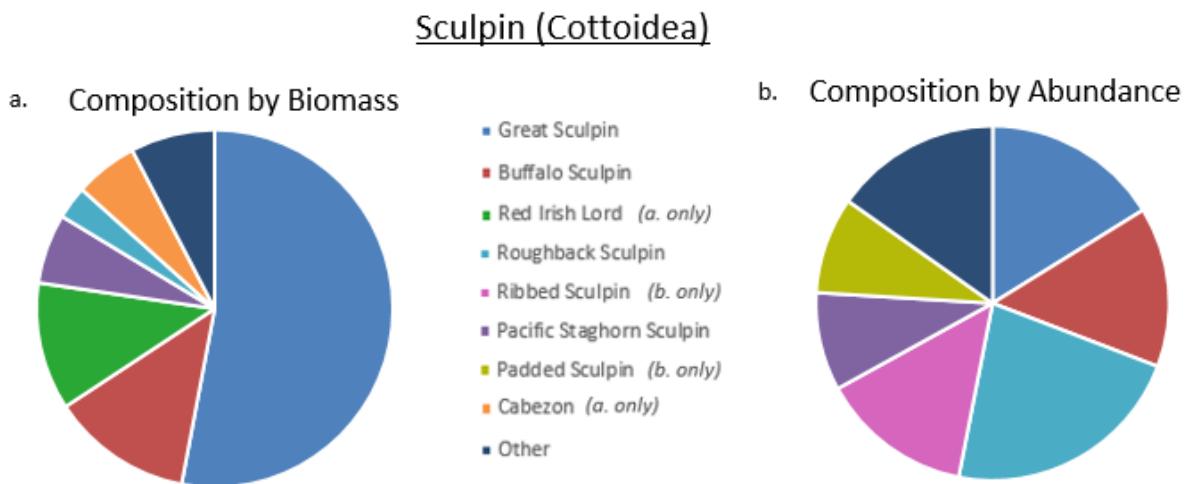


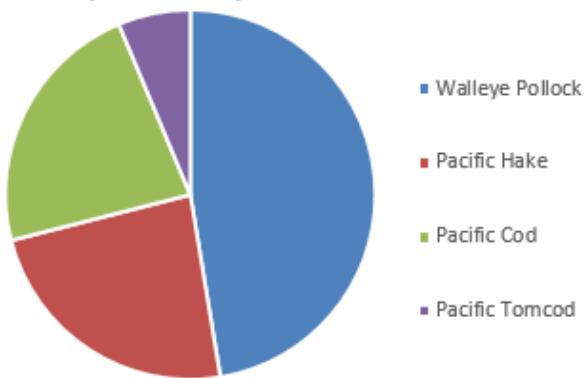
Figure 85: Proportional species composition of the sculpin species group, by both biomass (a) and abundance (b), based on population estimates from all years and regions of the 2002-2007 surveys.

Codfish (Gadiformes)

Four species of codfish (Gadiformes) were caught during the survey period: Walleye Pollock comprised 47% of the codfish biomass and 75% of the abundance, Pacific Hake represented 24% of the biomass and 16% of the abundance, Pacific Cod was 23% of the biomass and 2% of the abundance, and Pacific Tomcod represented the remaining 6% of biomass and 8% of abundance (Figure 86). Due to their commercial relevance at one point in Puget Sound and elsewhere in the Pacific, Walleye Pollock, Pacific Hake, and Pacific Cod are further examined below.

Codfish (Gadiformes)

a. Composition by Biomass



b. Composition by Abundance

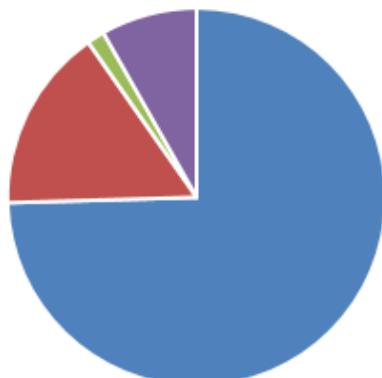


Figure 86: Proportional species composition of the codfish species group, by both biomass (a) and abundance (b), based on population estimates from all years and regions of the 2002-2007 surveys.

*Walleye Pollock (*Gadus chalcogrammus*)*

Walleye Pollock was not a dominant component of the fish fauna in any region but was encountered in every depth stratum over the course of the survey; they were more common, and generally larger, in the deeper two strata (Figure 87). The population of Walleye Pollock in Puget Sound south of Port Townsend (CS, HC, WI, and SS) is on Washington State's list of Priority Habitats and Species, and considered a candidate for listing under state jurisdiction (WDFW 2015), largely as a result of intensive historic fishing pressure and a lack of population recovery. Declines in abundance throughout this portion of the region led to closure of recreational fisheries in the 1990s. Data collected here continue to demonstrate low population levels, with biomass density never exceeding 2 kg/ha and population density never exceeding 25 ind/ha in any of these regions in 2002 or 2005 (Figure 88).

Pollock biomass and abundance were substantially higher in all years in the northern regions of the survey area, excluding DB, and biomass hot spots were identified in western JW, northwestern JE, northern SJ, and northwestern GB (Figure 89). Regional biomass density exceeded 8 kg/ha in both JE and JW in 2003, and regional population density often exceeded 50 ind/ha in the Strait of Juan de Fuca and San Juans (Figure 88). In JE in 2007, estimated population density reached nearly 350 ind/ha, but biomass density was comparatively low because most of these individuals were small (Figure 88, Figure 90).

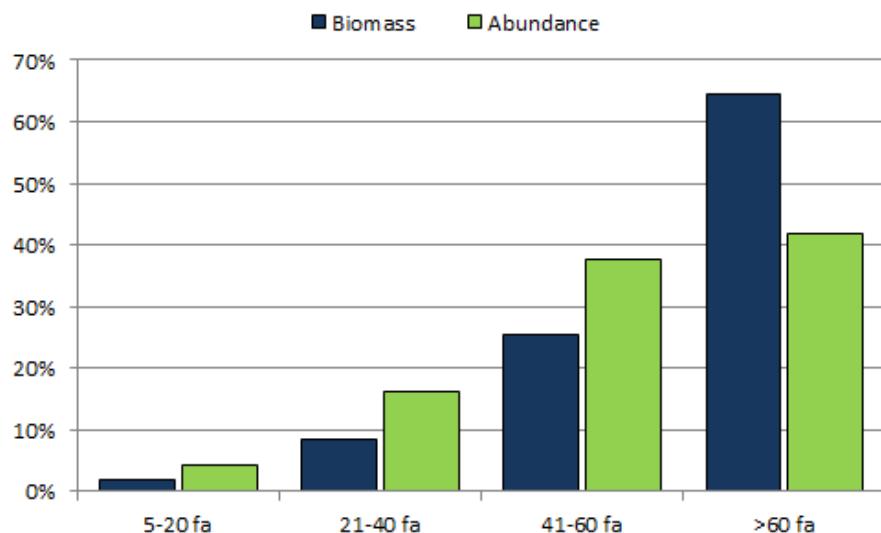


Figure 87: Proportion of Walleye Pollock biomass and abundance occurring in each depth stratum across all survey regions and years.

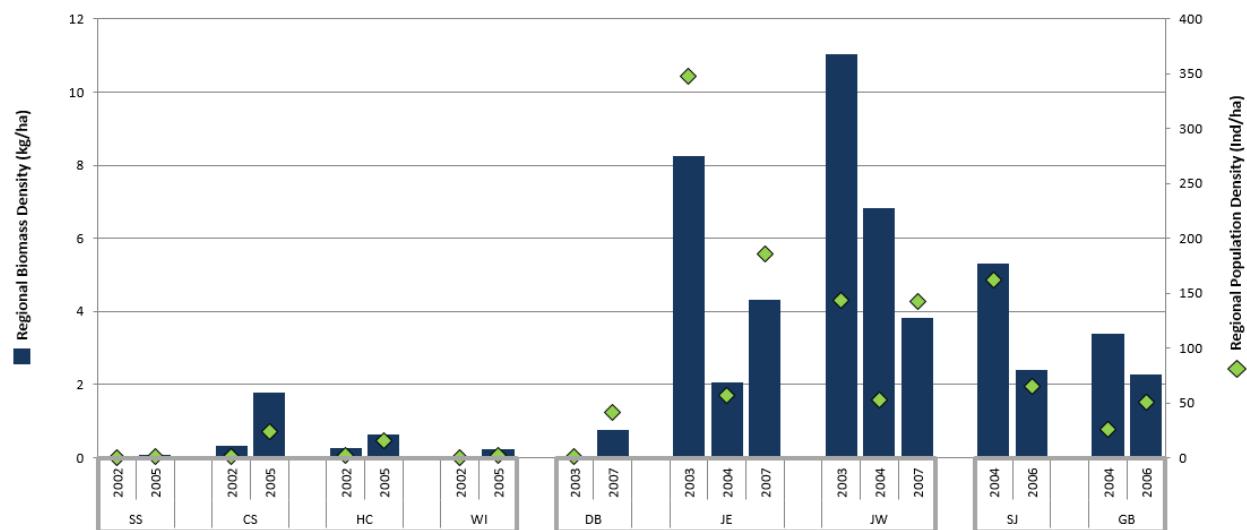


Figure 88: Biomass density (kg/ha; primary y-axis) and population density (ind/ha; secondary y-axis) of Walleye Pollock by region and year. Gray boxes around regions indicate regions on the same or similar sampling schedules.

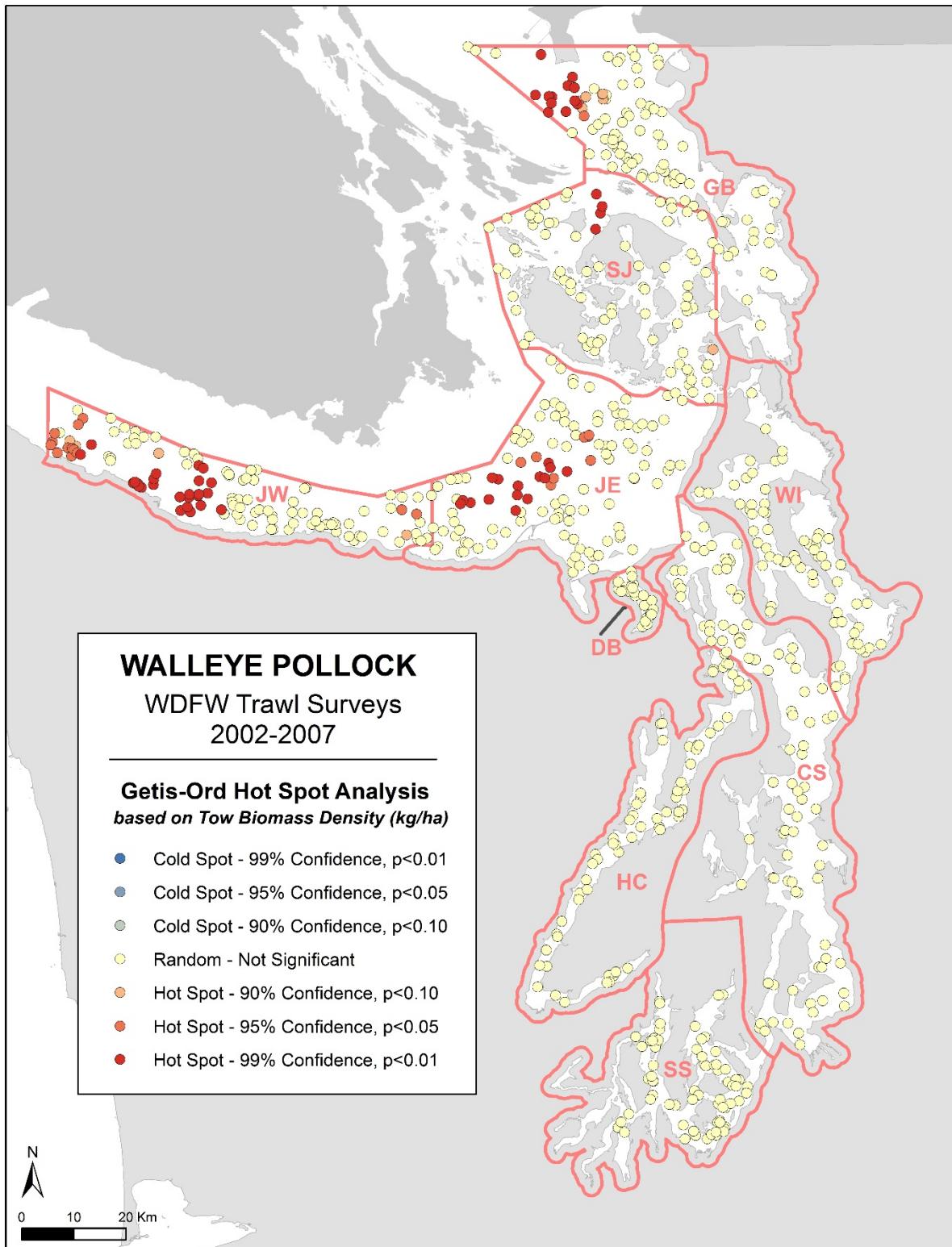


Figure 89: Getis-Ord hot spot analysis, performed in ArcGIS, based on the tow biomass densities (kg/ha) of Walleye Pollock for all 747 tows in the 2002-2007 surveys. The analysis spatially identifies statistically significant biomass hot spots and cold spots based on the tow densities. See Methods for more details.

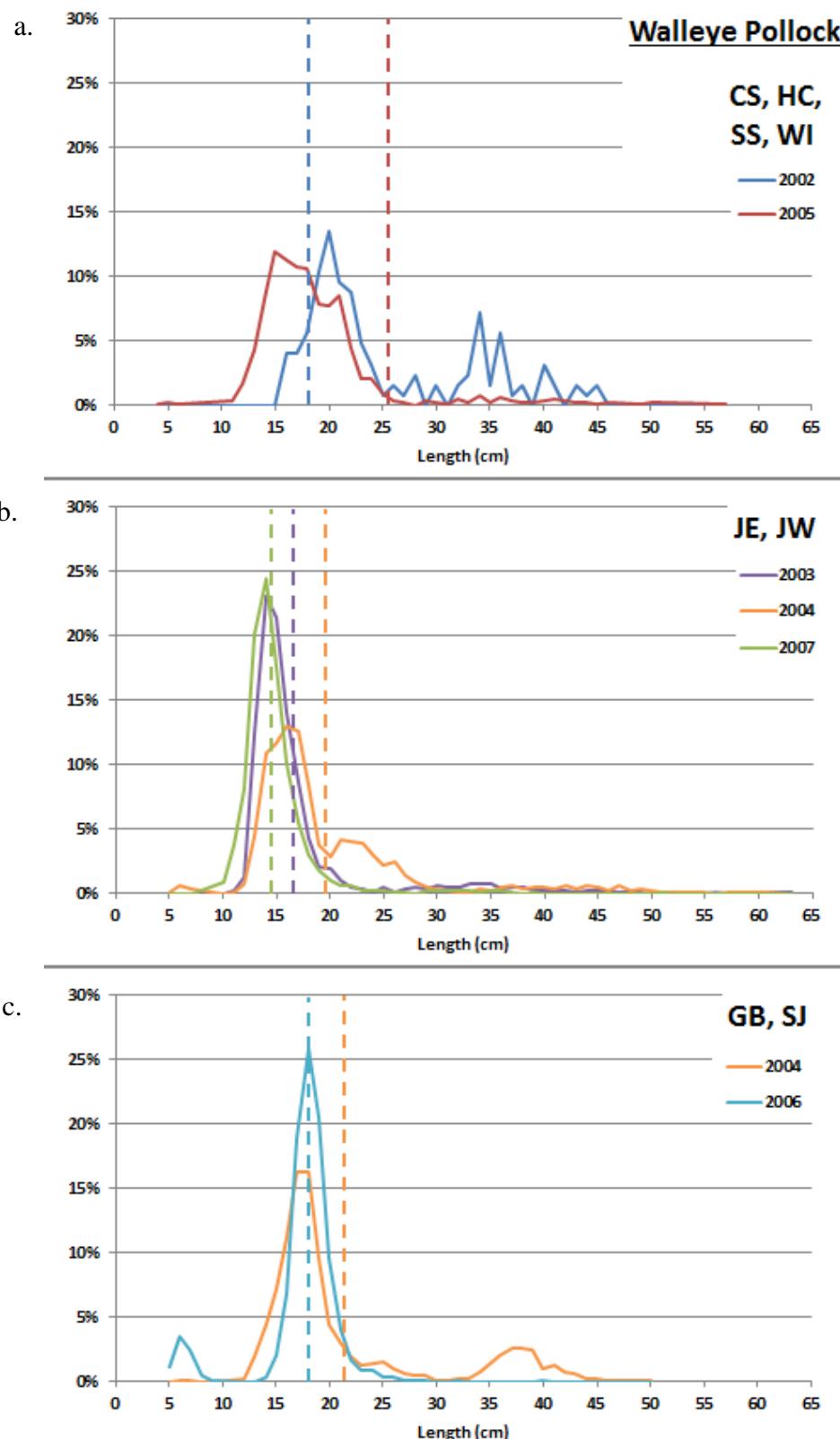


Figure 90: Percent length composition data for Walleye Pollock captured in the trawl survey. (A) Regions CS, HC, SS, and WI combined. (B) Regions JE and JW combined. (C) Regions GB and SJ combined. Dashed lines indicate mean lengths.

Pacific Hake (*Merluccius productus*)

Pacific Hake within the Georgia Basin and Puget Sound, known as the Georgia Basin Pacific Hake Distinct Population Segment (DPS; Gustafson et al. 2000), have been listed as a Federal Species of Concern since 1999 due to years of overfishing and declines in age- and size-at-maturity (NOAA 2009). The state of Washington also includes this population on its list of Priority Habitats and Species, and considers it a candidate for listing under state jurisdiction (WDFW 2008). In the present survey, hake were rarely caught in the shallowest depth stratum; they were most abundant in the 41-60 fa stratum, but largest (based on biomass to abundance ratio) in the deepest, >60 fa stratum (Figure 91, Figure 92). This is consistent with documented hake behavior elsewhere, with larger, older individuals generally occurring in deeper waters (e.g., Bailey et al. 1982), though both juveniles and adults exhibit diel vertical feeding migrations.

Regionally, the highest densities of hake were found in WI in 2002 (16.8 kg/ha and 387 ind/ha) and in HC in 2005 (12.3 kg/ha and 126 ind/ha) (Figure 92). Aside from WI and HC, other regions with notable quantities of hake during any of the sampling periods were CS, JW, and GB. WI and HC, however, were the only two regions to support statistical hotspots of hake biomass, although one small warm spot was present in GB (Figure 93). These observed hot spots align with previously reported spawning aggregation areas of Dabob Bay (Bailey and Yen 1983; Gustafson et al. 2000) and Port Susan (Pedersen 1985; Gustafson et al. 2000); another reported spawning aggregation area in deep south-central Strait of Georgia waters (Shaw et al. 1990) aligns with the warm spot observed in GB region. In the earlier years (02-04), the northern regions hosted the largest hake, with average lengths of 33.8 cm in GB/ SJ and 51.8 cm in JE/JW, but in the later years (05-07), these averages shifted to 18.6 cm and 15.5 cm, respectively, as very few larger fish but rather a pulse of juveniles were caught (Figure 94). Average lengths in the southern regions (CS/HC/WI/SS) remained relatively unchanged between sampling years at 24.5 cm. No hake were caught in DB during the survey.

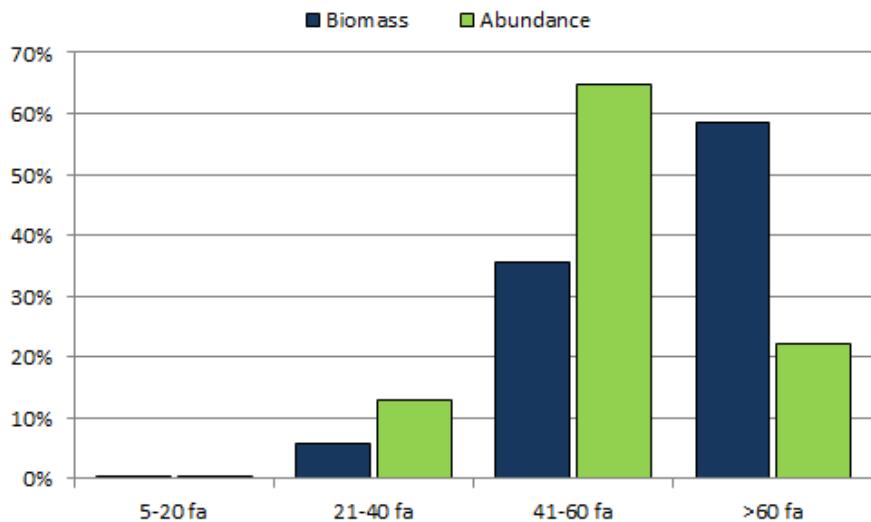


Figure 91: Proportion of Pacific Hake biomass and abundance occurring in each depth stratum across all survey regions and years.

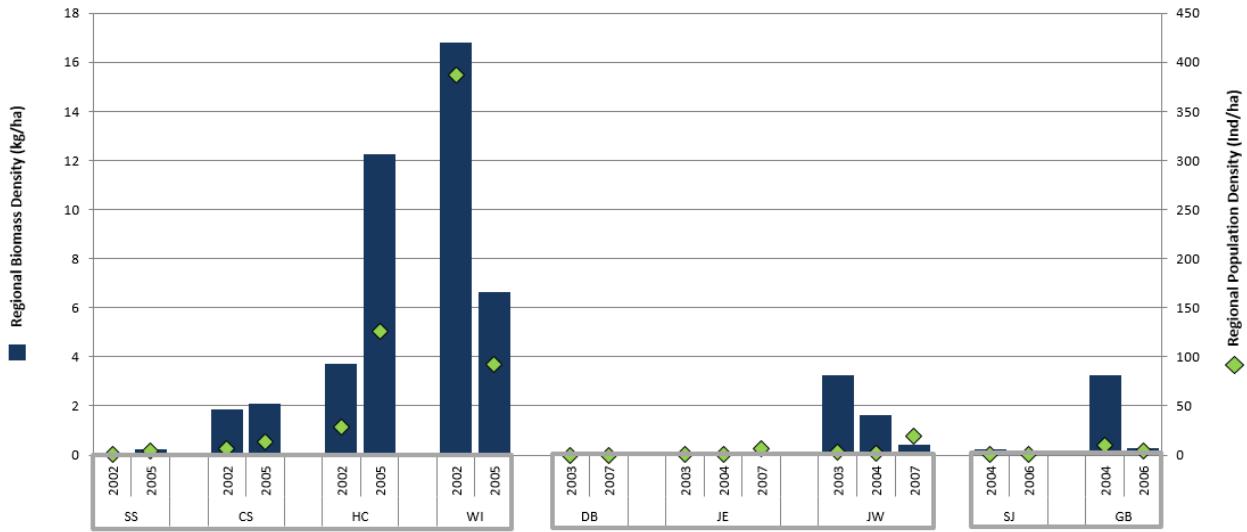


Figure 92: Biomass density (kg/ha; primary y-axis) and population density (ind/ha; secondary y-axis) of Pacific Hake by region and year. Gray boxes around regions indicate regions on the same or similar sampling schedules.

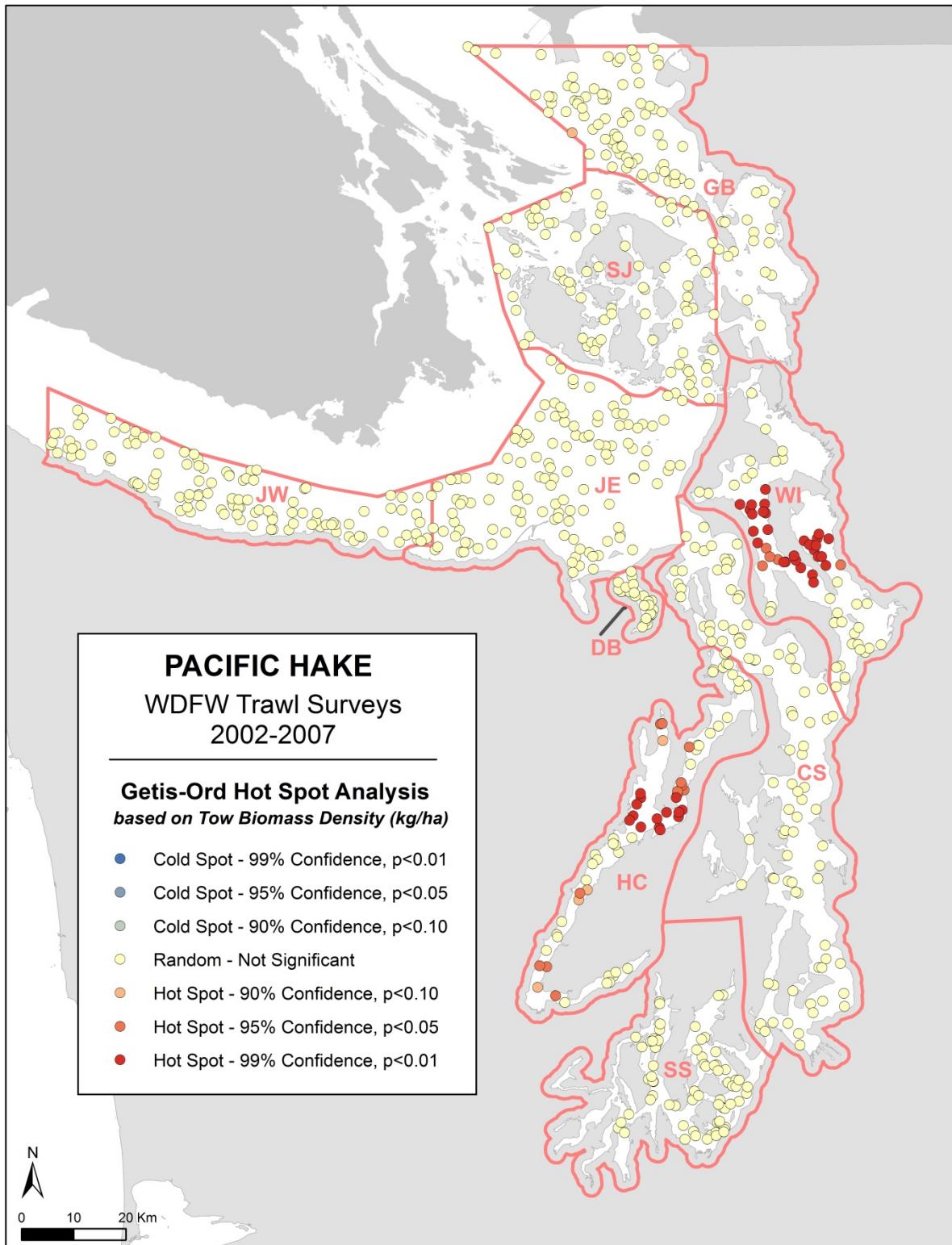


Figure 93: Getis-Ord hot spot analysis, performed in ArcGIS, based on the tow biomass densities (kg/ha) of Pacific Hake for all 747 tows in the 2002-2007 surveys. The analysis spatially identifies statistically significant biomass hot spots and cold spots based on the tow densities. See Methods for more details.

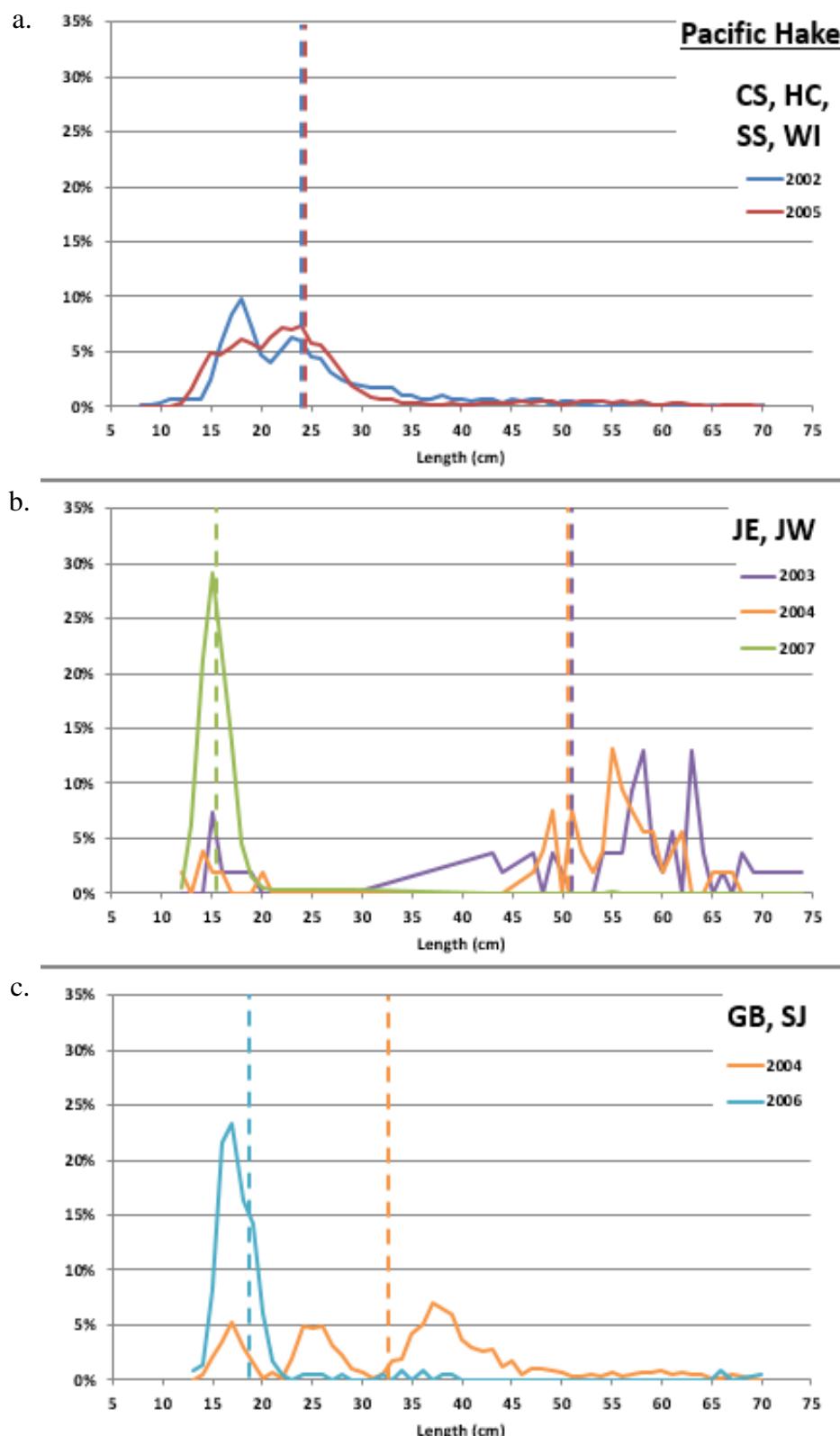


Figure 94: Percent length composition data for Pacific Hake captured in the trawl survey. (A) Regions CS, HC, SS, and WI combined. (B) Regions JE and JW combined. (C) Regions GB and SJ combined. Dashed lines indicate mean lengths.

Pacific Cod (*Gadus macrocephalus*)

Though the target of an intensive recreational fishery through the early 1990s in Agate Pass and near Port Townsend (Bargmann 1980, Gustafson et al. 2000), which both fall within CS, Pacific Cod were only encountered in any substantial abundance in the deep waters of JW (Figure 95, Figure 96, Figure 97). This is consistent with other evidence that prompted a petition to list cod occurring throughout the whole of Puget Sound, and beyond, under the federal Endangered Species Act in 1999 (Wright 1999). After assessment, however, it was determined that while substantial threats to cod in the region did exist, they were not intense enough to threaten future occurrence and/or survival (Gustafson et al. 2000). Contrary to this conclusion, not a single Pacific Cod was encountered in HC or DB during the course of this survey, and only 19 were encountered in all of SS (1), WI (3), and SJ (15). In JW, however, 910 were caught over the three-year period – 400 in 2003, 285 in 2004, and 225 in 2007. Cod population density in JW was therefore highest in 2003 at 10.9 ind/ha, but biomass density was actually highest in 2004 at 12.3 kg/ha, despite a much lower count than the previous year. This indicates that the fish in 2004 were larger on average than those in 2003, which is supported by the length-frequency distribution (Figure 98). Interestingly, there was also a notable peak in abundance of juveniles in JW in 2004; juveniles were only encountered in JW, and overall average fish size, and the size distribution of captured fish, were variable across regions and years (Figure 98).

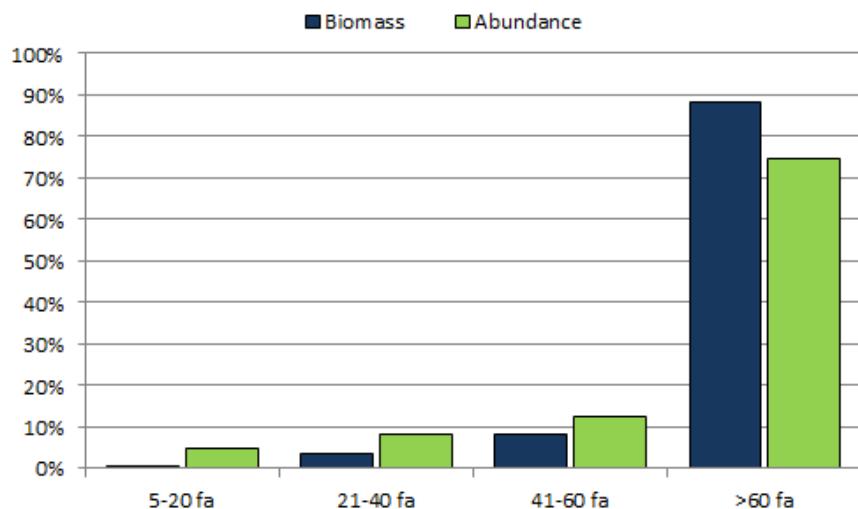


Figure 95: Proportion of Pacific Cod biomass and abundance occurring in each depth stratum across all survey regions and years.

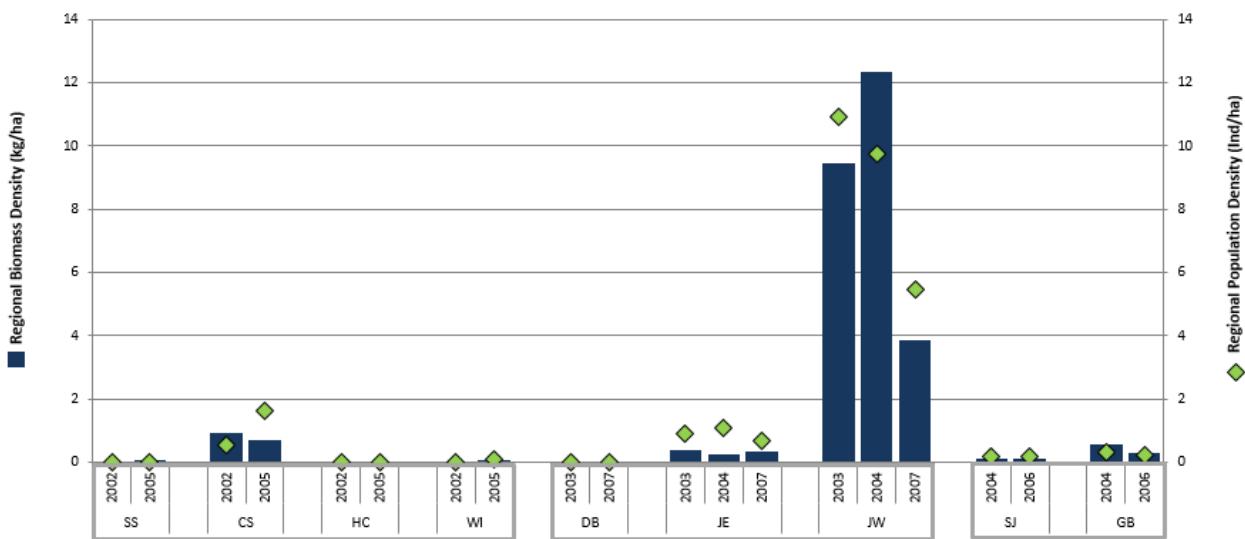


Figure 96: Biomass density (kg/ha; primary y-axis) and population density (ind/ha; secondary y-axis) of Pacific Cod by region and year. Gray boxes around regions indicate regions on the same or similar sampling schedules.

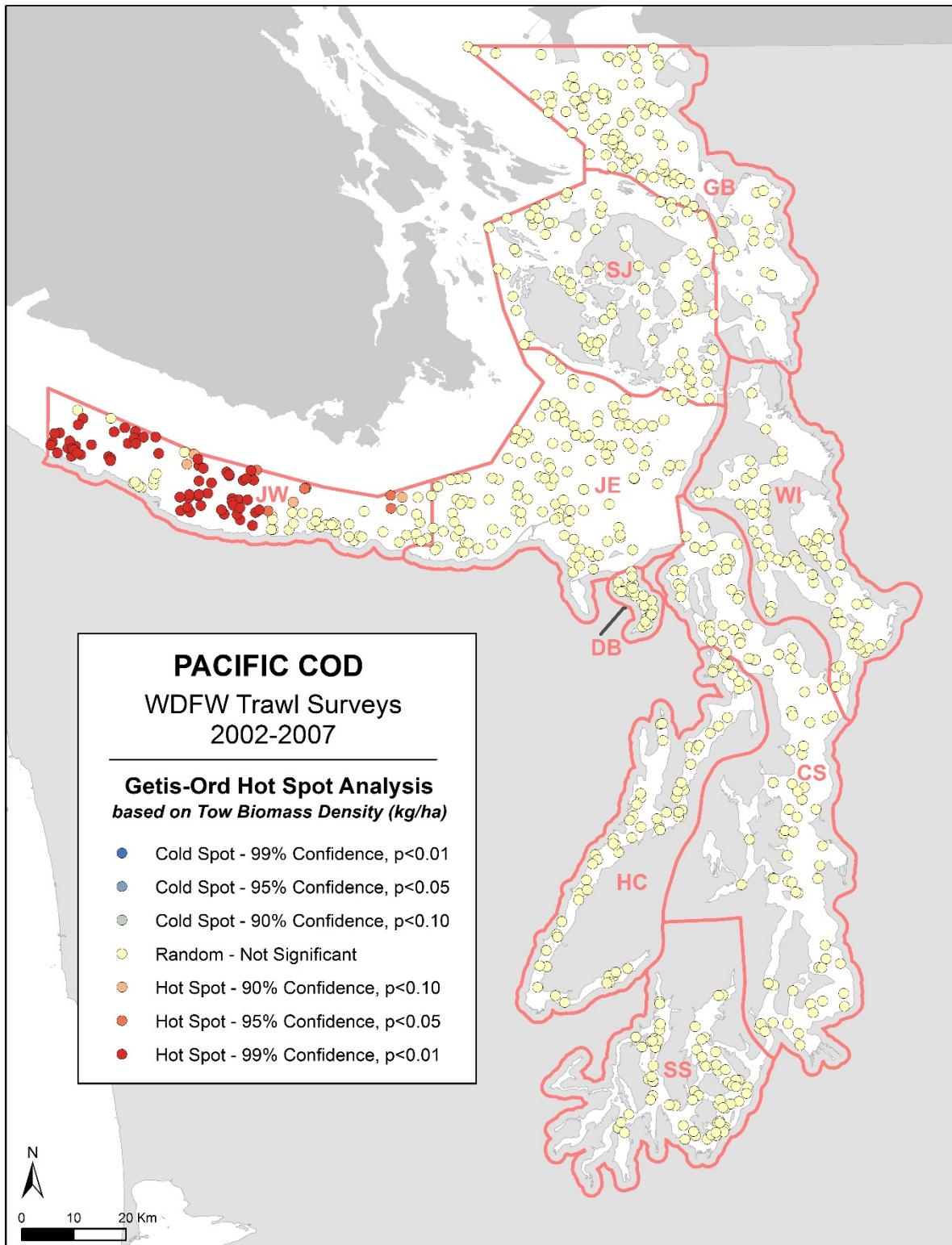


Figure 97: Getis-Ord hot spot analysis, performed in ArcGIS, based on the tow biomass densities (kg/ha) of Pacific Cod for all 747 tows in the 2002-2007 surveys. The analysis spatially identifies statistically significant biomass hot spots and cold spots based on the tow densities. See Methods for more details.

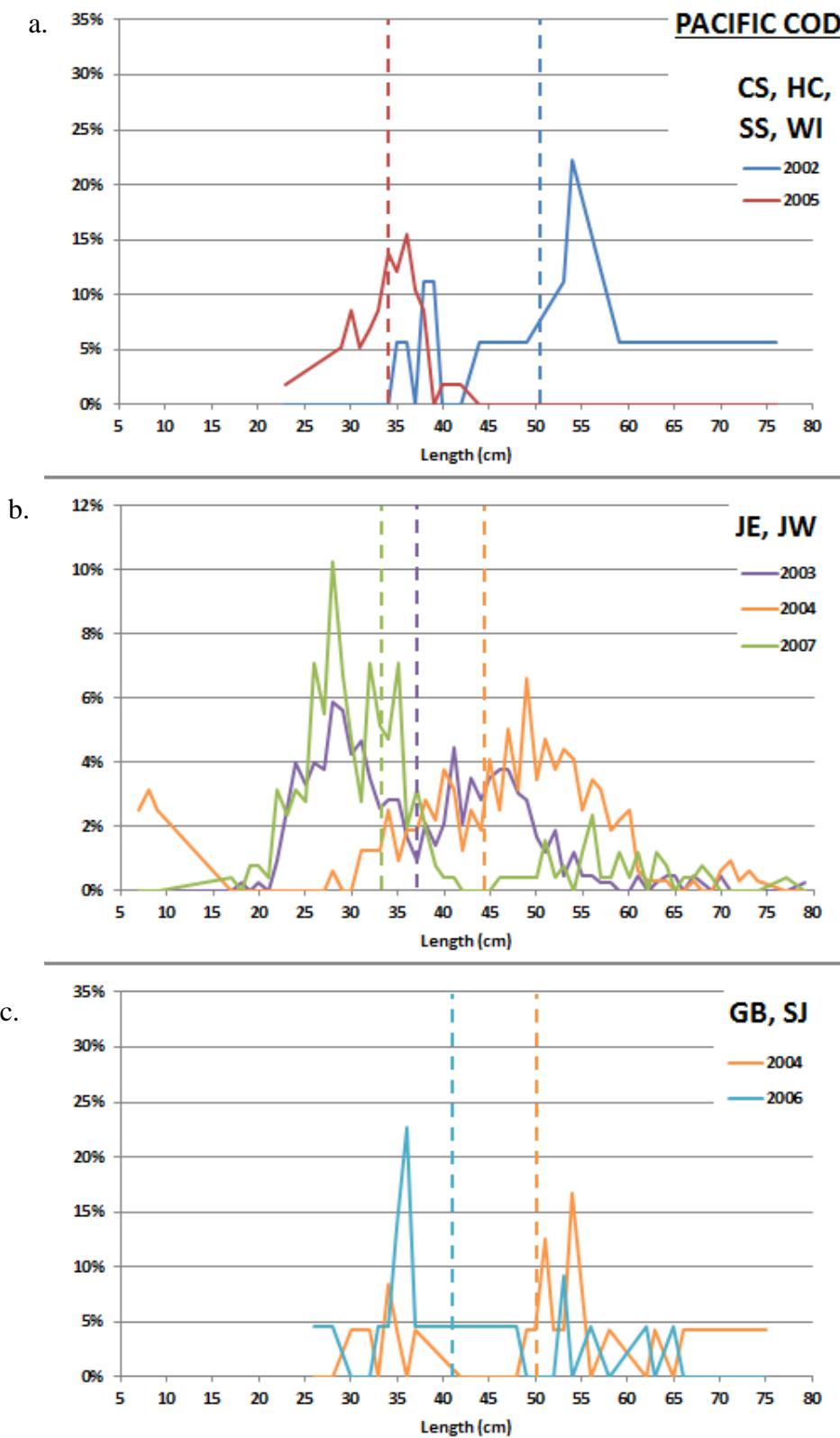


Figure 98: Percent length composition data for Pacific Cod captured in the trawl survey. (A) Regions CS, HC, SS, and WI combined. (B) Regions JE and JW combined. (C) Regions GB and SJ combined. Dashed lines indicate mean lengths.

Other Fish

As mentioned above, the “other fish” category contains species that were not part of the other five species groups, many of which are not reliably caught with the trawl net due to their size, behavior, habitat tendencies, etc. Rockfish (*Sebastes* spp.) and Lingcod (*Ophiodon elongatus*), for example, are typically found on rocky, complex habitats that are normally avoided when towing a bottom trawl net. They were still caught on occasion, though, if the net got close to rockier habitats or if the fish were associating with one small rock or rock pile on otherwise trawlable habitats. While the population estimates calculated from the trawl survey would not be reliable management parameters, valuable data regarding these species were still collected – including lengths, age structures, and genetics samples – which can be used to better inform growth rates and population genetics. Throughout the survey, 19 different species of rockfish were caught.

Plainfin Midshipman comprised the largest proportion of the “other fish” biomass at 25%, and comprised 15% of the abundance (Figure 99). This species, although reliably found on or very near the bottom, is known to bury itself in the sand/mud, thereby reducing its catchability with the net; with that in mind, the species was most frequently encountered in HC and GB. As a group, Pile Perch (*Rhacochilus vacca*), Shiner Perch, Pacific Herring, Longfin Smelt, and Pacific Eulachon (*Thaleichthys pacificus*) accounted for 32% and 56% of the “other fish” biomass and abundance, respectively. These species are not typically associated with the bottom, but occur mainly in the water column where they were most likely captured during net deployment or retrieval. Blackbelly Eelpouts, which comprised 14% of the biomass and 21% of the abundance, are not reliably caught due to their size and shape – their narrow, elongated bodies can easily wriggle through the net mesh. Typically eelpouts are caught in higher numbers when the overall catches are larger or full of algae or shells, which can make it more difficult for the eelpouts to escape. Sixty percent of the Blackbelly Eelpouts caught in the survey were found in SS. Overall, 74 different species of “other fish” were caught throughout the survey, with total catch numbers ranging from 54,000 (Shiner Perch and Blackbelly Eelpout) to just 1 individual (10 species, including Green Sturgeon, *Acipenser medirostris*).

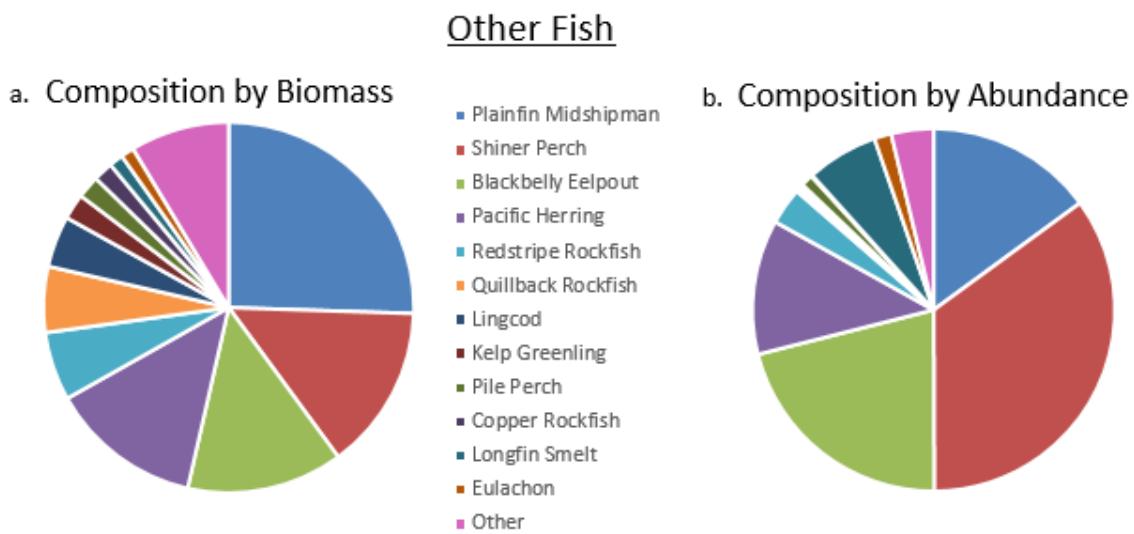


Figure 99: Proportional species composition of the “other fish” species group, by both biomass (a) and abundance (b), based on population estimates from all years and regions of the 2002-2007 surveys.

DISCUSSION

The purpose of the WDFW bottom trawl program is to assess and monitor the distribution and abundance of bottomfish populations throughout the southern Salish Sea. The 2002-07 survey did so to a greater and more thorough extent than any of the previous years' surveys, and will thus be able to serve as a better baseline for future survey efforts. Ultimately, this survey has shown that the southern Salish Sea is dominated by Spotted Ratfish and flatfish, predominantly English Sole. Species compositions do, however, vary substantially and predictably by depth, as well as by region. Each region supports its own unique combination of species, although those in Whidbey Island and Hood Canal were found to be remarkably similar. Furthermore, several species were caught reliably enough to allow for further species-specific analyses – including length-frequency distributions and hotspot generations – that can be used for fishery management and conservation actions.

Bottom trawl surveys have long been used as a fishery-independent method to assess groundfish populations worldwide. NOAA's National Marine Fisheries Service (NMFS), in particular, has been employing scientific bottom trawling on the east coast since 1963 (Clark 1978), on the west coast since 1977 (Weinberg et al. 1994), and in the Bering Sea since 1979 (Lauth and Acuna 2007). Other examples from around the world include surveys in the North Sea since 1965 (Heessen 1996), in the Mediterranean Sea since 1993 (Bertrand et al. 1997), and along the Namibian and South African coasts since 1985 (Axelsen and Johnsen 2015), among many others. Despite their widespread use, trawl surveys come with a number of limitations and assumptions that must be considered when interpreting their resulting data.

One consideration is that trawl surveys typically avoid untrawlable habitats in their sampling in order to reduce the risk of snagging the net and damaging gear (Zimmerman 2003, Jagielo et al. 2003, Williams et al. 2010). What defines a habitat as trawlable versus untrawlable is also dependent, to an extent, on the type of trawl gear being used; nets with rock hopper gear, for example, can sample rougher terrain than those with a standard lead-line footrope. The net in the present survey has 4-inch cookie gear on the footrope, which allows it to sample on pebble/cobble bottoms as well as mud bottoms. Because it is well-known that groundfish species compositions and densities vary by bottom type (Jagielo et al. 2003, Anderson and Yoklavich 2006), targeting trawlable habitats will ultimately yield a different species composition than untrawlable habitats. Additionally, untrawlable areas are typically not removed from the total area used in the resulting relative abundance estimates (Zimmerman 2003). As such, estimates for species found only on trawlable habitats are likely overestimates, while those for species typically found more on untrawlable habitats are certainly underestimates. Some studies have explored ways in which to quantify the untrawlable areas and remove them from the relative abundance estimates (Zimmerman 2003, Jagielo et al. 2003), but these would not be possible in the current study without good multibeam bathymetry mapping and/or a longer and more widespread sampling history. Therefore, untrawlable areas are included in the relative abundance and biomass estimates included in this report.

Another limitation to consider when interpreting trawl data is that of catchability. A number of gear-related factors, including net mesh size, footrope type, door spread, net height, towing speed, etc., can affect the ability of the gear to catch fish of varying species (Sissenwine and Bowman 1978, Benoit and Swain 2003, Walsh 2011). Additionally, sizes or behaviors (vertical migration, net avoidance or escape) or even densities of certain species can affect their

catchability in a trawl (Sissenwine and Bowman 1978, Engas and Godo 1989, Ona and Godo 1990, Godo et al. 1999, Benoit and Swain 2003, Handegard et al. 2003). Despite these considerations, in this survey, as in most annual bottom trawl surveys, we assume catchability to be constant between years and proportional between CPUE and stock abundance (Godo et al. 1999). We used the same net, vessel, and tow protocol in each survey year, and assume that any species size and behavior catchability factors also remain consistent over time. Because we assume the same catchability and trawl-habitat biases occur throughout the survey, the results can be, and are, used as a relative index for management purposes.

While trawl surveys are used worldwide to monitor bottomfish populations, few have been done in Puget Sound. The University of Washington has been conducting a nearly annual bottom trawl as part of its Fisheries Ecology course since 1991, but this survey is focused only in Port Madison and cannot provide a broader look at the rest of the Sound.

The surveys in Puget Sound that could best match the scale of the current survey are the previous WDFW bottom trawl surveys. Unfortunately the design and scope of each survey since 1987 is not directly comparable to the current one due to various changes in fishing vessel, net, season, and regional delineations; however, there are a couple rough comparisons that can be made. From 1994-1997 and 2000-2001, the WDFW bottom trawl survey used the same net and vessel and spring sampling season as the current 2002-2007 survey (WDFW unpublished data; Palsson et al. 1998, 2002, 2003). During these earlier surveys, the areas that the current survey defines as CS, WI, and SS were all one region and thus cannot be compared without resampling and ignoring the original random station selection. GB and HC, on the other hand, were surveyed as well and had mostly the same sampling area as the GB and HC of the current survey (-0.22% and 0.35% difference, respectively, due to differing computational technologies). GB was surveyed in 1994, 1997, and 2001 before being surveyed in 2004 and 2006 in the current survey; HC was surveyed only in 1996 before the 2002 and 2005 surveys. In GB on a species-group level, ratfish were the most dominant group by biomass in the earlier years, but flatfish estimates increased each year and surpassed ratfish in 2004 and 2006. Additionally, elasmobranch biomass was at least twice as high in 1994 as it was from 1997-2006. The other primary groups (Codfish, Sculpins, and Other Fish) were relatively consistent over the five sampling years. In HC, ratfish also were higher in the 1996 survey than they were in the 2002 survey, and, like in GB, flatfish surpassed ratfish in 2005.

Though the sampling design differed substantially prior to 2002, data from these surveys were used to inform hypotheses about fish assemblage variance by depth and region, which was the reasoning behind stratifying the survey design into four depth strata. The results of species depth distributions and of the bootstrap average analysis presented here further corroborate expectations and can be employed to further refine and improve survey designs. Additionally, they suggest that fish and invertebrate assemblages vary by a factor of distance to the open waters of the Pacific Ocean. This is not unexpected, as species distributions are often influenced by such environmental parameters that vary with these factors, including temperature and salinity. Additionally, in the southern Salish Sea, often as distance to the open ocean increases, distance to anthropogenic influences, such as pollution, and to freshwater inputs, decreases. Because the fish communities within each region appear to be mostly unique when compared to other regions, the state of one region's populations in a given year cannot be used as a proxy for the state of an unsampled region's populations. Thus, in order to best capture the state of the bottomfish populations throughout the Sound, in a future survey design, each region should be

sampled during each survey year; additionally, due to the interannual variations of the fish populations, annual surveys would be recommended to closely monitor population changes.

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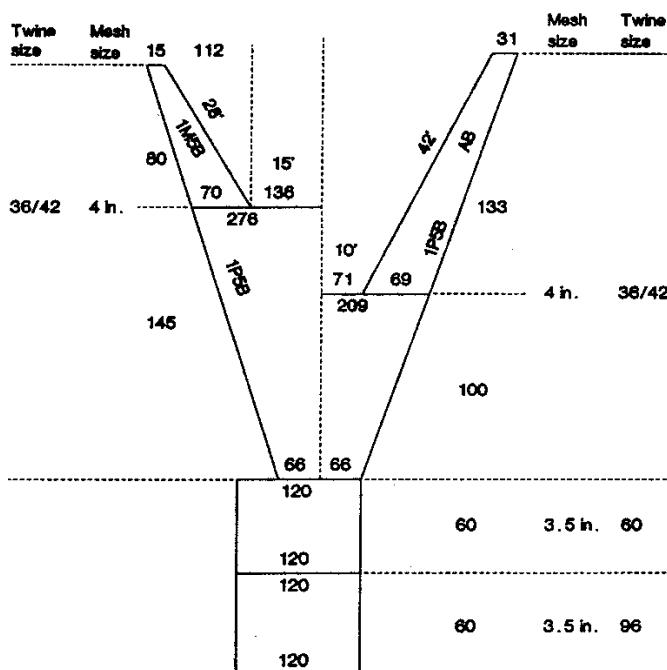
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APPENDICES

Appendix A: Trawl Net Specifications and Diagram

Net Specifications for the 400 mesh Eastern Research Trawl.	
Feature	Description
Head rope	21.6 m with thimbled eyes, 11.4 cm x 6 cm x 19 cm galvanized wire rope (full rap) served with 11.4 cm polypropylene rope
Fishing line	28.6 m with thimbled eyes of 11.4 cm 6 cm x 19 cm galvanized wire rope (footrope) served with 11.4 cm. polypropylene rope (web laced or “hung”) to the fishing line
Disk foot rope	12.7 cm disks on 15.2 cm long link deck, Beacon 7 deck lashing chain
Breast Lines	1.8 m of 11.4 cm 6 cm x 19 cm galvanized wire rope served with 11.4 cm polypropylene rope
Seams	Side seams shall consist of lacing 3 knots (2 meshes) from each panel with No. 36 nylon twine, tie each full mesh
Hanging head rope	wings - 2 meshes to 15.2 cm, Bosom - 4 meshes to 13.3 cm, foot rope wings- 4 bars to 19.2 cm, lower bosom - 4 meshes to 17.8 cm
Puckering rings	0.8 cm by 5.7 cm galvanized steel (approx. 33 pieces), secured with No.48 braided polypropylene
Splitting rings	15.2 cm by 10.2 cm galvanized steel (4 pieces) set up 12 meshes from the bottom
Bag liner	3.2 cm mesh, No. 18 nylon; 360 meshes around, 200 meshes deep (60 cm of liner extending from the end of the bag)
Chafing gear	Hula skirt chafing 20 cm. - 5 mm double bar mesh
Webbing	10.2 cm mesh (including one knot) polyethylene, depth stretched and heat set; twine: 2 ½ mm top - 3 mm bottom
FLOATS	15, 20 cm Deep Sea Floats, evenly spaced. (2.5 kg buoyancy each)
Dandylines	4, 27.4 m, 15.2 cm 6 x 19 galvanized wire rope



Schematic of the 400 Eastern bottom trawl used for WDFW bottom trawl surveys.

Appendix B: Net Widths as a Function of Depth and Scope

DEPTH (fms)	MINIMUM SCOPE	MAXIMUM SCOPE	SCOPE BREAK	MINIMUM WIRE (fms)	BREAK WIRE (fms)	MAXIMUM WIRE (fms)	MINIMUM NET WIDTH (m)	MAXIMUM NET WIDTH (m)
<10	1.8	2.9	2.4	20	24	30	8.74	10.79
10	1.8	2.9	2.4	20	24	29	8.74	10.79
11	1.8	2.9	2.4	20	26	32	8.74	10.79
12	1.8	2.9	2.3	21	28	35	9.00	10.88
13	1.8	2.9	2.3	23	30	37	9.10	10.97
14	1.8	2.9	2.3	25	32	40	9.22	11.05
15	1.8	2.9	2.3	26	35	43	9.34	11.13
16	1.7	2.8	2.3	28	37	46	9.45	11.22
17	1.7	2.8	2.3	30	39	48	9.57	11.30
18	1.7	2.8	2.3	31	41	51	9.68	11.38
19	1.7	2.8	2.3	33	43	54	9.79	11.47
20	1.7	2.8	2.3	34	45	56	10.00	11.55
21	1.7	2.8	2.2	36	47	59	10.05	11.63
22	1.7	2.8	2.2	37	49	61	10.13	11.72
23	1.7	2.8	2.2	39	51	64	10.30	11.81
24	1.7	2.8	2.2	40	53	66	10.38	11.90
25	1.7	2.8	2.2	41	55	69	10.49	12.00
26	1.6	2.7	2.2	43	57	71	10.60	12.08
27	1.6	2.7	2.2	44	59	74	10.71	12.16
28	1.6	2.7	2.2	45	61	76	10.80	12.24
29	1.6	2.7	2.2	47	63	78	10.97	12.32
30	2.0	2.7	2.3	60	70	81	11.06	12.41
31	2.0	2.7	2.3	62	73	83	11.12	12.45
32	2.0	2.7	2.3	64	75	85	11.18	12.50
33	2.0	2.7	2.3	66	77	88	11.23	12.54
34	2.0	2.7	2.3	68	79	90	11.28	12.59
35	2.0	2.6	2.3	70	81	92	11.33	12.63
36	2.0	2.6	2.3	72	83	95	11.40	12.68
37	2.0	2.6	2.3	74	85	97	11.44	12.72
38	2.0	2.6	2.3	76	88	99	11.50	12.77
39	2.0	2.6	2.3	78	90	101	11.56	12.81
40	2.0	2.6	2.3	80	92	104	11.61	12.85
41	2.0	2.6	2.3	82	94	106	11.67	12.89
42	2.0	2.6	2.3	84	96	108	11.72	12.94
43	2.0	2.6	2.3	86	98	110	11.78	12.99
44	2.0	2.6	2.3	88	100	112	11.90	13.03
45	2.0	2.5	2.3	90	102	114	11.90	13.07
46	2.0	2.5	2.3	92	104	116	11.95	13.11
47	2.0	2.5	2.3	94	106	118	12.00	13.16
48	2.0	2.5	2.3	96	108	120	12.06	13.20
49	2.0	2.5	2.3	98	110	123	12.11	13.25
50	2.0	2.5	2.3	100	113	125	12.16	13.29
51	2.0	2.5	2.2	102	114	127	12.17	13.30
52	2.0	2.5	2.2	103	116	129	12.18	13.30
53	2.0	2.5	2.2	105	118	131	12.18	13.30
54	2.0	2.5	2.2	106	119	132	12.19	13.31
55	2.0	2.4	2.2	108	121	134	12.20	13.31
56	2.0	2.4	2.2	110	123	136	12.21	13.32
57	2.0	2.4	2.2	111	124	138	12.21	13.32
58	1.9	2.4	2.2	113	126	139	12.22	13.33
59	1.9	2.4	2.2	114	128	141	12.23	13.34
60	1.9	2.4	2.2	116	129	143	12.24	13.35
61	1.9	2.4	2.1	117	131	145	12.24	13.35
62	1.9	2.4	2.1	119	132	146	12.25	13.36
63	1.9	2.3	2.1	120	134	148	12.26	13.36
64	1.9	2.3	2.1	122	136	149	12.27	13.37
65	1.9	2.3	2.1	123	137	151	12.27	13.37
66	1.9	2.3	2.1	125	139	152	12.28	13.38
67	1.9	2.3	2.1	126	140	154	12.29	13.39
68	1.9	2.3	2.1	127	141	155	12.29	13.39
69	1.9	2.3	2.1	129	143	157	12.30	13.40
70	1.9	2.3	2.1	130	144	158	12.30	13.40
71	1.9	2.3	2.1	132	146	160	12.31	13.41
72	1.8	2.2	2.0	133	147	161	12.32	13.42
73	1.8	2.2	2.0	134	148	163	12.32	13.42

DEPTH (fms)	MINIMUM SCOPE	MAXIMUM SCOPE	SCOPE BREAK	MINIMUM WIRE (fms)	BREAK WIRE (fms)	MAXIMUM WIRE (fms)	MINIMUM NET WIDTH (m)	MAXIMUM NET WIDTH (m)
74	1.8	2.2	2.0	136	150	164	12.33	13.43
75	1.8	2.2	2.0	137	151	165	12.34	13.43
76	1.8	2.2	2.0	138	152	166	12.35	13.44
77	1.8	2.2	2.0	139	154	168	12.36	13.45
78	1.8	2.2	2.0	141	155	169	12.36	13.45
79	1.8	2.2	2.0	142	156	170	12.37	13.46
80	1.8	2.1	2.0	143	157	171	12.38	13.47
81	1.8	2.1	2.0	144	159	173	12.39	13.48
82	1.8	2.1	1.9	146	160	174	12.40	13.49
83	1.8	2.1	1.9	147	161	175	12.40	13.49
84	1.8	2.1	1.9	148	162	176	12.41	13.50
85	1.8	2.1	1.9	149	163	177	12.42	13.51
86	1.7	2.1	1.9	150	164	178	12.42	13.51
87	1.7	2.1	1.9	151	165	179	12.43	13.52
88	1.7	2.0	1.9	153	166	180	12.43	13.52
89	1.7	2.0	1.9	154	167	181	12.44	13.53
90	1.7	2.0	1.9	155	168	182	12.45	13.54
91	1.7	2.0	1.9	156	169	183	12.46	13.54
92	1.7	2.0	1.9	157	170	184	12.47	13.55
93	1.7	2.0	1.8	158	171	185	12.48	13.56
94	1.7	2.0	1.8	159	172	186	12.48	13.56
95	1.7	2.0	1.8	160	173	187	12.49	13.57
96	1.7	2.0	1.8	161	174	187	12.50	13.58
97	1.7	1.9	1.8	162	175	188	12.50	13.58
98	1.7	1.9	1.8	163	176	189	12.51	13.59
99	1.7	1.9	1.8	164	177	190	12.52	13.59
100	1.7	1.9	1.8	165	178	191	12.53	13.60
101	1.6	1.9	1.8	166	179	191	12.53	13.60
102	1.6	1.9	1.8	167	179	192	12.54	13.61
103	1.6	1.9	1.7	168	180	193	12.55	13.61
104	1.6	1.9	1.7	169	181	193	12.56	13.62
105	1.6	1.8	1.7	170	182	194	12.57	13.62
106	1.6	1.8	1.7	170	182	194	12.58	13.63
107	1.6	1.8	1.7	171	183	195	12.58	13.63
108	1.6	1.8	1.7	172	184	195	12.59	13.64
109	1.6	1.8	1.7	173	184	196	12.60	13.65
110	1.6	1.8	1.7	174	185	196	12.60	13.65
111	1.6	1.8	1.7	175	186	197	12.61	13.66
112	1.6	1.8	1.7	175	186	197	12.61	13.66
113	1.6	1.8	1.7	176	187	198	12.62	13.67
114	1.6	1.7	1.6	177	188	198	12.63	13.67
115	1.5	1.7	1.6	178	188	199	12.64	13.68
116	1.5	1.7	1.6	178	189	199	12.65	13.69
117	1.5	1.7	1.6	179	189	199	12.66	13.70
118	1.5	1.7	1.6	180	190	200	12.67	13.71
119	1.5	1.7	1.6	181	190	200	12.68	13.72
120	1.5	1.7	1.6	180	190	200	12.68	13.72
130	1.5	1.7	1.6	195	206	217	12.68	13.72
140	1.5	1.7	1.6	210	222	234	12.68	13.72
150	1.5	1.7	1.6	225	238	251	12.68	13.72
160	1.5	1.7	1.6	240	254	267	12.68	13.72
170	1.5	1.7	1.6	255	269	284	12.68	13.72
180	1.5	1.7	1.6	270	285	301	12.68	13.72
190	1.5	1.7	1.6	285	301	317	12.68	13.72
200	1.5	1.7	1.6	300	317	334	12.68	13.72

Appendix C: Biological Samples and Measurements to Take for Key Species

Species	Length	Sex	Genetic Samples		Age Structures
			Fin clip	Tissue plug	Otoliths (other if specified)
FLATFISH (**TAKEN ON MORTALITIES/MORIBUNDS ONLY)					
Arrowtooth Flounder	X	X			
Butter Sole	X	X			
C-O Sole	X				
Curlfin Sole	X				
Dover Sole	X	X			
English Sole	X	X			
Flathead Sole	X	X			
Pacific Halibut	X		X		X**
Pacific Sanddab	X	X			
Petrale Sole	X	X			
Rex Sole	X	X			
Rock Soles	X	X			
Sand Sole	X	X			
Starry Flounder	X	X			
FORAGE FISH (*AS TIME ALLOWS)					
Eulachon	X		X		
Pacific Herring	X		X*		
Northern Anchovy	X		X*		
American Shad	X		X*		
(other species)	X		X		
GADIFORMS					
Hake (Pacific Whiting)	X	X			
Pacific Cod	X	X	X		X
Pacific Tomcod	X				
Walleye Pollock	X	X			
GREENLINGS					
Kelp Greenling	X	X			
Lingcod	X	X	X		
Whitespotted Greenling	X				

Species	Length	Sex	Genetic Samples		Age Structures
			Fin clip	Tissue plug	Otoliths (other if specified)
SCULPINS					
Brown Irish Lord	X				
Buffalo Sculpin	X				
Cabezon	X	X	X		
Great Sculpin	X				
Pacific Staghorn Sculpin	X				
Red Irish Lord	X				
ROCKFISH (**TAKEN ON MORTALITIES/MORIBUNDS ONLY)					
Black Rockfish	X	X	X		X
Bocaccio	X	X	X		X**
Brown Rockfish	X	X	X		X
Canary Rockfish	X	X	X		X**
Copper Rockfish	X	X	X		X
Greenstriped Rockfish	X	X	X		X
Pacific Ocean Perch	X	X	X		X
Puget Sound Rockfish	X	X	X		X
Quillback Rockfish	X	X	X		X
Redstripe Rockfish	X	X	X		X
Shortspine Thornyhead	X		X		X
Splitnose Rockfish	X		X		X
Yelloweye Rockfish	X	X	X		X**
Yellowtail Rockfish	X	X	X		X
SHARKS & SKATES					
Big Skate	X	X	X		
Bluntnose Sixgill Shark	X	X		X	
Longnose Skate	X	X	X		
North Pacific Spiny Dogfish	X	X		X	
Sandpaper Skate	X	X	X	X	
OTHER (**TAKEN ON MORTALITIES/MORIBUNDS ONLY)					
Chinook Salmon	X	X	X		X**
Coho Salmon	X	X	X		X**
Red Brotula	X		X		

Appendix D: Detailed Results and Parameters of Bootstrap Average Calculation and Simper Analysis in Primer

Bootstrap Averages

Plot

Resemblance worksheet

Name: Resem8

Data type: Similarity

Selection: All

9	0. 05	0. 07
10	0. 05	0. 07
11	0. 05	0. 07
12	0. 06	0. 07
13	0. 33	0. 07
14	0. 06	0. 07
15	0. 05	0. 07
16	0. 33	0. 42
17	0. 33	0. 07
18	0. 06	0. 07
19	0. 05	0. 07
20	0. 05	0. 07
21	0. 05	0. 07
22	0. 33	0. 07
23	0. 33	0. 07
24	0. 33	0. 07
25	0. 05	0. 07
26	0. 33	0. 07
27	0. 05	0. 07
28	0. 05	0. 07
29	0. 05	0. 07
30	0. 33	0. 07
31	0. 05	0. 42
32	0. 06	0. 07
33	0. 33	0. 07
34	0. 05	0. 07
35	0. 05	0. 42
36	0. 05	0. 07
37	0. 06	0. 07
38	0. 05	0. 07
39	0. 06	0. 07
40	0. 06	0. 07
41	0. 05	0. 07
42	0. 05	0. 07
43	0. 33	0. 07
44	0. 05	0. 07
45	0. 05	0. 07
46	0. 05	0. 07
47	0. 05	0. 07
48	0. 05	0. 07
49	0. 33	0. 42
50	0. 05	0. 07

Parameters

Factor: YearRegion

Number of bootstraps per group: 25

Minimum rho: 0.99

Bootstrap regions: 95%

Non-metric MDS

Optimum m: 10

DIAGNOSTICS

m rho

4 0. 915

5 0. 932

6 0. 944

7 0. 955

8 0. 962

9 0. 968

10 0. 972

33	0. 33	0. 07
34	0. 05	0. 07
35	0. 05	0. 42
36	0. 05	0. 07
37	0. 06	0. 07
38	0. 05	0. 07
39	0. 06	0. 07
40	0. 06	0. 07
41	0. 05	0. 07
42	0. 05	0. 07
43	0. 33	0. 07
44	0. 05	0. 07
45	0. 05	0. 07
46	0. 05	0. 07

Parameters

Kruskal stress formula: 1

Minimum stress: 0.01

Stress values

Di m Stress

3 0. 05

2 0. 07

47	0. 05	0. 07
48	0. 05	0. 07
49	0. 33	0. 42
50	0. 05	0. 07

STRESS VALUES

Repeat	3D	2D
1	0. 05	0. 42
2	0. 05	0. 07
3	0. 05	0. 07
4	0. 05	0. 07
5	0. 05	0. 07
6	0. 05	0. 42
7	0. 05	0. 07
8	0. 05	0. 07

** = Maximum number of iterations used

3-d : Minimum stress: 0.05 occurred 32 times
2-d : Minimum stress: 0.07 occurred 44 times

Outputs

Plot: Graph48

Plot: Graph49

SIMPER

Similarity Percentages - species contributions

Two-Way Analysis

Data worksheet

Name: Data1

Data type: Biomass

Sample selection: All

Variable selection: All

Parameters

Resemblance: S17 Bray-Curtis similarity

Cut off for low contributions: 70.00%

Factor Groups

Sample Region x Stratum

Examines Region groups

(across all Stratum groups)

Group CS

Average similarity: 49.76

Species	Av. Abund	Av. Sim	Sim/SD	Contrib%	Cum. %
Spotted ratfish	3.70	15.96	1.76	32.06	32.06
English sole	1.71	5.29	1.06	10.63	42.69
Spiny dogfish	1.18	3.38	0.81	6.80	49.49
Dover sole	0.77	3.18	0.95	6.38	55.87
Southern rock sole	0.90	2.64	0.70	5.30	61.18
Pacific whiting (hake)	0.49	1.96	0.62	3.95	65.13
Longnose skate	0.62	1.71	0.59	3.43	68.55
Great sculpin	0.74	1.58	0.51	3.17	71.72

Group HC

Average similarity: 57.07

Species	Av. Abund	Av. Sim	Sim/SD	Contrib%	Cum. %
English sole	2.15	8.25	2.44	14.45	14.45
Spotted ratfish	2.17	7.85	1.20	13.76	28.21
Plaifin midshipman	1.46	5.84	1.84	10.23	38.43
Slender sole	1.22	4.98	1.70	8.73	47.16
Longnose skate	1.11	4.63	1.16	8.11	55.28
Pacific whiting (hake)	1.14	4.49	1.02	7.87	63.15
Spiny dogfish	1.05	3.41	0.89	5.97	69.12
Blackbelly eel pout	0.83	2.60	1.04	4.56	73.68

Group SS

Average similarity: 56.43

Species	Av. Abund	Av. Sim	Sim/SD	Contrib%	Cum. %
English sole	1.68	6.64	3.95	11.77	11.77
Starry flounder	1.59	6.54	1.24	11.59	23.36
Blackbelly eel pout	1.53	5.03	1.37	8.91	32.28
Plaifin midshipman	1.05	4.18	2.10	7.40	39.67
Speckled sanddab	0.85	3.95	1.46	7.00	46.68
Pacific staghorn sculpin	0.87	3.58	2.07	6.35	53.03
Roughback sculpin	0.87	3.15	1.52	5.58	58.60
Pacific tomcod	0.84	2.40	1.04	4.25	62.85
Spotted ratfish	1.00	2.13	0.56	3.78	66.63
Sand sole	0.52	1.94	0.80	3.43	70.06

Group WI

Average similarity: 55.47

Species	Av. Abund	Av. Sim	Sim/SD	Contrib%	Cum. %
Spotted ratfish	1. 70	7. 76	0. 90	14. 00	14. 00
English sole	1. 73	7. 31	2. 43	13. 19	27. 18
Pacific whiting (hake)	1. 15	5. 10	1. 04	9. 20	36. 38
Slender sole	0. 84	3. 57	0. 96	6. 44	42. 82
Starry flounder	0. 71	3. 14	0. 71	5. 66	48. 48
Longnose skate	0. 76	2. 94	0. 74	5. 30	53. 79
Shiner perch	0. 89	2. 40	0. 73	4. 32	58. 11
Blackbelly eel pout	0. 70	2. 06	0. 82	3. 72	61. 83
Speckled sanddab	0. 49	1. 98	0. 78	3. 56	65. 39
Plainfin midshipman	0. 65	1. 96	0. 90	3. 54	68. 93
Sand sole	0. 46	1. 74	0. 66	3. 13	72. 06

Group DB

Average similarity: 60.05

Species	Av. Abund	Av. Sim	Sim/SD	Contrib%	Cum. %
Starry flounder	2. 03	12. 03	4. 96	20. 03	20. 03
English sole	1. 52	8. 71	5. 05	14. 50	34. 53
Spiny dogfish	1. 84	8. 26	1. 06	13. 75	48. 28
Blackbelly eel pout	0. 86	4. 87	1. 97	8. 11	56. 39
Pacific herring	1. 08	4. 84	1. 34	8. 06	64. 45
Pacific tomcod	0. 88	4. 51	2. 34	7. 50	71. 95

Group JE

Average similarity: 49.65

Species	Av. Abund	Av. Sim	Sim/SD	Contrib%	Cum. %
Spotted ratfish	2. 32	14. 34	1. 43	28. 88	28. 88
Walleye pollock	1. 05	6. 20	1. 75	12. 48	41. 36
Spiny dogfish	1. 17	4. 37	0. 82	8. 80	50. 16
Dover sole	0. 60	3. 31	1. 05	6. 67	56. 83
Southern rock sole	0. 58	2. 53	0. 52	5. 10	61. 93
Pacific sanddab	0. 73	2. 33	0. 61	4. 69	66. 62
Rex sole	0. 50	2. 21	0. 89	4. 46	71. 09

Group JW

Average similarity: 57.22

Species	Av. Abund	Av. Sim	Sim/SD	Contrib%	Cum. %
Spotted ratfish	3. 07	18. 12	3. 48	31. 67	31. 67
Dover sole	1. 10	6. 73	1. 86	11. 77	43. 44
Pacific cod	1. 12	5. 52	1. 23	9. 65	53. 10
Arrowtooth flounder	0. 90	5. 21	1. 46	9. 11	62. 20
Walleye pollock	1. 02	4. 68	1. 21	8. 19	70. 39

Group GB

Average similarity: 58.09

Species	Av. Abund	Av. Sim	Sim/SD	Contrib%	Cum. %
Spotted ratfish	1. 57	7. 90	1. 02	13. 61	13. 61
English sole	1. 92	7. 40	2. 46	12. 73	26. 34
Spiny dogfish	1. 41	5. 70	1. 38	9. 82	36. 16
Walleye pollock	0. 83	3. 77	1. 07	6. 49	42. 65
Dover sole	0. 80	3. 45	1. 18	5. 93	48. 58
Big skate	1. 07	3. 32	0. 98	5. 72	54. 30
Starry flounder	0. 76	2. 36	0. 58	4. 06	58. 36
Pacific whiting (hake)	0. 58	2. 32	0. 79	4. 00	62. 36
Longnose skate	0. 59	2. 10	0. 71	3. 61	65. 97
Rex sole	0. 58	1. 88	0. 90	3. 24	69. 21
Sand sole	0. 50	1. 76	0. 62	3. 02	72. 24

Group SJ

Average similarity: 47.50

Species	Av. Abund	Av. Sim	Sim/SD	Contrib%	Cum. %
Spotted ratfish	1. 51	8. 55	0. 95	18. 00	18. 00
Spiny dogfish	1. 80	8. 11	1. 41	17. 08	35. 08
Walleye pollock	1. 06	5. 61	1. 50	11. 82	46. 89
English sole	1. 09	3. 62	0. 92	7. 62	54. 51
Dover sole	0. 67	3. 51	1. 05	7. 38	61. 89
Rex sole	0. 56	2. 73	0. 88	5. 74	67. 63
Great sculpin	0. 78	2. 15	0. 58	4. 53	72. 16

*Examines Stratum groups
(across all Region groups)*

Group S

Average similarity: 46.12

Species	Av. Abund	Av. Sim	Sim/SD	Contrib%	Cum. %
English sole	1. 46	5. 92	1. 55	12. 84	12. 84
Starry flounder	1. 40	5. 41	1. 00	11. 73	24. 57
Southern rock sole	1. 19	4. 94	0. 83	10. 71	35. 28
Sand sole	0. 73	2. 71	0. 91	5. 87	41. 15
Spiny dogfish	0. 89	2. 69	0. 60	5. 82	46. 97
Speckled sanddab	0. 69	2. 65	0. 94	5. 74	52. 71
Plaenfin midshipman	0. 64	2. 13	0. 73	4. 63	57. 33
Spotted ratfish	0. 72	1. 77	0. 30	3. 85	61. 18
Great sculpin	0. 63	1. 66	0. 49	3. 61	64. 79
Pacific staghorn sculpin	0. 44	1. 63	0. 73	3. 54	68. 33
Pacific herring	0. 52	1. 61	0. 75	3. 50	71. 82

Group T

Average similarity: 48.45

Species	Av. Abund	Av. Sim	Sim/SD	Contrib%	Cum. %
Spotted ratfish	1. 57	5. 29	0. 68	10. 92	10. 92
English sole	1. 49	4. 52	1. 30	9. 33	20. 25
Pacific sanddab	1. 05	3. 74	0. 97	7. 72	27. 97
Spiny dogfish	1. 13	3. 48	0. 69	7. 18	35. 15
Southern rock sole	0. 94	3. 11	0. 82	6. 42	41. 57
Great sculpin	0. 74	2. 00	0. 57	4. 12	45. 69
Starry flounder	0. 62	1. 93	0. 50	3. 98	49. 67
Blackbelly eel pout	0. 66	1. 86	0. 68	3. 84	53. 51
Walleye pollock	0. 51	1. 81	0. 67	3. 74	57. 25
Pacific herring	0. 64	1. 50	0. 65	3. 09	60. 34
Pacific tomcod	0. 57	1. 45	0. 76	2. 98	63. 32
Plaenfin midshipman	0. 61	1. 41	0. 59	2. 90	66. 22
Pacific staghorn sculpin	0. 45	1. 18	0. 60	2. 43	68. 65
Dover sole	0. 48	1. 13	0. 66	2. 33	70. 98

Group U

Average similarity: 50.72

Species	Av. Abund	Av. Sim	Sim/SD	Contrib%	Cum. %
Spotted ratfish	2. 90	14. 02	2. 27	27. 64	27. 64
Walleye pollock	0. 96	4. 33	1. 34	8. 53	36. 17
English sole	1. 33	3. 65	1. 00	7. 19	43. 36
Skiny dogfish	1. 17	3. 59	0. 80	7. 07	50. 43
Dover sole	0. 74	2. 70	1. 20	5. 33	55. 76
Pacific sanddab	0. 64	1. 87	0. 68	3. 70	59. 46
Rex sole	0. 59	1. 63	0. 88	3. 21	62. 67
Slender sole	0. 60	1. 38	0. 57	2. 73	65. 40
Pacific whiting (hake)	0. 62	1. 38	0. 48	2. 72	68. 12
Big skate	0. 66	1. 23	0. 47	2. 43	70. 55

Group V

Average similarity: 60.78

Species	Av. Abund	Av. Sim	Sim/SD	Contrib%	Cum. %
Spotted ratfish	3. 15	18. 48	3. 16	30. 41	30. 41
Dover sole	1. 18	6. 75	2. 30	11. 11	41. 52
Walleye pollock	1. 08	5. 69	1. 47	9. 37	50. 89
Skiny dogfish	1. 26	5. 09	1. 02	8. 37	59. 27
Longnose skate	0. 95	3. 42	0. 88	5. 62	64. 89
English sole	1. 15	3. 35	0. 75	5. 50	70. 39

APPENDIX E: ESTIMATES BY STRATUM

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass Estimate Coefficient of Variation	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
2002	CS	S	5-20 fa	Aluminum	Aluminum	unsexed	2.37	80.83	22847	89.36
2002	CS	S	5-20 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.68	73.2	25655	67.7
2002	CS	S	5-20 fa	Barnacle uniden.	Order Thoracica	unsexed	3.30	100	12384	100
2002	CS	S	5-20 fa	Big Skate	<i>Raja binoculata</i>	unsexed	0.21	100	4704	100
2002	CS	S	5-20 fa	Big Skate egg case	<i>Raja binoculata</i> egg case	unsexed	31.88	83.03	119654	83.5
2002	CS	S	5-20 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	0.23	69.58	9984	74.01
2002	CS	S	5-20 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	0.03	100	2775	100
2002	CS	S	5-20 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.03	100	3013	100
2002	CS	S	5-20 fa	Brown Rockfish	<i>Sebastes auriculatus</i>	unsexed	3.92	67.77	8832	67.59
2002	CS	S	5-20 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	140.14	82.18	1344431	80.59
2002	CS	S	5-20 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	3.51	65.47	54129	68.01
2002	CS	S	5-20 fa	Cabezon	<i>Scorpaenichthys marmoratus</i>	unsexed	115.20	73.8	20087	56.55
2002	CS	S	5-20 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	19.79	96.48	922926	93.83
2002	CS	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	531.61	47.54	663583	44.8
2002	CS	S	5-20 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	145.05	66.52	576027	67.91
2002	CS	S	5-20 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	14.80	80.61	2485107	82.22
2002	CS	S	5-20 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	3.97	65.12	1952463	65.79
2002	CS	S	5-20 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.15	72.79	24132	81.09
2002	CS	S	5-20 fa	Divaricate Nut Clam	<i>Acila castrensis</i>	unsexed	5.55	100	2772659	100
2002	CS	S	5-20 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	36.99	71.58	6988912	72.17
2002	CS	S	5-20 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	3.80	67.67	50715	71.14
2002	CS	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	male	656.78	43.23	1001141	43.58
2002	CS	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	female	382.39	49.92	996170	51.55
2002	CS	S	5-20 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	839.08	44.08	3840718	41.48
2002	CS	S	5-20 fa	False Ochre Star	<i>Easterias troschelii</i>	unsexed	70.40	61.65	87757	56.47
2002	CS	S	5-20 fa	Fishing gear	Fishing gear	unsexed	47.04	100	2352	100
2002	CS	S	5-20 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	3.76	58.42	110342	63.88
2002	CS	S	5-20 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	79.39	78.72	699611	93.1
2002	CS	S	5-20 fa	Glass	Glass	unsexed	38.03	69.26	76733	54.94
2002	CS	S	5-20 fa	Glassy Tunicate	<i>Ascidia paratropa</i>	unsexed	7.39	97.86	5274	67.89
2002	CS	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	female	7.73	92.61	88066	84.7
2002	CS	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	male	29.28	81.03	264468	72.15
2002	CS	S	5-20 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.14	100	7056	100
2002	CS	S	5-20 fa	Graceful Kelp Crab	<i>Pugettia gracilis</i>	unsexed	0.05	100	4632	100
2002	CS	S	5-20 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	144.05	29.76	273782	29.54
2002	CS	S	5-20 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	16.76	90.15	114689	84.33
2002	CS	S	5-20 fa	Grunt Sculpin	<i>Rhamphocottus richardsoni</i>	unsexed	0.43	58.51	32595	51.17
2002	CS	S	5-20 fa	Helmet Crab	<i>Telmessus cheiragonus</i>	unsexed	0.59	97.89	10642	79.28
2002	CS	S	5-20 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.25	68.78	5439	67.64
2002	CS	S	5-20 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.09	67.59	18240	78.61
2002	CS	S	5-20 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	0.41	100	122119	100
2002	CS	S	5-20 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	7.91	100	24108	100
2002	CS	S	5-20 fa	Leather Star	<i>Dermasterias imbricata</i>	unsexed	6.39	93.84	37056	88.54
2002	CS	S	5-20 fa	Lewis's Moon Snail	<i>Euspira lewisi</i>	unsexed	5.43	82.26	35609	85.74
2002	CS	S	5-20 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	0.50	100	2517	100
2002	CS	S	5-20 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	0.58	100	8766	100

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2002	CS	S	5-20 fa	Longfin Smelt	<i>Spirinchus thaleichthys</i>	unsexed	0.10	55.35	45876	84.02
2002	CS	S	5-20 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.14	66.35	28164	61.72
2002	CS	S	5-20 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	13.13	66.58	8997	54.65
2002	CS	S	5-20 fa	Marine vegetation	Marine vegetation	unsexed	457.74	48	30783	20.66
2002	CS	S	5-20 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	122.98	58.03	232241	55.77
2002	CS	S	5-20 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	8.89	47.1	28933	53.76
2002	CS	S	5-20 fa	Northern Kelp Crab	<i>Pugettia producta</i>	unsexed	0.14	100	7056	100
2002	CS	S	5-20 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	202.00	46.41	1058947	45.3
2002	CS	S	5-20 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	1.90	70.08	57288	70.9
2002	CS	S	5-20 fa	Nuttall Cockle	<i>Clinocardium nuttallii</i>	unsexed	0.51	100	2316	100
2002	CS	S	5-20 fa	Orange Sea Pen	<i>Ptilosarcus gurneyi</i>	unsexed	0.46	100	6947	100
2002	CS	S	5-20 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	3.52	100	25168	100
2002	CS	S	5-20 fa	Other man-made debris	Other man-made debris	unsexed	50.19	93.03	16699	40.07
2002	CS	S	5-20 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	44.63	60.88	2253438	67.85
2002	CS	S	5-20 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.07	100	11579	100
2002	CS	S	5-20 fa	Pacific Pompano	<i>Peprilus simillimus</i>	unsexed	0.60	70.06	22438	70.06
2002	CS	S	5-20 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	238.37	42.68	1410648	43.02
2002	CS	S	5-20 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	1.86	50.29	14652	51.09
2002	CS	S	5-20 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	33.46	67.66	591414	69.04
2002	CS	S	5-20 fa	Padded Sculpin	<i>Artedius fenestralis</i>	unsexed	0.22	60.9	20011	64.07
2002	CS	S	5-20 fa	Painted Greenling	<i>Oxylebius pictus</i>	unsexed	0.33	100	4128	100
2002	CS	S	5-20 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	0.47	100	14112	100
2002	CS	S	5-20 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	162.28	43.45	107420	57.28
2002	CS	S	5-20 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	58.69	62.11	894719	62.38
2002	CS	S	5-20 fa	Plastic	Plastic	unsexed	4.75	68.09	46188	50.31
2002	CS	S	5-20 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	0.03	100	5551	100
2002	CS	S	5-20 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.00	100	2316	100
2002	CS	S	5-20 fa	Red Irish Lord	<i>Hemilepidotus hemilepidotus</i>	unsexed	73.42	66.23	251018	70.25
2002	CS	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	male	63.64	44.01	153873	40.37
2002	CS	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	female	35.83	57.04	163874	54.59
2002	CS	S	5-20 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	0.05	77.08	14076	83.67
2002	CS	S	5-20 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	2.50	82.78	80590	76.84
2002	CS	S	5-20 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.58	67.9	10560	67.9
2002	CS	S	5-20 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	15.54	64.06	576316	59.31
2002	CS	S	5-20 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	50.88	32.74	280253	35.87
2002	CS	S	5-20 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	2.42	100	18816	100
2002	CS	S	5-20 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	3.42	53.26	190749	56.8
2002	CS	S	5-20 fa	Shortfin Eelpout	<i>Lycodes brevipes</i>	unsexed	0.31	100	13877	100
2002	CS	S	5-20 fa	Silverspotted Sculpin	<i>Blepsias cirrhosus</i>	unsexed	0.07	100	2316	100
2002	CS	S	5-20 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.24	100	3013	100
2002	CS	S	5-20 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	0.12	100	2922	100
2002	CS	S	5-20 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.20	55.52	22862	60.22
2002	CS	S	5-20 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	1233.51	24.62	5530425	27.59
2002	CS	S	5-20 fa	Speckled Sanddab	<i>Citharichthys stigmatus</i>	unsexed	15.49	49.67	405763	49.92
2002	CS	S	5-20 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	307.19	25.79	154991	35.63
2002	CS	S	5-20 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	8.11	60.11	179611	58.16

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								Estimate		
2002	CS	S	5-20 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	1.05	100	2922	100
2002	CS	S	5-20 fa	Spinyhead Sculpin	<i>Dasy cottus setiger</i>	unsexed	1.18	83.55	10213	58.71
2002	CS	S	5-20 fa	Splendid Hermit Crab	<i>Labidochirus splendescens</i>	unsexed	0.00	100	2352	100
2002	CS	S	5-20 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	9.97	100	721613	100
2002	CS	S	5-20 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	2587.80	57.9	5469808	54.19
2002	CS	S	5-20 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei</i> egg case	unsexed	0.06	100	2922	100
2002	CS	S	5-20 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	182.24	81.47	173081	62.76
2002	CS	S	5-20 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	1.39	83.28	10608	78.96
2002	CS	S	5-20 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	0.20	73.82	12803	67.71
2002	CS	S	5-20 fa	Striped Seaperch	<i>Embiotoca lateralis</i>	unsexed	0.12	100	4704	100
2002	CS	S	5-20 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.16	100	6947	100
2002	CS	S	5-20 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	2.46	76.27	86159	80.67
2002	CS	S	5-20 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	358.15	34.98	414359	38.66
2002	CS	S	5-20 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	0.61	100	4704	100
2002	CS	S	5-20 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	2.58	73	18581	76.65
2002	CS	S	5-20 fa	Tunicate uniden.	<i>Subphylum Tunicata</i>	unsexed	0.21	100	33025	100
2002	CS	S	5-20 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	3.33	64.44	71983	67.11
2002	CS	S	5-20 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	15.21	81.75	8062	72.9
2002	CS	S	5-20 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	0.35	100	4704	100
2002	CS	S	5-20 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	10.00	43.71	54016	42.51
2002	CS	S	5-20 fa	Wrinkled Dogwinkle	<i>Nucella lamellosa</i>	unsexed	0.05	100	2352	100
2002	CS	T	21-40 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	0.00	100	1643	100
2002	CS	T	21-40 fa	Aluminum	Aluminum	unsexed	0.02	100	1712	100
2002	CS	T	21-40 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.54	69.07	10126	67.85
2002	CS	T	21-40 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	0.17	77.24	5643	70.55
2002	CS	T	21-40 fa	Big Skate	<i>Raja binoculata</i>	unsexed	14.15	100	1647	100
2002	CS	T	21-40 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	9.64	73.22	235480	71.97
2002	CS	T	21-40 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	0.93	52.16	78536	63.89
2002	CS	T	21-40 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.02	100	2239	100
2002	CS	T	21-40 fa	Brown Rockfish	<i>Sebastes auriculatus</i>	unsexed	3.76	47.44	28164	47.35
2002	CS	T	21-40 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	254.57	79.81	997582	75.54
2002	CS	T	21-40 fa	Cabezon	<i>Scorpaenichthys marmoratus</i>	unsexed	62.99	69.21	22786	63.2
2002	CS	T	21-40 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.64	96.99	53034	92.93
2002	CS	T	21-40 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	4.49	62.99	12715	62.97
2002	CS	T	21-40 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	0.01	100	1643	100
2002	CS	T	21-40 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	9.94	67.71	22974	68.12
2002	CS	T	21-40 fa	Crangonid shrimp uniden.	Crangonidae	unsexed	0.01	100	3287	100
2002	CS	T	21-40 fa	Danas Blade Shrimp	<i>Spirontocaris lamellicornis</i>	unsexed	0.02	100	2155	100
2002	CS	T	21-40 fa	Decorated Warbonnet	<i>Chiroliphis decoratus</i>	unsexed	0.20	75.68	3404	67.81
2002	CS	T	21-40 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	18.51	44.3	2012683	40.63
2002	CS	T	21-40 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	27.70	86.48	461781	88.76
2002	CS	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	male	40.07	58.26	45957	56.52
2002	CS	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	female	64.19	65.41	149922	65.4
2002	CS	T	21-40 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	369.53	51.53	2811637	52.45
2002	CS	T	21-40 fa	False Ochre Star	<i>Easterias troschelii</i>	unsexed	28.54	87.37	23247	78.53
2002	CS	T	21-40 fa	False White Sea Cucumber	<i>Eupentacta pseudoquinquesemita</i>	unsexed	0.03	100	1613	100

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								Estimate Coefficient of Variation		
2002	CS	T	21-40 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	0.93	44.53	10342	52.64
2002	CS	T	21-40 fa	Flattop Crab	<i>Petrolisthes eriomerus</i>	unsexed	0.01	100	1498	100
2002	CS	T	21-40 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	45.07	48.97	347206	57.92
2002	CS	T	21-40 fa	Glass	Glass	unsexed	1.31	69.49	5009	72.9
2002	CS	T	21-40 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.04	100	4311	100
2002	CS	T	21-40 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	437.31	40.45	704337	37.27
2002	CS	T	21-40 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	32.23	53.7	426262	56.14
2002	CS	T	21-40 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	0.19	100	2060	100
2002	CS	T	21-40 fa	Grunt Sculpin	<i>Rhamphocottus richardsoni</i>	unsexed	0.93	42.74	54156	48.55
2002	CS	T	21-40 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	1.07	72.88	24244	64.99
2002	CS	T	21-40 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.08	54.25	19507	68.66
2002	CS	T	21-40 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	0.46	100	2437	100
2002	CS	T	21-40 fa	Lampshell Brachiopod	<i>Terebratalia transversa</i>	unsexed	0.04	100	2239	100
2002	CS	T	21-40 fa	Leafy Hornmouth	<i>Ceratostoma foliatum</i>	unsexed	0.46	63.31	10140	54.78
2002	CS	T	21-40 fa	Leather Star	<i>Dermasterias imbricata</i>	unsexed	1.94	70.77	3404	67.81
2002	CS	T	21-40 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	3.51	68.14	4875	52.72
2002	CS	T	21-40 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	5.41	82.64	13888	66.55
2002	CS	T	21-40 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	23.77	47.85	28449	37.81
2002	CS	T	21-40 fa	Longnose Skate egg case	<i>Raja rhina egg case</i>	unsexed	1.12	100	2239	100
2002	CS	T	21-40 fa	Marine vegetation	Marine vegetation	unsexed	3.42	94.41	10694	47.26
2002	CS	T	21-40 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	187.87	45.04	365741	44.69
2002	CS	T	21-40 fa	Miscellaneous material		unsexed	38.65	98.74	9889	67.76
2002	CS	T	21-40 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	1.68	100	4752	100
2002	CS	T	21-40 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	8.66	59.06	126142	58.75
2002	CS	T	21-40 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	23.71	58.88	121512	67.27
2002	CS	T	21-40 fa	Northern Ronquil	<i>Ronquilus jordanii</i>	unsexed	7.23	34.32	159985	32.23
2002	CS	T	21-40 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	0.10	100	8217	100
2002	CS	T	21-40 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	1.85	47.36	54471	49.23
2002	CS	T	21-40 fa	Odhner's Dorid	<i>Archidoris odhneri</i>	unsexed	0.16	100	1643	100
2002	CS	T	21-40 fa	Orange Burrowing Sea Cucumber	<i>Cucumaria miniata</i>	unsexed	0.13	100	4752	100
2002	CS	T	21-40 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	1.64	79.41	20198	75.95
2002	CS	T	21-40 fa	Other man-made debris	Other man-made debris	unsexed	0.71	100	1613	100
2002	CS	T	21-40 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	3.87	100	4874	100
2002	CS	T	21-40 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	0.05	100	5137	100
2002	CS	T	21-40 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	14.73	65.22	290282	58.36
2002	CS	T	21-40 fa	Pacific Pompano	<i>Peprilus simillimus</i>	unsexed	0.24	75.61	6399	76.54
2002	CS	T	21-40 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	36.97	50.51	185581	47.27
2002	CS	T	21-40 fa	Pacific Spiny Lumpsucker	<i>Eumicrotremus orbis</i>	unsexed	0.09	100	4311	100
2002	CS	T	21-40 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	0.30	100	1647	100
2002	CS	T	21-40 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	55.32	41.11	722000	38.88
2002	CS	T	21-40 fa	Padded Sculpin	<i>Artedius fenestratus</i>	unsexed	0.55	44.67	36276	43.96
2002	CS	T	21-40 fa	Pile Perch	<i>Rhacocheilus vacca</i>	unsexed	0.75	66.66	12563	55.74
2002	CS	T	21-40 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	18.36	83.49	12329	56.25
2002	CS	T	21-40 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	25.10	61.71	415104	63.82
2002	CS	T	21-40 fa	Plastic	Plastic	unsexed	0.62	100	2060	100
2002	CS	T	21-40 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	16.04	57.57	358703	57.84

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Coefficient of Variation		
2002	CS	T	21-40 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.07	73.44	7029	73.44
2002	CS	T	21-40 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	9.74	58.8	28865	54.13
2002	CS	T	21-40 fa	Red Irish Lord	<i>Hemilepidotus hemilepidotus</i>	unsexed	83.85	81.57	297711	86.41
2002	CS	T	21-40 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.95	55.49	4788	52.77
2002	CS	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	female	2.65	75.5	16379	77.02
2002	CS	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	male	11.20	69.51	24600	70.24
2002	CS	T	21-40 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	17.23	54.81	19163	55.5
2002	CS	T	21-40 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	135.09	89.8	3549661	86.54
2002	CS	T	21-40 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	3.50	56.67	47674	60.42
2002	CS	T	21-40 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	14.82	55.06	357668	52.33
2002	CS	T	21-40 fa	Rosy Tritonia	<i>Tritonia diomedea</i>	unsexed	0.02	100	1647	100
2002	CS	T	21-40 fa	Roughback Sculpin	<i>Chitonotus pugentensis</i>	unsexed	2.23	49.39	84198	53.62
2002	CS	T	21-40 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	1.26	40.34	22519	37.51
2002	CS	T	21-40 fa	Salt and Pepper Sea Cucumber	<i>Cucumaria piperata</i>	unsexed	0.22	100	26927	100
2002	CS	T	21-40 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	0.66	100	4752	100
2002	CS	T	21-40 fa	Sea cucumber uniden.	<i>Class Holothuroidea</i>	unsexed	0.12	69.77	4787	70.19
2002	CS	T	21-40 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	1.15	91.71	64329	83.08
2002	CS	T	21-40 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.01	100	2155	100
2002	CS	T	21-40 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	12.64	48.81	256630	49.07
2002	CS	T	21-40 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.19	70.84	32570	82.13
2002	CS	T	21-40 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	1.31	100	3226	100
2002	CS	T	21-40 fa	Slipper Sea Cucumber	<i>Psolus chitonoides</i>	unsexed	0.10	100	7310	100
2002	CS	T	21-40 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	9.06	58.52	355441	64.13
2002	CS	T	21-40 fa	Southern Rock Sole	<i>Lepidotsetta bilineata</i>	unsexed	152.16	29.55	807883	34.7
2002	CS	T	21-40 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	268.78	45.47	131075	52.29
2002	CS	T	21-40 fa	Spiny Lebtheid	<i>Lebbeus groenlandicus</i>	unsexed	0.06	62.14	6367	57.17
2002	CS	T	21-40 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	130.40	50.47	3386984	47
2002	CS	T	21-40 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	0.68	72.04	13356	71.45
2002	CS	T	21-40 fa	Spinyhead Sculpin	<i>Dasyctottus setiger</i>	unsexed	1.16	56.7	7138	55.52
2002	CS	T	21-40 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	0.15	100	2155	100
2002	CS	T	21-40 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	88.28	99.64	3527051	99.28
2002	CS	T	21-40 fa	Spotfin Sculpin	<i>Icelinus tenuis</i>	unsexed	0.68	100	3583	100
2002	CS	T	21-40 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	11818.15	30.76	29769960	35.52
2002	CS	T	21-40 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei egg case</i>	unsexed	0.19	57.24	12919	53.78
2002	CS	T	21-40 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	6.97	91.72	19215	90.38
2002	CS	T	21-40 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	1.20	46.45	27779	37.12
2002	CS	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	1.77	61.19	50248	69.07
2002	CS	T	21-40 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	31.53	87.83	30510	88.06
2002	CS	T	21-40 fa	Threadfin Sculpin	<i>Icelinus filamentosus</i>	unsexed	1.97	100	12540	100
2002	CS	T	21-40 fa	Tunicate uniden.	<i>Subphylum Tunicata</i>	unsexed	1.10	100	2437	100
2002	CS	T	21-40 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	1.77	46.57	61308	47.09
2002	CS	T	21-40 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	4.32	86.37	13650	53.48
2002	CS	T	21-40 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	0.20	100	2239	100
2002	CS	T	21-40 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	2.43	84.25	11621	70.32
2002	CS	T	21-40 fa	Widehand Hermit Crab	<i>Elassochirus tenuimanus</i>	unsexed	0.33	71.46	4084	69.18
2002	CS	U	41-60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	0.19	66.2	44521	65.85

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2002	CS	U	41-60 fa	Aluminum	Aluminum	unsexed	0.54	67.16	10211	51.94
2002	CS	U	41-60 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.76	73.55	13153	69.73
2002	CS	U	41-60 fa	Barnacle uniden.	Order Thoracica	unsexed	0.16	100	39638	100
2002	CS	U	41-60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	102.00	65.66	12016	58.47
2002	CS	U	41-60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	23.42	90.51	575907	92.25
2002	CS	U	41-60 fa	Blue Topsnail	<i>Calliostoma ligatum</i>	unsexed	0.02	100	1892	100
2002	CS	U	41-60 fa	Brown Rockfish	<i>Sebastes auriculatus</i>	unsexed	2.19	57.23	13158	43.85
2002	CS	U	41-60 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	16.36	91.59	74270	91.02
2002	CS	U	41-60 fa	Cabezon	<i>Scorpaenichthys marmoratus</i>	unsexed	22.92	100	4558	100
2002	CS	U	41-60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	11.62	96.4	24026	94.07
2002	CS	U	41-60 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	6.61	68.03	33825	76.38
2002	CS	U	41-60 fa	Coho Salmon	<i>Oncorhynchus kisutch</i>	unsexed	0.10	100	2839	100
2002	CS	U	41-60 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	4.01	100	4558	100
2002	CS	U	41-60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.01	100	1317	100
2002	CS	U	41-60 fa	Curlfin Sole	<i>Pleuronichthys decurrens</i>	unsexed	7.72	100	6342	100
2002	CS	U	41-60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	10.77	60.23	1339479	57.19
2002	CS	U	41-60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	70.80	44.58	759262	61.21
2002	CS	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	male	36.19	62.65	40826	59.8
2002	CS	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	female	54.02	81.35	125818	80.86
2002	CS	U	41-60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	2560.95	91.32	11228090	88.9
2002	CS	U	41-60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	11.15	73.58	109763	68.37
2002	CS	U	41-60 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	8.15	74.13	45022	53.82
2002	CS	U	41-60 fa	Glass	<i>Glass</i>	unsexed	26.89	98.17	73978	97.63
2002	CS	U	41-60 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	104.81	70.14	190136	74.16
2002	CS	U	41-60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	19.17	90.03	183064	85.44
2002	CS	U	41-60 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	0.68	100	3950	100
2002	CS	U	41-60 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.18	100	2537	100
2002	CS	U	41-60 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	0.01	100	1317	100
2002	CS	U	41-60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	0.95	91.31	7361	67.46
2002	CS	U	41-60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	14.95	38.92	21375	42.7
2002	CS	U	41-60 fa	Marbled Snailfish	<i>Liparis dennyi</i>	unsexed	0.16	100	7928	100
2002	CS	U	41-60 fa	Marine vegetation	Marine vegetation	unsexed	58.81	86.18	9247	34.98
2002	CS	U	41-60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	459.81	96.67	625457	89.56
2002	CS	U	41-60 fa	Miscellaneous material		unsexed	85.00	72.62	7029	68.19
2002	CS	U	41-60 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	0.68	100	2114	100
2002	CS	U	41-60 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	5.27	67.95	147120	63.25
2002	CS	U	41-60 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	88.90	92.32	387292	92.27
2002	CS	U	41-60 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	0.26	67.65	15190	69.27
2002	CS	U	41-60 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	1.57	67.37	45383	72.95
2002	CS	U	41-60 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	2.94	58.57	28434	56.82
2002	CS	U	41-60 fa	Other man-made debris	Other man-made debris	unsexed	0.01	100	1317	100
2002	CS	U	41-60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	3.54	55.67	6269	54.04
2002	CS	U	41-60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	0.14	100	2633	100
2002	CS	U	41-60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	5.15	49.91	64093	57.08
2002	CS	U	41-60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	7.12	74	149244	77.24
2002	CS	U	41-60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	0.74	100	4652	100

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								Estimate		
2002	CS	U	41-60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	62.60	29.61	840354	37.22
2002	CS	U	41-60 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	0.52	100	1591	100
2002	CS	U	41-60 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	0.12	100	1317	100
2002	CS	U	41-60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	12.85	69.05	159724	71.18
2002	CS	U	41-60 fa	Plastic	Plastic	unsexed	14.17	95.83	14365	88.38
2002	CS	U	41-60 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	2.22	97.64	52934	96.72
2002	CS	U	41-60 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.09	100	7570	100
2002	CS	U	41-60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	38.88	79.19	76950	70.21
2002	CS	U	41-60 fa	Red Irish Lord	<i>Hemilepidotus hemilepidotus</i>	unsexed	18.62	59.61	31570	62.1
2002	CS	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	male	5.83	100	12774	100
2002	CS	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	female	2.29	100	12774	100
2002	CS	U	41-60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	4.25	79.23	5535	73.88
2002	CS	U	41-60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	17.76	42.93	242107	43.64
2002	CS	U	41-60 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	0.42	55.89	9896	60.15
2002	CS	U	41-60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.27	59.81	8318	56.11
2002	CS	U	41-60 fa	Rosy Tritonia	<i>Tritonia diomedea</i>	unsexed	0.33	100	2839	100
2002	CS	U	41-60 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.08	100	2537	100
2002	CS	U	41-60 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.09	100	4558	100
2002	CS	U	41-60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	4.34	58.04	16993	66.92
2002	CS	U	41-60 fa	Sea cucumber uniden.	<i>Class Holothuroidea</i>	unsexed	0.05	100	4558	100
2002	CS	U	41-60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.38	47.47	16309	45.73
2002	CS	U	41-60 fa	Shortscale Eulaid	<i>Eualus suckleyi</i>	unsexed	0.02	100	9462	100
2002	CS	U	41-60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	0.05	100	6363	100
2002	CS	U	41-60 fa	Sixgill Shark	<i>Hexanchus griseus</i>	unsexed	455.75	100	4558	100
2002	CS	U	41-60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	58.93	68.43	943881	61.66
2002	CS	U	41-60 fa	Slipper Sea Cucumber	<i>Psolus chitonoides</i>	unsexed	0.00	100	4558	100
2002	CS	U	41-60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	2.73	61.05	77285	60.69
2002	CS	U	41-60 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	3.36	49.62	11936	44.36
2002	CS	U	41-60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	111.45	47.49	39369	48.08
2002	CS	U	41-60 fa	Spiny Lebtheid	<i>Lebbeus groenlandicus</i>	unsexed	0.38	55.19	97839	58.97
2002	CS	U	41-60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	7.01	60.63	136164	56.57
2002	CS	U	41-60 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	1.70	61.64	20489	55.12
2002	CS	U	41-60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	1.23	90.01	53800	84.13
2002	CS	U	41-60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	10019.26	35.59	38377989	49.24
2002	CS	U	41-60 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei egg case</i>	unsexed	0.04	100	4228	100
2002	CS	U	41-60 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	0.10	100	2839	100
2002	CS	U	41-60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.05	100	2537	100
2002	CS	U	41-60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	14.28	54.73	10671	41.56
2002	CS	U	41-60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	5.56	75.28	279360	75.65
2002	CS	U	41-60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	11.77	55.64	86838	68.32
2002	CS	U	41-60 fa	White-spotted Rose Anemone	<i>Urticina lofotenensis</i>	unsexed	1.11	100	2839	100
2002	CS	V	>60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	0.31	85.39	53493	78.48
2002	CS	V	>60 fa	Aluminum	Aluminum	unsexed	0.54	42.39	19701	37.01
2002	CS	V	>60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	2.70	74.35	5373	68.16
2002	CS	V	>60 fa	Bering Eelpout	<i>Lycodes beringi</i>	unsexed	1.37	42.08	25629	42.77
2002	CS	V	>60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	18.44	100	2159	100

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass Estimate Coefficient of Variation		Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
2002	CS	V	>60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	1.17	100	24788	100	
2002	CS	V	>60 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	0.07	100	3648	100	
2002	CS	V	>60 fa	Brown Cat Shark	<i>Apristurus brunneus</i>	unsexed	2.57	63.6	10291	57.08	
2002	CS	V	>60 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	0.37	100	9994	100	
2002	CS	V	>60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	2.10	100	3331	100	
2002	CS	V	>60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.07	100	6534	100	
2002	CS	V	>60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	208.75	39.45	962457	38.57	
2002	CS	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	female	8.63	40.45	18187	39.36	
2002	CS	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	male	16.70	33.9	21138	34.03	
2002	CS	V	>60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	2204.02	42.8	7742967	42.75	
2002	CS	V	>60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	2.09	50.18	18754	45.15	
2002	CS	V	>60 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	0.23	100	9802	100	
2002	CS	V	>60 fa	Giant Pacific Octopus	<i>Enteroctopus dofleini</i>	unsexed	31.78	100	2889	100	
2002	CS	V	>60 fa	Glass	Glass	unsexed	23.92	81.16	38958	63.55	
2002	CS	V	>60 fa	Graceful Kelp Crab	<i>Pugettia gracilis</i>	unsexed	0.04	100	3541	100	
2002	CS	V	>60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	3.85	85.79	40209	70	
2002	CS	V	>60 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.07	100	3541	100	
2002	CS	V	>60 fa	Krill uniden.	Order Euphausiacea	unsexed	0.06	67.98	42186	70.64	
2002	CS	V	>60 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	16.91	60.93	13921	58.15	
2002	CS	V	>60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	10.33	72.76	32211	58.55	
2002	CS	V	>60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	93.14	29.33	117162	24.42	
2002	CS	V	>60 fa	Magister Armhook Squid	<i>Berryteuthis magister</i>	unsexed	0.17	100	2889	100	
2002	CS	V	>60 fa	Marbled Snailfish	<i>Liparis dennyi</i>	unsexed	0.10	100	3267	100	
2002	CS	V	>60 fa	Marine vegetation	Marine vegetation	unsexed	870.80	93.25	19174	28.52	
2002	CS	V	>60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	139.79	29.04	447123	30.79	
2002	CS	V	>60 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	0.14	100	3541	100	
2002	CS	V	>60 fa	Mottled Anemone	<i>Urticina crassicornis</i>	unsexed	0.15	100	3648	100	
2002	CS	V	>60 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	51.65	99.59	1055000	99.67	
2002	CS	V	>60 fa	Other man-made debris	Other man-made debris	unsexed	15.08	67.32	10580	55.91	
2002	CS	V	>60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	80.20	34.58	38443	29.41	
2002	CS	V	>60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	171.12	33.66	507211	28.17	
2002	CS	V	>60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	0.10	100	2562	100	
2002	CS	V	>60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	0.25	100	2484	100	
2002	CS	V	>60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	1.61	39.27	16441	32.72	
2002	CS	V	>60 fa	Phoenician Whelk	<i>Neptunea phoenicea</i>	unsexed	0.20	100	2889	100	
2002	CS	V	>60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	1.09	58.65	7828	53.85	
2002	CS	V	>60 fa	Plastic	Plastic	unsexed	3.50	38.77	20678	33.88	
2002	CS	V	>60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	30.14	43.81	49195	40.18	
2002	CS	V	>60 fa	Red Irish Lord	<i>Hemilepidotus hemilepidotus</i>	unsexed	2.48	100	6534	100	
2002	CS	V	>60 fa	Red Rock Crab	<i>Cancer productus</i>	female	1.06	100	3541	100	
2002	CS	V	>60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	3.47	51.76	48176	55.6	
2002	CS	V	>60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	1.01	53.86	27482	61.64	
2002	CS	V	>60 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.34	100	10455	100	
2002	CS	V	>60 fa	Sand Rose Anemone	<i>Urticina columbiana</i>	unsexed	0.50	100	3331	100	
2002	CS	V	>60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	58.46	42.19	166258	43.47	
2002	CS	V	>60 fa	Sea cucumber uniden.	<i>Class Holothuroidea</i>	unsexed	0.17	100	3331	100	

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass Estimate Coefficient of Variation		Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Coefficient of Variation	Abundance Estimate		
2002	CS	V	>60 fa	Sea Lemon	<i>Anisodoris nobilis</i>	unsexed	0.16	100	3267	100	
2002	CS	V	>60 fa	Shortspine Thornyhead	<i>Sebastolobus alascanus</i>	unsexed	1.02	100	3648	100	
2002	CS	V	>60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	1.41	32.98	126198	32.49	
2002	CS	V	>60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	10.10	38.57	195808	39.36	
2002	CS	V	>60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	273.57	18.11	265183	19.68	
2002	CS	V	>60 fa	Spiny Lebeid	<i>Lebbeus groenlandicus</i>	unsexed	0.00	100	3267	100	
2002	CS	V	>60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	2.12	83.67	52823	86.6	
2002	CS	V	>60 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	2.14	66.44	11668	54.89	
2002	CS	V	>60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	8748.83	14.97	19250836	11.51	
2002	CS	V	>60 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei egg case</i>	unsexed	0.08	54.99	12985	55.61	
2002	CS	V	>60 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.39	100	2159	100	
2002	CS	V	>60 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.03	100	3331	100	
2002	CS	V	>60 fa	Sweet Potato Sea Cucumber	<i>Molpadiida intermedia</i>	unsexed	1.48	54.06	25132	55.08	
2002	CS	V	>60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	3.83	29.55	204753	34.15	
2002	CS	V	>60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	16.16	47.43	52811	49.06	
2002	CS	V	>60 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	3.60	74.07	17685	70.96	
2002	HC	S	5-20 fa	Abundant Sea Cucumber	<i>Pentamera populifera</i>	unsexed	0.96	86.91	57936	85.62	
2002	HC	S	5-20 fa	Aluminum	<i>Aluminum</i>	unsexed	2.41	47.59	47847	42.83	
2002	HC	S	5-20 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.06	100	2865	100	
2002	HC	S	5-20 fa	Big Skate	<i>Raja binoculata</i>	unsexed	9.26	81.03	6142	64.75	
2002	HC	S	5-20 fa	Big Skate egg case	<i>Raja binoculata egg case</i>	unsexed	0.98	100	3912	100	
2002	HC	S	5-20 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	31.81	98.12	1204012	98.27	
2002	HC	S	5-20 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	0.10	100	13109	100	
2002	HC	S	5-20 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	1.47	100	5868	100	
2002	HC	S	5-20 fa	California Market Squid	<i>Loigo opalescens</i>	unsexed	0.06	100	1433	100	
2002	HC	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	36.51	75.13	36502	79.5	
2002	HC	S	5-20 fa	Clam uniden.	<i>Class Bivalvia</i>	unsexed	0.24	68.87	181531	97.36	
2002	HC	S	5-20 fa	Clown Nudibranch	<i>Triopha catalinae</i>	unsexed	0.02	100	1956	100	
2002	HC	S	5-20 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	16.66	100	54766	100	
2002	HC	S	5-20 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.02	68.44	11025	64.62	
2002	HC	S	5-20 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.03	100	5295	100	
2002	HC	S	5-20 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	7.10	100	106508	100	
2002	HC	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	male	74.68	42.85	123278	41.72	
2002	HC	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	female	81.48	65.76	219834	71.31	
2002	HC	S	5-20 fa	Eastern Softshell	<i>Mya arenaria</i>	unsexed	7.17	97.54	234156	98.11	
2002	HC	S	5-20 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	145.69	38.5	1227305	41.72	
2002	HC	S	5-20 fa	False Ochre Star	<i>Easterias troschelii</i>	unsexed	7.28	100	13692	100	
2002	HC	S	5-20 fa	Fish-eating Star	<i>Stylasterias forreri</i>	unsexed	1.23	100	3277	100	
2002	HC	S	5-20 fa	Fishing gear	<i>Fishing gear</i>	unsexed	3.38	60.73	11757	43.3	
2002	HC	S	5-20 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	1.41	100	42603	100	
2002	HC	S	5-20 fa	Glass	<i>Glass</i>	unsexed	8.59	57.42	27824	51.49	
2002	HC	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	male	24.71	66.62	285457	71.49	
2002	HC	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	female	18.50	67.36	372399	65.3	
2002	HC	S	5-20 fa	Graceful Kelp Crab	<i>Pugettia gracilis</i>	unsexed	0.00	100	1433	100	
2002	HC	S	5-20 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	28.18	65.13	49394	66.13	
2002	HC	S	5-20 fa	Grunt Sculpin	<i>Rhamphocottus richardsoni</i>	unsexed	0.10	100	3453	100	

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								Estimate		
2002	HC	S	5-20 fa	Hermit crabs uniden.	Paguridae	unsexed	0.20	100	1956	100
2002	HC	S	5-20 fa	Leather Star	Dermasterias imbricata	unsexed	3.29	100	3912	100
2002	HC	S	5-20 fa	Lingcod	Ophiodon elongatus	unsexed	0.55	100	1956	100
2002	HC	S	5-20 fa	Lion's Mane Jelly	Cyanea capillata	unsexed	9.77	65.8	21174	58.18
2002	HC	S	5-20 fa	Longnose Skate	Raja rhina	unsexed	8.32	100	4916	100
2002	HC	S	5-20 fa	Longnose Skate egg case	Raja rhina egg case	unsexed	0.08	100	1956	100
2002	HC	S	5-20 fa	Longspine Combfish	Zaniolepis latipinnis	unsexed	3.34	72.68	66114	71.58
2002	HC	S	5-20 fa	Marine vegetation	Marine vegetation	unsexed	103.93	67.13	5027	47.82
2002	HC	S	5-20 fa	Metridium uniden.	Metridium sp.	unsexed	79.90	51.96	488736	39.25
2002	HC	S	5-20 fa	Milky Venus	Compsomyax subdiaphana	unsexed	0.10	100	3453	100
2002	HC	S	5-20 fa	Northern Rock Sole	Lepidopsetta polyxystra	unsexed	3.03	100	7824	100
2002	HC	S	5-20 fa	Northern Ronquil	Ronquilus jordani	unsexed	0.08	100	3277	100
2002	HC	S	5-20 fa	Northern Sculpin	Icelinus borealis	unsexed	0.02	100	1639	100
2002	HC	S	5-20 fa	Orange Burrowing Sea Cucumber	Cucumaria miniata	unsexed	0.49	100	5868	100
2002	HC	S	5-20 fa	Other man-made debris	Other man-made debris	unsexed	15.56	57.62	7790	37.64
2002	HC	S	5-20 fa	Pacific Herring	Clupea pallasii	unsexed	8.93	75.79	374669	89.84
2002	HC	S	5-20 fa	Pacific Sanddab	Citharichthys sordidus	unsexed	33.33	97.77	194680	97.25
2002	HC	S	5-20 fa	Pacific Staghorn Sculpin	Leptocottus armatus	unsexed	2.02	78.69	25623	66.19
2002	HC	S	5-20 fa	Pacific Tomcod	Microgadus proximus	unsexed	3.83	100	131087	100
2002	HC	S	5-20 fa	Pink Short-Spined Star	Pisaster brevispinus	unsexed	129.04	98.6	66670	92.95
2002	HC	S	5-20 fa	Plainfin Midshipman	Porichthys notatus	unsexed	78.13	42.06	1513475	41.46
2002	HC	S	5-20 fa	Plastic	Plastic	unsexed	1.65	49.01	47855	45.23
2002	HC	S	5-20 fa	Polychaete worm uniden.	Class Polychaeta	unsexed	0.32	56.86	27085	51.58
2002	HC	S	5-20 fa	Quillback Rockfish	Sebastes maliger	unsexed	0.66	100	1639	100
2002	HC	S	5-20 fa	Rainbow Nudibranch	Dendronotus iris	unsexed	0.04	100	1956	100
2002	HC	S	5-20 fa	Red Rock Crab	Cancer productus	female	4.24	64.84	24844	64.69
2002	HC	S	5-20 fa	Red Rock Crab	Cancer productus	male	12.14	62.07	29305	65.11
2002	HC	S	5-20 fa	Rex Sole	Glyptocephalus zachirus	unsexed	3.41	100	58989	100
2002	HC	S	5-20 fa	Rosy Tritonia	Tritonia diomedea	unsexed	17.73	97.42	67192	72.94
2002	HC	S	5-20 fa	Roughback Sculpin	Chitonotus pugetensis	unsexed	0.62	64.55	41865	67.37
2002	HC	S	5-20 fa	Sand Sole	Psettichthys melanostictus	unsexed	9.24	37.06	53114	39.43
2002	HC	S	5-20 fa	Sand Star	Luidia foliolata	unsexed	0.06	100	2072	100
2002	HC	S	5-20 fa	Sea Lemon	Anisodoris nobilis	unsexed	0.08	100	1956	100
2002	HC	S	5-20 fa	Sea whip uniden.	Virgulariidae	unsexed	0.21	100	3277	100
2002	HC	S	5-20 fa	Shiner Perch	Cymatogaster aggregata	unsexed	2.07	96.23	92474	93.65
2002	HC	S	5-20 fa	Slender Sole	Lyopsetta exilis	unsexed	17.79	87.01	731831	91.88
2002	HC	S	5-20 fa	Slim Sculpin	Radulinus asprellus	unsexed	0.10	100	13109	100
2002	HC	S	5-20 fa	Snake Prickleback	Lumpenus sagitta	unsexed	0.03	100	1639	100
2002	HC	S	5-20 fa	Southern Rock Sole	Lepidopsetta bilineata	unsexed	147.40	73.91	436048	64.55
2002	HC	S	5-20 fa	Speckled Sanddab	Citharichthys stigmatus	unsexed	2.44	70.8	69331	70.27
2002	HC	S	5-20 fa	Spot Prawn	Pandalus platyceros	unsexed	129.84	100	6107022	100
2002	HC	S	5-20 fa	Spotted Ratfish	Hydrolagus colliei	unsexed	264.74	66.74	471116	64.85
2002	HC	S	5-20 fa	Starry Flounder	Platichthys stellatus	unsexed	102.61	66.4	155287	72.4
2002	HC	S	5-20 fa	Striped Nudibranch	Armina californica	unsexed	0.25	100	11736	100
2002	HC	S	5-20 fa	Sturgeon Poacher	Podothecus accipenserinus	unsexed	0.15	88.16	3595	64.9
2002	HC	S	5-20 fa	Sunflower Star	Pycnopodia helianthoides	unsexed	53.33	81.39	110820	72.63

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2002	HC	S	5-20 fa	Tubesnout	<i>Aulorhynchus flavidus</i>	unsexed	0.06	100	9780	100
2002	HC	S	5-20 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	0.20	100	1956	100
2002	HC	T	21-40 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	0.09	97.98	11596	85.81
2002	HC	T	21-40 fa	Aluminum	<i>Aluminum</i>	unsexed	0.20	66.87	7837	65.16
2002	HC	T	21-40 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	3.95	45.46	42752	44.64
2002	HC	T	21-40 fa	Axe Yoldia	<i>Megayoldia thraciaeformis</i>	unsexed	0.02	100	3380	100
2002	HC	T	21-40 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	60.25	43.27	2454221	51.77
2002	HC	T	21-40 fa	Blackfin Sculpin	<i>Malacocottus kincaidi</i>	unsexed	6.47	67.6	367674	61.39
2002	HC	T	21-40 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	1.84	56.23	121792	37.25
2002	HC	T	21-40 fa	Bluebarred Prickleback	<i>Plectobranchus evides</i>	unsexed	0.02	100	1690	100
2002	HC	T	21-40 fa	Brown Rockfish	<i>Sebastes auriculatus</i>	unsexed	0.60	100	4711	100
2002	HC	T	21-40 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	1.44	64.5	150787	67
2002	HC	T	21-40 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	4.85	59.39	38220	58.84
2002	HC	T	21-40 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.03	100	8740	100
2002	HC	T	21-40 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	2.80	96.59	415252	97.46
2002	HC	T	21-40 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	10.16	27.77	195723	24.69
2002	HC	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	male	156.63	40.66	233522	39.51
2002	HC	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	female	451.23	35.68	1048155	36.45
2002	HC	T	21-40 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	285.61	34.46	2416122	50.02
2002	HC	T	21-40 fa	Fishing gear	<i>Fishing gear</i>	unsexed	47.89	62.17	48904	84.41
2002	HC	T	21-40 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	18.15	16.22	374543	27.93
2002	HC	T	21-40 fa	Glass	<i>Glass</i>	unsexed	23.26	33.45	42288	32.13
2002	HC	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	male	0.07	100	5904	100
2002	HC	T	21-40 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	12.51	57.79	37753	48.64
2002	HC	T	21-40 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	0.04	100	3126	100
2002	HC	T	21-40 fa	Hairy Crab	<i>Hapalogaster mertensii</i>	unsexed	0.20	100	5904	100
2002	HC	T	21-40 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	10.10	78.66	22145	48.45
2002	HC	T	21-40 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	7.70	42.09	30982	36.36
2002	HC	T	21-40 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	471.44	88.69	7749	37.2
2002	HC	T	21-40 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	1214.06	67.06	2657161	65.76
2002	HC	T	21-40 fa	Miscellaneous material		unsexed	95.62	58.51	13741	47.4
2002	HC	T	21-40 fa	Northern Ronquil	<i>Ronquilus jordani</i>	unsexed	0.64	65.66	22022	65.23
2002	HC	T	21-40 fa	Other man-made debris	<i>Other man-made debris</i>	unsexed	11.93	99.27	3027	63.31
2002	HC	T	21-40 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	9.20	42.87	98289	44.53
2002	HC	T	21-40 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	346.36	90.74	5304002	89.6
2002	HC	T	21-40 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	68.46	35.57	393528	36.86
2002	HC	T	21-40 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	1.67	79.28	9811	83.46
2002	HC	T	21-40 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	42.96	41.89	874213	37.47
2002	HC	T	21-40 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	2.07	97.49	62697	97.24
2002	HC	T	21-40 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	23.63	96.68	14984	45.49
2002	HC	T	21-40 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	389.42	30.2	5974947	32.8
2002	HC	T	21-40 fa	Plastic	<i>Plastic</i>	unsexed	5.43	100	12562	100
2002	HC	T	21-40 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	1.19	100	49524	100
2002	HC	T	21-40 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	1.12	86.7	9030	67.58
2002	HC	T	21-40 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.25	100	1570	100
2002	HC	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	male	16.08	63.37	32509	58.92

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								Estimate		
2002	HC	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	female	11.82	38.56	73836	48.86
2002	HC	T	21-40 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	1.07	100	30588	100
2002	HC	T	21-40 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	4.66	69.62	103118	49.26
2002	HC	T	21-40 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.62	64.26	9030	67.58
2002	HC	T	21-40 fa	Rosy Tritonia	<i>Tritonia diomedea</i>	unsexed	0.49	100	12562	100
2002	HC	T	21-40 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.28	100	7816	100
2002	HC	T	21-40 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.08	100	1690	100
2002	HC	T	21-40 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	17.55	93.06	46424	77.15
2002	HC	T	21-40 fa	Sea whip uniden.	<i>Virgulariidae</i>	unsexed	0.92	52.54	44724	32.87
2002	HC	T	21-40 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.39	60.23	22637	53.29
2002	HC	T	21-40 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.02	100	3126	100
2002	HC	T	21-40 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	0.84	100	57459	100
2002	HC	T	21-40 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	82.54	25.79	2759185	40.12
2002	HC	T	21-40 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	1.25	81.29	150735	83.67
2002	HC	T	21-40 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.07	100	1690	100
2002	HC	T	21-40 fa	Southern Rock Sole	<i>Lepidotsetta bilineata</i>	unsexed	65.74	77.05	318996	82.64
2002	HC	T	21-40 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	140.30	73.42	335516	91.05
2002	HC	T	21-40 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	18.52	57.6	69807	49.45
2002	HC	T	21-40 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	295.42	47.28	13065707	56.08
2002	HC	T	21-40 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	712.74	48.06	2397491	45.2
2002	HC	T	21-40 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	0.03	100	2913	100
2002	HC	T	21-40 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	4.39	83.23	9081	63.31
2002	HC	T	21-40 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.15	70.35	4603	66.51
2002	HC	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	1.55	96.66	29479	88.67
2002	HC	T	21-40 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	94.19	67.99	130625	36.16
2002	HC	T	21-40 fa	Sweet Potato Sea Cucumber	<i>Molpadia intermedia</i>	unsexed	0.03	100	5070	100
2002	HC	T	21-40 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	2.97	51.08	68225	51.66
2002	HC	T	21-40 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	7.04	81.57	52212	76.41
2002	HC	T	21-40 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.94	70.36	13720	64.16
2002	HC	T	21-40 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	0.16	100	1457	100
2002	HC	U	41-60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	4.22	61.7	641492	64.49
2002	HC	U	41-60 fa	Aluminum	Aluminum	unsexed	0.02	100	1042	100
2002	HC	U	41-60 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.06	80.84	2278	63.27
2002	HC	U	41-60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	35.72	99.78	3443	68.93
2002	HC	U	41-60 fa	Big Skate egg case	<i>Raja binoculata</i> egg case	unsexed	0.43	100	1112	100
2002	HC	U	41-60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	7.18	49.76	217530	56.48
2002	HC	U	41-60 fa	Blackfin Poacher	<i>Bathyagonus nigripinnis</i>	unsexed	0.02	63.26	3428	67.93
2002	HC	U	41-60 fa	Blackfin Sculpin	<i>Malacocottus kincaidi</i>	unsexed	11.77	45.89	1167491	43.32
2002	HC	U	41-60 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	0.06	52.08	4349	50.77
2002	HC	U	41-60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.01	100	2263	100
2002	HC	U	41-60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	1.67	100	2225	100
2002	HC	U	41-60 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	6.09	91.38	6771	81.61
2002	HC	U	41-60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.02	63.26	6855	67.93
2002	HC	U	41-60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.01	100	2225	100
2002	HC	U	41-60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	5.73	51.27	103163	81.07
2002	HC	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	male	49.16	19.49	77595	26.37

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2002	HC	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	female	89.06	35.96	174923	37.86
2002	HC	U	41-60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	167.92	83.22	732149	76.79
2002	HC	U	41-60 fa	Fish-eating Star	<i>Stylasterias forsteri</i>	unsexed	0.34	100	1131	100
2002	HC	U	41-60 fa	Fishing gear	<i>Fishing gear</i>	unsexed	81.03	52.92	12119	47.43
2002	HC	U	41-60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	1.65	87.98	15793	83.41
2002	HC	U	41-60 fa	Glass	<i>Glass</i>	unsexed	0.56	100	1128	100
2002	HC	U	41-60 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	1.69	100	3337	100
2002	HC	U	41-60 fa	Greenstriped Rockfish	<i>Sebastodes elongatus</i>	unsexed	0.74	100	3384	100
2002	HC	U	41-60 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.01	100	1112	100
2002	HC	U	41-60 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	0.09	100	24888	100
2002	HC	U	41-60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	13.78	49.49	21247	53.45
2002	HC	U	41-60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	9.97	50.06	19481	55.15
2002	HC	U	41-60 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	5.51	62.93	3424	44.73
2002	HC	U	41-60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	24.36	76.99	38619	55.85
2002	HC	U	41-60 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	0.01	100	1131	100
2002	HC	U	41-60 fa	Other man-made debris	<i>Other man-made debris</i>	unsexed	0.57	100	1131	100
2002	HC	U	41-60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	61.61	90.19	584911	84.22
2002	HC	U	41-60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	1.45	33.09	25477	30.32
2002	HC	U	41-60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	10.93	60.48	55914	62.31
2002	HC	U	41-60 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	0.12	100	1112	100
2002	HC	U	41-60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	14.62	53.57	274909	52.54
2002	HC	U	41-60 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	0.29	70.11	3368	68.49
2002	HC	U	41-60 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	4.36	77.63	2105	63.4
2002	HC	U	41-60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	47.69	77.54	745469	79.45
2002	HC	U	41-60 fa	Quillback Rockfish	<i>Sebastodes maliger</i>	unsexed	3.26	82.95	6755	63.36
2002	HC	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	male	7.32	72.55	21400	73.37
2002	HC	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	female	4.69	60.63	27015	66.37
2002	HC	U	41-60 fa	Redstripe Rockfish	<i>Sebastodes proriger</i>	unsexed	0.30	100	1042	100
2002	HC	U	41-60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	3.20	53.66	45862	60.37
2002	HC	U	41-60 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	0.27	100	5562	100
2002	HC	U	41-60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.06	100	1112	100
2002	HC	U	41-60 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.03	100	1112	100
2002	HC	U	41-60 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.03	100	1128	100
2002	HC	U	41-60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	0.45	76.59	2158	63.55
2002	HC	U	41-60 fa	Sea whip uniden.	<i>Virgulariidae</i>	unsexed	0.10	64.92	3151	66.38
2002	HC	U	41-60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.48	91.78	21182	82.33
2002	HC	U	41-60 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.04	100	33938	100
2002	HC	U	41-60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	7.61	83.75	767863	80.1
2002	HC	U	41-60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	38.82	48	959151	43.07
2002	HC	U	41-60 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.01	100	1112	100
2002	HC	U	41-60 fa	Southern Rock Sole	<i>Lepidotsetta bilineata</i>	unsexed	2.79	97.59	7806	83.82
2002	HC	U	41-60 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	0.04	100	1112	100
2002	HC	U	41-60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	46.64	45.92	80913	69.34
2002	HC	U	41-60 fa	Splitnose Rockfish	<i>Sebastodes diploproa</i>	unsexed	2.03	64.06	6426	67.32
2002	HC	U	41-60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	31.50	53.53	1282612	56.58
2002	HC	U	41-60 fa	Spotted Ratfish	<i>Hydrolagus collei</i>	unsexed	1393.70	56.76	3531483	56.75

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass Estimate Coefficient of Variation		Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Coefficient of Variation	Abundance Estimate		
2002	HC	U	41-60 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei</i> egg case	unsexed	0.01	100	1112	100	
2002	HC	U	41-60 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	0.28	68.79	31475	63.25	
2002	HC	U	41-60 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	0.67	100	1128	100	
2002	HC	U	41-60 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.02	100	1128	100	
2002	HC	U	41-60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.06	100	1112	100	
2002	HC	U	41-60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	50.34	89.18	29874	71.67	
2002	HC	U	41-60 fa	Tadpole Sculpin	<i>Psychrolutes paradoxus</i>	unsexed	0.14	100	30453	100	
2002	HC	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	1.33	93.04	9471	86.46	
2002	HC	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	3.64	96.21	12633	89.39	
2002	HC	U	41-60 fa	Threadfin Sculpin	<i>Icelinus filamentosus</i>	unsexed	0.69	63.85	5646	65.09	
2002	HC	U	41-60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	0.68	38.4	10029	37.94	
2002	HC	U	41-60 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	0.11	100	993	100	
2002	HC	V	>60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	0.60	97.38	79792	98.02	
2002	HC	V	>60 fa	Aluminum	Aluminum	unsexed	0.03	64.57	2775	64.57	
2002	HC	V	>60 fa	Axe Yoldia	<i>Megayoldia thraciaeformis</i>	unsexed	0.05	80.09	3687	64.6	
2002	HC	V	>60 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	0.49	100	3911	100	
2002	HC	V	>60 fa	Bering Eelpout	<i>Lycodes beringi</i>	unsexed	0.04	100	1395	100	
2002	HC	V	>60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	0.20	100	1956	100	
2002	HC	V	>60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	7.23	39.93	206064	39.57	
2002	HC	V	>60 fa	Blackfin Poacher	<i>Bathyagonus nigripinnis</i>	unsexed	0.32	29.42	38159	33.69	
2002	HC	V	>60 fa	Blackfin Sculpin	<i>Malacocottus kincaidi</i>	unsexed	8.20	59.58	530023	47.38	
2002	HC	V	>60 fa	Blue Mud Shrimp	<i>Upogebia pugettensis</i>	unsexed	0.02	100	1904	100	
2002	HC	V	>60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.14	54.03	57567	56.13	
2002	HC	V	>60 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.02	100	3911	100	
2002	HC	V	>60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	12.03	83.8	88308	86.98	
2002	HC	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	male	19.83	56.35	27620	41.92	
2002	HC	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	female	51.44	39.77	113915	32.41	
2002	HC	V	>60 fa	Dwarf Wrymouth	<i>Cryptacanthodes aleutensis</i>	unsexed	0.04	100	1904	100	
2002	HC	V	>60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	105.10	81.71	328248	58.57	
2002	HC	V	>60 fa	Fishing gear	Fishing gear	unsexed	1.00	78.18	5921	35.93	
2002	HC	V	>60 fa	Glassy Tunicate	<i>Ascidia paratropa</i>	unsexed	0.10	100	1956	100	
2002	HC	V	>60 fa	Graceful Crab	<i>Cancer gracilis</i>	female	0.07	100	1359	100	
2002	HC	V	>60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.14	100	1956	100	
2002	HC	V	>60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	0.06	100	3911	100	
2002	HC	V	>60 fa	Heart Urchin	<i>Briaster latifrons</i>	unsexed	48.60	64.73	1862450	62.65	
2002	HC	V	>60 fa	Krill uniden.	Order Euphausiacea	unsexed	0.13	44.19	124704	48.59	
2002	HC	V	>60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	50.07	29.1	103430	28.86	
2002	HC	V	>60 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.06	100	7822	100	
2002	HC	V	>60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	29.48	15.91	66699	21.01	
2002	HC	V	>60 fa	Marine vegetation	Marine vegetation	unsexed	225.08	96.66	7908	26.85	
2002	HC	V	>60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	24.03	58.93	68574	53.37	
2002	HC	V	>60 fa	Mottled Anemone	<i>Urticina crassicornis</i>	unsexed	0.51	100	5867	100	
2002	HC	V	>60 fa	Other man-made debris	Other man-made debris	unsexed	0.17	82.31	3198	65.14	
2002	HC	V	>60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	48.89	30.31	214230	30.82	
2002	HC	V	>60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	1.32	55.38	20808	51.82	
2002	HC	V	>60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	6.23	98.67	72184	97.15	

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate Coefficient of Variation		
2002	HC	V	>60 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	7.92	95.46	7231	80.18
2002	HC	V	>60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	19.47	25.92	220100	28.29
2002	HC	V	>60 fa	Plastic	Plastic	unsexed	0.02	69.11	2759	64.56
2002	HC	V	>60 fa	Polychaete worm uniden.	Class Polychaeta	unsexed	0.07	100	7130	100
2002	HC	V	>60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	13.08	45.32	24070	46.06
2002	HC	V	>60 fa	Red Rock Crab	<i>Cancer productus</i>	male	0.66	100	1956	100
2002	HC	V	>60 fa	Red Rock Crab	<i>Cancer productus</i>	female	2.56	100	11734	100
2002	HC	V	>60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	1.72	70.02	21114	71.88
2002	HC	V	>60 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.04	100	1415	100
2002	HC	V	>60 fa	Sea Nymph uniden.	Family Nereididae	unsexed	0.10	100	1904	100
2002	HC	V	>60 fa	Sea whip uniden.	Virgulariidae	unsexed	0.01	100	1956	100
2002	HC	V	>60 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.26	35.11	162348	34.75
2002	HC	V	>60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	7.48	34.38	820654	35.07
2002	HC	V	>60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	15.15	28.11	502942	28.32
2002	HC	V	>60 fa	Southern Rock Sole	<i>Lepidotsetta bilineata</i>	unsexed	0.93	64.92	2723	64.55
2002	HC	V	>60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	50.65	46.99	27346	37.38
2002	HC	V	>60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	0.16	100	5867	100
2002	HC	V	>60 fa	Splitnose Rockfish	<i>Sebastes diploproa</i>	unsexed	6.55	40.74	23358	47.24
2002	HC	V	>60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	1.21	52.54	48680	46.93
2002	HC	V	>60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	410.93	78.26	812869	80.36
2002	HC	V	>60 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	0.03	65.22	4960	72.68
2002	HC	V	>60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	281.34	99.51	207630	97.63
2002	HC	V	>60 fa	Sweet Potato Sea Cucumber	<i>Molpadia intermedia</i>	unsexed	2.12	71.37	24266	78.09
2002	HC	V	>60 fa	Tadpole Sculpin	<i>Psychrolutes paradoxus</i>	unsexed	0.24	76.04	64773	76.18
2002	HC	V	>60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	8.60	46.42	35748	44.62
2002	HC	V	>60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	3.33	82.52	28731	72.57
2002	HC	V	>60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.74	100	11734	100
2002	HC	V	>60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	7.47	73.9	55897	89.55
2002	SS	S	5-20 fa	Aluminum	Aluminum	unsexed	0.41	56.75	11924	54.67
2002	SS	S	5-20 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.17	100	1877	100
2002	SS	S	5-20 fa	Big Skate	<i>Raja binoculata</i>	unsexed	4.15	84.29	14867	87.23
2002	SS	S	5-20 fa	Big Skate egg case	<i>Raja binoculata</i> egg case	unsexed	0.86	100	2325	100
2002	SS	S	5-20 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	83.77	65.14	3663747	65.77
2002	SS	S	5-20 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	86.84	68.9	910038	71.19
2002	SS	S	5-20 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	2.47	92.1	31094	93.69
2002	SS	S	5-20 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	0.30	67.62	4158	66.07
2002	SS	S	5-20 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	11.27	42.34	586712	37.88
2002	SS	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	104.68	58.2	106433	58.98
2002	SS	S	5-20 fa	Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	unsexed	0.67	100	2230	100
2002	SS	S	5-20 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	2.27	67.85	21124	65.17
2002	SS	S	5-20 fa	Crangonid shrimp uniden.	Crangonidae	unsexed	0.25	65.95	119982	52.1
2002	SS	S	5-20 fa	Danas Blade Shrimp	<i>Spirontocaris lamellicornis</i>	unsexed	0.02	100	1764	100
2002	SS	S	5-20 fa	Diamondback Nudibranch	<i>Tritonia festiva</i>	unsexed	0.03	100	2858	100
2002	SS	S	5-20 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	2.08	82.25	551258	87.45
2002	SS	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	male	1.62	100	3528	100
2002	SS	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	female	0.95	100	3528	100

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2002	SS	S	5-20 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	28.87	22.21	616117	32.66
2002	SS	S	5-20 fa	False Ochre Star	<i>Easterias troschelii</i>	unsexed	3.62	92.45	8740	79.49
2002	SS	S	5-20 fa	Fishing gear	Fishing gear	unsexed	22.69	93.38	10696	81.81
2002	SS	S	5-20 fa	Glass	Glass	unsexed	9.22	61.34	29837	58.63
2002	SS	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	male	48.39	26.26	297228	22.09
2002	SS	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	female	27.84	63.62	397269	64.03
2002	SS	S	5-20 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.12	46.71	17055	50.18
2002	SS	S	5-20 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	2.45	100	8735	100
2002	SS	S	5-20 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.01	100	2858	100
2002	SS	S	5-20 fa	Leather Star	<i>Dermasterias imbricata</i>	unsexed	1.15	100	2804	100
2002	SS	S	5-20 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.02	100	4368	100
2002	SS	S	5-20 fa	Longnose Skate egg case	<i>Raja rhina</i> egg case	unsexed	0.05	100	1764	100
2002	SS	S	5-20 fa	Longspine Combfish	<i>Zaniolepis latipinnis</i>	unsexed	6.49	81.85	130622	80.71
2002	SS	S	5-20 fa	Marine vegetation	Marine vegetation	unsexed	823.00	76.29	12355	40.06
2002	SS	S	5-20 fa	Metridium uniden.	<i>Metridium</i> sp.	unsexed	629.79	70.33	1647350	63.02
2002	SS	S	5-20 fa	Miscellaneous material		unsexed	641.21	100	4368	100
2002	SS	S	5-20 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	1.04	100	2804	100
2002	SS	S	5-20 fa	Northern Rock Sole	<i>Lepidotsetta polyxystra</i>	unsexed	10.97	55.9	239938	61.55
2002	SS	S	5-20 fa	Northern Ronquil	<i>Ronquilus jordani</i>	unsexed	0.03	100	2858	100
2002	SS	S	5-20 fa	Orange Sea Pen	<i>Ptilosarcus gurneyi</i>	unsexed	0.67	69.74	9834	72.72
2002	SS	S	5-20 fa	Other man-made debris	Other man-made debris	unsexed	67.57	66.09	9331	53.89
2002	SS	S	5-20 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	40.06	43.45	2115414	41.5
2002	SS	S	5-20 fa	Pacific Pompano	<i>Peprilus simillimus</i>	unsexed	0.16	100	1833	100
2002	SS	S	5-20 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	4.54	43.08	22950	44.3
2002	SS	S	5-20 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	7.01	29	133811	31.46
2002	SS	S	5-20 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	15.73	33.89	349819	38.49
2002	SS	S	5-20 fa	Padded Sculpin	<i>Artedius fenestralis</i>	unsexed	5.32	65.06	306877	63.24
2002	SS	S	5-20 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	1.05	33.97	34136	33.5
2002	SS	S	5-20 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	269.99	78.21	628786	75.47
2002	SS	S	5-20 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	11.96	40.32	396437	40.22
2002	SS	S	5-20 fa	Plastic	Plastic	unsexed	1.02	81.37	9745	50.35
2002	SS	S	5-20 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.02	100	1833	100
2002	SS	S	5-20 fa	Rainbow Nudibranch	<i>Dendronotus iris</i>	unsexed	0.08	51.11	11790	60.21
2002	SS	S	5-20 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.07	100	1764	100
2002	SS	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	female	3.61	52.26	25287	51.7
2002	SS	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	male	75.90	45.88	183359	42.55
2002	SS	S	5-20 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	0.23	100	17147	100
2002	SS	S	5-20 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.14	100	5607	100
2002	SS	S	5-20 fa	Rosy Tritonia	<i>Tritonia diomedea</i>	unsexed	14.82	100	109361	100
2002	SS	S	5-20 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	36.97	55.96	1689265	54.68
2002	SS	S	5-20 fa	Sand Dollar	<i>Dendraster excentricus</i>	unsexed	0.27	100	10999	100
2002	SS	S	5-20 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	13.89	50.83	129532	50.54
2002	SS	S	5-20 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	19.89	64.27	200843	56.12
2002	SS	S	5-20 fa	Sea Lemon	<i>Anisodoris nobilis</i>	unsexed	0.12	100	1764	100
2002	SS	S	5-20 fa	Sea whip uniden.	<i>Virgulariidae</i>	unsexed	0.09	79.49	4089	66.28
2002	SS	S	5-20 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	29.01	44.01	2329177	49.16

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2002	SS	S	5-20 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.09	100	14290	100
2002	SS	S	5-20 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	0.90	100	2804	100
2002	SS	S	5-20 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	9.42	87.37	442306	87.57
2002	SS	S	5-20 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	12.28	55.06	193311	68.3
2002	SS	S	5-20 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	58.04	34.12	2844181	33.57
2002	SS	S	5-20 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	25.95	53.75	27496	70.36
2002	SS	S	5-20 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	0.56	100	2804	100
2002	SS	S	5-20 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	2.13	65.62	3994	66.06
2002	SS	S	5-20 fa	Squid egg case	<i>Squid egg case</i>	unsexed	0.94	100	22521	100
2002	SS	S	5-20 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	1593.42	51.81	3626934	56.47
2002	SS	S	5-20 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	0.22	91.11	6132	72.91
2002	SS	S	5-20 fa	Striped Seaperch	<i>Embiotoca lateralis</i>	unsexed	0.48	100	11214	100
2002	SS	S	5-20 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	3.31	54.95	155918	54.4
2002	SS	S	5-20 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	108.25	48.12	183526	42.99
2002	SS	S	5-20 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	0.14	100	1764	100
2002	SS	T	21-40 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	7.83	99.97	2538612	99.95
2002	SS	T	21-40 fa	Aluminum	<i>Aluminum</i>	unsexed	0.03	100	1166	100
2002	SS	T	21-40 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.15	100	2332	100
2002	SS	T	21-40 fa	Big Skate	<i>Raja binoculata</i>	unsexed	2.87	36.34	6145	29.58
2002	SS	T	21-40 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	118.90	49.47	4999375	51.22
2002	SS	T	21-40 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	0.91	88.15	47807	83.63
2002	SS	T	21-40 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	182.90	83.07	1367886	85.59
2002	SS	T	21-40 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	0.78	60	11688	58.76
2002	SS	T	21-40 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	8.84	57.11	131482	53.5
2002	SS	T	21-40 fa	California Market Squid	<i>Loilgo opalescens</i>	unsexed	0.31	89.85	11480	86.65
2002	SS	T	21-40 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	5.91	73.37	9194	71.15
2002	SS	T	21-40 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	0.70	77.77	5022	77.77
2002	SS	T	21-40 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	0.56	100	55864	100
2002	SS	T	21-40 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.80	65.42	506387	67.41
2002	SS	T	21-40 fa	Danas Blade Shrimp	<i>Spirontocaris lamellicornis</i>	unsexed	0.10	75.55	23185	68.5
2002	SS	T	21-40 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	4.66	58.76	547577	57.85
2002	SS	T	21-40 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	0.45	100	1166	100
2002	SS	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	male	34.36	76.99	36703	70.34
2002	SS	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	female	17.83	87.47	33875	81.77
2002	SS	T	21-40 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	71.08	52.68	1164135	55.93
2002	SS	T	21-40 fa	False Ochre Star	<i>Easterias troschelii</i>	unsexed	0.41	100	1117	100
2002	SS	T	21-40 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	6.01	63.87	84106	67.07
2002	SS	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	male	26.22	27.98	187852	30.14
2002	SS	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	female	18.16	65.36	221986	64.48
2002	SS	T	21-40 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.03	79.23	2419	65.47
2002	SS	T	21-40 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	2.74	75.41	3572	71.33
2002	SS	T	21-40 fa	Leather Star	<i>Dermasterias imbricata</i>	unsexed	1.38	71.67	2344	65.56
2002	SS	T	21-40 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	0.74	78.76	2732	65.56
2002	SS	T	21-40 fa	Longspine Combfish	<i>Zaniolepis latipinnis</i>	unsexed	0.54	83.28	9058	85.42
2002	SS	T	21-40 fa	Marbled Snailfish	<i>Liparis dennyi</i>	unsexed	0.03	100	2455	100
2002	SS	T	21-40 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	14.21	69.38	3660	48.95

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2002	SS	T	21-40 fa	Metridium uniden.	Metridium sp.	unsexed	404.04	64.95	1901394	85.03
2002	SS	T	21-40 fa	Northern Anchovy	Engraulis mordax	unsexed	0.01	100	1166	100
2002	SS	T	21-40 fa	Northern Rock Sole	Lepidopsetta polyxystra	unsexed	21.04	83.34	135031	81.81
2002	SS	T	21-40 fa	Northern Spearnose Poacher	Agonopsis vulsa	unsexed	0.21	100	6138	100
2002	SS	T	21-40 fa	Orange Sea Pen	Ptilosarcus gurneyi	unsexed	0.45	58.11	5187	52.16
2002	SS	T	21-40 fa	Pacific Hake	Merluccius productus	unsexed	0.16	71.02	5087	65.49
2002	SS	T	21-40 fa	Pacific Herring	Clupea pallasii	unsexed	5.48	61.76	176624	62.5
2002	SS	T	21-40 fa	Pacific Sanddab	Citharichthys sordidus	unsexed	22.50	58.81	109634	58.19
2002	SS	T	21-40 fa	Pacific Staghorn Sculpin	Leptocottus armatus	unsexed	10.82	41.36	140634	35.67
2002	SS	T	21-40 fa	Pacific Tomcod	Microgadus proximus	unsexed	5.95	54.7	136941	51.59
2002	SS	T	21-40 fa	Padded Sculpin	Artedius fenestralis	unsexed	23.48	66.36	3514644	83.05
2002	SS	T	21-40 fa	Pile Perch	Rhacochilus vacca	unsexed	0.12	60.22	4742	53.63
2002	SS	T	21-40 fa	Pink Short-Spined Star	Pisaster brevispinus	unsexed	25.00	64.63	42966	84.34
2002	SS	T	21-40 fa	Plainfin Midshipman	Porichthys notatus	unsexed	21.82	38.51	603475	39.67
2002	SS	T	21-40 fa	Plastic	Plastic	unsexed	0.02	69.41	2407	65.51
2002	SS	T	21-40 fa	Rainbow Nudibranch	Dendronotus iris	unsexed	0.07	82.33	3523	69.88
2002	SS	T	21-40 fa	Red Octopus	Octopus rubescens	unsexed	0.57	100	1430	100
2002	SS	T	21-40 fa	Red Rock Crab	Cancer productus	female	5.32	52.02	24241	42.54
2002	SS	T	21-40 fa	Red Rock Crab	Cancer productus	male	21.87	44.05	54038	45.62
2002	SS	T	21-40 fa	Rex Sole	Glyptocephalus zachirus	unsexed	0.47	55.8	7384	66
2002	SS	T	21-40 fa	Rose Star	Crossaster papposus	unsexed	0.45	97.21	13034	90.61
2002	SS	T	21-40 fa	Rosy Tritonia	Tritonia diomedea	unsexed	60.67	64.58	199371	64.43
2002	SS	T	21-40 fa	Roughback Sculpin	Chitonotus pugetensis	unsexed	26.48	59.19	1106985	58.3
2002	SS	T	21-40 fa	Sand Dollar	Dendraster excentricus	unsexed	0.05	100	1241	100
2002	SS	T	21-40 fa	Sand Sole	Psettichthys melanostictus	unsexed	3.85	44.04	36005	29.05
2002	SS	T	21-40 fa	Sand Star	Luidia foliolata	unsexed	12.03	92.55	46742	60.47
2002	SS	T	21-40 fa	Sea mouse uniden.	Family Aphroditidae	unsexed	0.14	100	1302	100
2002	SS	T	21-40 fa	Shiner Perch	Cymatogaster aggregata	unsexed	2.94	50.42	228451	57
2002	SS	T	21-40 fa	Slender Sole	Lyopsetta exilis	unsexed	0.24	58.84	20451	67.34
2002	SS	T	21-40 fa	Slim Sculpin	Radulinus asprellus	unsexed	0.73	100	50249	100
2002	SS	T	21-40 fa	Soft Sculpin	Psychrolutes sigalutes	unsexed	0.01	100	1241	100
2002	SS	T	21-40 fa	Southern Rock Sole	Lepidopsetta bilineata	unsexed	196.68	98.52	623838	97.42
2002	SS	T	21-40 fa	Speckled Sanddab	Citharichthys stigmatus	unsexed	7.71	43.72	410241	49.24
2002	SS	T	21-40 fa	Spiny Dogfish	Squalus suckleyi	unsexed	19.55	43.59	18869	37.05
2002	SS	T	21-40 fa	Spinyhead Sculpin	Dasy cottus setiger	unsexed	0.06	100	1241	100
2002	SS	T	21-40 fa	Spotted Ratfish	Hydrolagus colliei	unsexed	17.63	55.25	34972	55.92
2002	SS	T	21-40 fa	Starry Flounder	Platichthys stellatus	unsexed	196.60	45.12	225210	38.33
2002	SS	T	21-40 fa	Striped Nudibranch	Armina californica	unsexed	0.02	65.6	2468	65.6
2002	SS	T	21-40 fa	Sturgeon Poacher	Podothecus accipenserinus	unsexed	12.93	87.73	368171	85.7
2002	SS	T	21-40 fa	Sunflower Star	Pycnopodia helianthoides	unsexed	12.65	39.83	19522	52.29
2002	SS	T	21-40 fa	Tadpole Sculpin	Psychrolutes paradoxus	unsexed	0.01	100	1241	100
2002	SS	T	21-40 fa	Vermilion Star	Mediaster aequalis	unsexed	0.52	100	11717	100
2002	SS	U	41-60 fa	Alaskan Pink Shrimp	Pandalus eous	unsexed	2.23	49.04	492552	53.1
2002	SS	U	41-60 fa	Aluminum	Aluminum	unsexed	0.05	63.25	1070	63.25
2002	SS	U	41-60 fa	American Shad	Alosa sapidissima	unsexed	0.75	53.28	7844	51.7
2002	SS	U	41-60 fa	Axe Yoldia	Megayoldia thraciaeformis	unsexed	0.02	100	585	100

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2002	SS	U	41-60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	1.90	63.28	2140	63.25
2002	SS	U	41-60 fa	Big Skate egg case	<i>Raja binoculata egg case</i>	unsexed	0.15	100	533	100
2002	SS	U	41-60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	48.41	22.37	1608745	16.84
2002	SS	U	41-60 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	0.18	96.49	17847	96.49
2002	SS	U	41-60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.01	100	641	100
2002	SS	U	41-60 fa	Brown Rockfish	<i>Sebastes auriculatus</i>	unsexed	0.12	100	528	100
2002	SS	U	41-60 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	0.28	100	1924	100
2002	SS	U	41-60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	0.16	100	1599	100
2002	SS	U	41-60 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.02	100	537	100
2002	SS	U	41-60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	5.81	90.43	7570	90.21
2002	SS	U	41-60 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	0.03	100	5773	100
2002	SS	U	41-60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.10	29.29	59128	32.91
2002	SS	U	41-60 fa	Diamondback Nudibranch	<i>Tritonia festiva</i>	unsexed	0.19	100	3759	100
2002	SS	U	41-60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	3.76	98.11	500693	98.07
2002	SS	U	41-60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	0.29	63.56	1065	63.25
2002	SS	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	male	3.12	80.67	2773	75.72
2002	SS	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	female	3.96	84.22	8212	82.68
2002	SS	U	41-60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	28.28	51.88	342672	43.5
2002	SS	U	41-60 fa	Fishing gear	Fishing gear	unsexed	1.91	100	533	100
2002	SS	U	41-60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	2.10	38.59	15588	36.72
2002	SS	U	41-60 fa	Glass	Glass	unsexed	2.58	100	5131	100
2002	SS	U	41-60 fa	Graceful Crab	<i>Cancer gracilis</i>	male	9.55	9.39	53566	17.79
2002	SS	U	41-60 fa	Graceful Crab	<i>Cancer gracilis</i>	female	3.79	35.76	47041	34.88
2002	SS	U	41-60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.01	100	1066	100
2002	SS	U	41-60 fa	Leather Star	<i>Dermasterias imbricata</i>	unsexed	0.21	100	533	100
2002	SS	U	41-60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	0.05	100	528	100
2002	SS	U	41-60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	1.48	59.18	5915	49.38
2002	SS	U	41-60 fa	Longnose Skate egg case	<i>Raja rhina egg case</i>	unsexed	0.05	100	1283	100
2002	SS	U	41-60 fa	Marine vegetation	Marine vegetation	unsexed	26.36	68.85	2268	31.91
2002	SS	U	41-60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	480.81	76.88	615982	67.19
2002	SS	U	41-60 fa	Northern Anchovy	<i>Engraulis mordax</i>	unsexed	0.03	64.8	1094	63.26
2002	SS	U	41-60 fa	Northern Kelp Crab	<i>Pugettia producta</i>	unsexed	0.03	100	533	100
2002	SS	U	41-60 fa	Other man-made debris	Other man-made debris	unsexed	0.83	100	1066	100
2002	SS	U	41-60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	0.01	100	537	100
2002	SS	U	41-60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	0.22	61.5	3984	57.4
2002	SS	U	41-60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	3.50	64.78	87223	62.6
2002	SS	U	41-60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	11.54	17.66	54114	18.95
2002	SS	U	41-60 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	0.63	28.85	7253	23.9
2002	SS	U	41-60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	9.62	34.13	243676	35.41
2002	SS	U	41-60 fa	Padded Sculpin	<i>Artedius fenestralis</i>	unsexed	0.12	100	8339	100
2002	SS	U	41-60 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	0.02	63.62	1820	70.77
2002	SS	U	41-60 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	4.13	73.18	2773	75.72
2002	SS	U	41-60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	2.28	34.84	51421	17.94
2002	SS	U	41-60 fa	Plastic	Plastic	unsexed	0.70	98.19	1090	63.27
2002	SS	U	41-60 fa	Rainbow Nudibranch	<i>Dendronotus iris</i>	unsexed	0.03	67.23	1659	67.23
2002	SS	U	41-60 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.60	72.95	1816	70.88

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2002	SS	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	female	3.21	78.95	15498	80.4
2002	SS	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	male	9.42	59.9	20943	61.05
2002	SS	U	41-60 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	0.04	100	1057	100
2002	SS	U	41-60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	0.19	79.21	6087	42
2002	SS	U	41-60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.15	53.06	4750	55.16
2002	SS	U	41-60 fa	Rosy Tritonia	<i>Tritonia diomedea</i>	unsexed	4.61	100	11726	100
2002	SS	U	41-60 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.25	46.37	11323	52.67
2002	SS	U	41-60 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	0.36	100	533	100
2002	SS	U	41-60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	21.62	47.06	56043	35.67
2002	SS	U	41-60 fa	Sea mouse uniden.	<i>Family Aphroditidae</i>	unsexed	0.04	100	533	100
2002	SS	U	41-60 fa	Sea whip uniden.	<i>Virgulariidae</i>	unsexed	0.01	100	533	100
2002	SS	U	41-60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	16.22	29.41	858654	31.29
2002	SS	U	41-60 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.01	63.26	8275	73.4
2002	SS	U	41-60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	0.57	25.1	58199	22.97
2002	SS	U	41-60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	2.76	65.64	99284	55.63
2002	SS	U	41-60 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.06	100	4833	100
2002	SS	U	41-60 fa	Slimy Snailfish	<i>Liparis mucosus</i>	unsexed	0.01	100	641	100
2002	SS	U	41-60 fa	Soft Sculpin	<i>Psychrolutes sigalutes</i>	unsexed	0.01	100	585	100
2002	SS	U	41-60 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	0.93	53.2	2877	49.37
2002	SS	U	41-60 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	0.36	18.9	17184	18.36
2002	SS	U	41-60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	4.10	38.76	9938	32.25
2002	SS	U	41-60 fa	Spinyhead Sculpin	<i>Dasyctenus setiger</i>	unsexed	0.21	63.26	2340	63.69
2002	SS	U	41-60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	0.37	76.15	18027	80.79
2002	SS	U	41-60 fa	Spotted Ratfish	<i>Hydrolagus collei</i>	unsexed	91.17	92.72	230066	94.58
2002	SS	U	41-60 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	12.70	39.67	10926	41.45
2002	SS	U	41-60 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	0.01	100	537	100
2002	SS	U	41-60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.01	100	1066	100
2002	SS	U	41-60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	15.97	60.36	47270	59.14
2002	SS	U	41-60 fa	Tadpole Sculpin	<i>Psychrolutes paradoxus</i>	unsexed	0.01	100	528	100
2002	SS	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	0.49	55.38	1727	45.03
2002	SS	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	0.23	100	1114	100
2002	SS	U	41-60 fa	White-spotted Rose Anemone	<i>Urticina lofotensis</i>	unsexed	0.18	100	533	100
2002	SS	V	>60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	0.06	89.67	15140	87.65
2002	SS	V	>60 fa	Aluminum	<i>Aluminum</i>	unsexed	0.07	64.01	1603	69.51
2002	SS	V	>60 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.04	100	468	100
2002	SS	V	>60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	57.54	38.28	1538408	37.34
2002	SS	V	>60 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	1.13	37.28	91731	35.35
2002	SS	V	>60 fa	Brown Rockfish	<i>Sebastes auriculatus</i>	unsexed	0.11	61.47	1151	61.25
2002	SS	V	>60 fa	Bubble Gum Coral	<i>Paragorgia pacifica</i>	unsexed	0.01	100	868	100
2002	SS	V	>60 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	0.10	100	1735	100
2002	SS	V	>60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	0.64	96.63	9257	92.32
2002	SS	V	>60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	34.30	84.82	48925	82.49
2002	SS	V	>60 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	1.77	93.94	9259	92.32
2002	SS	V	>60 fa	Coho Salmon	<i>Oncorhynchus kisutch</i>	unsexed	0.00	100	468	100
2002	SS	V	>60 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	4.41	100	3470	100
2002	SS	V	>60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.28	78.16	25389	68.69

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2002	SS	V	>60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	6.97	59.49	75199	74.99
2002	SS	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	male	9.53	54.54	8009	51.3
2002	SS	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	female	11.82	57.5	24099	61.11
2002	SS	V	>60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	102.26	39.66	716644	33.45
2002	SS	V	>60 fa	False Ochre Star	<i>Easterias troschelii</i>	unsexed	0.23	73.19	1146	61.24
2002	SS	V	>60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	0.04	100	567	100
2002	SS	V	>60 fa	Graceful Crab	<i>Cancer gracilis</i>	female	2.28	63.87	28028	59.57
2002	SS	V	>60 fa	Graceful Crab	<i>Cancer gracilis</i>	male	6.02	44.56	43799	47.77
2002	SS	V	>60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.02	61.31	1336	65.64
2002	SS	V	>60 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	2.07	61.51	3438	61.24
2002	SS	V	>60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	0.16	100	2603	100
2002	SS	V	>60 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.00	100	578	100
2002	SS	V	>60 fa	Leather Star	<i>Dermasterias imbricata</i>	unsexed	10.29	41.09	24235	45.72
2002	SS	V	>60 fa	Lewis's Moon Snail	<i>Euspira lewisi</i>	unsexed	0.07	66.41	1146	61.24
2002	SS	V	>60 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	2.56	100	868	100
2002	SS	V	>60 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.02	100	2270	100
2002	SS	V	>60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	3.29	71.33	4921	34.51
2002	SS	V	>60 fa	Marine vegetation	Marine vegetation	unsexed	27.14	69.97	1619	41.28
2002	SS	V	>60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	14.84	54.37	66961	41.62
2002	SS	V	>60 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	1.30	28.32	5230	34.79
2002	SS	V	>60 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	74.19	64.4	440954	70.78
2002	SS	V	>60 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	0.05	100	1735	100
2002	SS	V	>60 fa	Orange Sea Pen	<i>Ptilosarcus gurneyi</i>	unsexed	0.10	55.88	1619	41.28
2002	SS	V	>60 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	1.80	80.77	23423	82.74
2002	SS	V	>60 fa	Other man-made debris	Other man-made debris	unsexed	86.97	100	1735	100
2002	SS	V	>60 fa	Pacific Gaper	<i>Tresus nuttallii</i>	unsexed	0.02	100	578	100
2002	SS	V	>60 fa	Pacific Geoduck	<i>Panopea abrupta</i>	unsexed	0.09	100	1135	100
2002	SS	V	>60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	0.48	35.86	7622	50.1
2002	SS	V	>60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	5.58	38.93	26866	33.17
2002	SS	V	>60 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	0.89	64.13	10382	74
2002	SS	V	>60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	19.62	18.56	523906	22.89
2002	SS	V	>60 fa	Padded Sculpin	<i>Artedius fenestralis</i>	unsexed	0.07	100	3470	100
2002	SS	V	>60 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	29.68	28.23	13253	22.91
2002	SS	V	>60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	4.89	40.02	109526	41.36
2002	SS	V	>60 fa	Plastic	Plastic	unsexed	1.32	53.11	2939	41.5
2002	SS	V	>60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	2.51	93.74	6373	79.11
2002	SS	V	>60 fa	Red Irish Lord	<i>Hemilepidotus hemilepidotus</i>	unsexed	0.16	61.86	1446	63.25
2002	SS	V	>60 fa	Red Rock Crab	<i>Cancer productus</i>	female	3.21	35.99	14849	31.98
2002	SS	V	>60 fa	Red Rock Crab	<i>Cancer productus</i>	male	7.89	38.26	16263	31.34
2002	SS	V	>60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	1.56	36.7	32257	39.95
2002	SS	V	>60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.66	68.16	20802	60.91
2002	SS	V	>60 fa	Rosy Tritonia	<i>Tritonia diomedea</i>	unsexed	0.92	97.94	45311	97.12
2002	SS	V	>60 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	2.64	96.21	150652	98.1
2002	SS	V	>60 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	0.14	100	578	100
2002	SS	V	>60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	1.14	24.71	8155	19.54
2002	SS	V	>60 fa	Scale Worm uniden.	Family Polynoidae	unsexed	0.00	100	567	100

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								Estimate		
2002	SS	V	>60 fa	Sea mouse uniden.	Family Aphroditidae	unsexed	0.32	62.82	3470	67.07
2002	SS	V	>60 fa	Sea whip uniden.	Virgulariidae	unsexed	0.03	41.28	2787	57.51
2002	SS	V	>60 fa	Shiner Perch	Cymatogaster aggregata	unsexed	0.14	57.24	6886	53.71
2002	SS	V	>60 fa	Sidestriped Shrimp	Pandalus dispar	unsexed	0.02	75.97	2738	80.35
2002	SS	V	>60 fa	Sixgill Shark	Hexanchus griseus	unsexed	11.12	92.21	1446	63.25
2002	SS	V	>60 fa	Slender Sole	Lyopsetta exilis	unsexed	8.16	29.72	326367	31.42
2002	SS	V	>60 fa	Slime Star	Pteraster tesselatus	unsexed	0.02	100	567	100
2002	SS	V	>60 fa	Southern Rock Sole	Lepidopsetta bilineata	unsexed	0.94	53.09	4327	55.96
2002	SS	V	>60 fa	Speckled Sanddab	Citharichthys stigmaeus	unsexed	0.20	93.14	8375	91.77
2002	SS	V	>60 fa	Spiny Dogfish	Squalus suckleyi	unsexed	1.74	90.52	1713	66.41
2002	SS	V	>60 fa	Spinyhead Sculpin	Dasy cottus setiger	unsexed	0.07	100	578	100
2002	SS	V	>60 fa	Sponge uniden.	Phylum Porifera	unsexed	0.06	100	578	100
2002	SS	V	>60 fa	Spot Prawn	Pandalus platyceros	unsexed	0.39	85.41	13101	78.81
2002	SS	V	>60 fa	Spotted Ratfish	Hydrolagus colliei	unsexed	333.94	30.04	737542	30.63
2002	SS	V	>60 fa	Squat Lobster	Munida quadrispina	unsexed	0.01	100	578	100
2002	SS	V	>60 fa	Starry Flounder	Platichthys stellatus	unsexed	1.94	89.27	2566	50.24
2002	SS	V	>60 fa	Stimpson's Sun Star	Solaster stimpsoni	unsexed	0.26	60.72	2781	57.08
2002	SS	V	>60 fa	Sunflower Star	Pycnopodia helianthoides	unsexed	35.27	82.96	27257	66.88
2002	SS	V	>60 fa	Swimming Anemone	Stomphia coccinea	unsexed	0.03	100	578	100
2002	SS	V	>60 fa	Vermilion Star	Mediaster aequalis	unsexed	1.51	47.63	38059	49.22
2002	SS	V	>60 fa	White-spotted Rose Anemone	Urticina lofotensis	unsexed	0.64	100	1135	100
2002	WI	S	5-20 fa	Aluminum	Aluminum	unsexed	0.15	100	2207	100
2002	WI	S	5-20 fa	American Shad	Alosa sapidissima	unsexed	1.57	78.36	39160	55.02
2002	WI	S	5-20 fa	Big Skate	Raja binoculata	unsexed	7.22	66.7	13712	53.85
2002	WI	S	5-20 fa	Blackbelly Eelpout	Lycodes pacificus	unsexed	0.20	64.09	9690	52.83
2002	WI	S	5-20 fa	Buffalo Sculpin	Enophrys bison	unsexed	10.02	99.49	76778	96.69
2002	WI	S	5-20 fa	Butter Sole	Isopsetta isolepis	unsexed	0.58	83.64	3429	64.61
2002	WI	S	5-20 fa	California Market Squid	Loligo opalescens	unsexed	2.65	62.34	152085	71.1
2002	WI	S	5-20 fa	California Sea Cucumber	Parastichopus californicus	unsexed	22.44	100	12927	100
2002	WI	S	5-20 fa	Chinook Salmon	Oncorhynchus tshawytscha	unsexed	1.11	79.24	3983	65.08
2002	WI	S	5-20 fa	C-O Sole	Pleuronichthys coenosus	unsexed	16.81	91.34	90278	87.37
2002	WI	S	5-20 fa	Crangonid shrimp uniden.	Crangonidae	unsexed	0.38	76.35	182791	74.39
2002	WI	S	5-20 fa	Dover Sole	Microstomus pacificus	unsexed	5.77	100	132719	100
2002	WI	S	5-20 fa	Dungeness Crab	Cancer magister	male	452.21	37.23	896427	50.24
2002	WI	S	5-20 fa	Dungeness Crab	Cancer magister	female	564.15	32.72	1846249	35.37
2002	WI	S	5-20 fa	English Sole	Parophrys vetulus	unsexed	639.90	96.28	4221419	86.97
2002	WI	S	5-20 fa	Fishing gear	Fishing gear	unsexed	45.84	66.67	13126	35.04
2002	WI	S	5-20 fa	Flathead Sole	Hippoglossoides elassodon	unsexed	3.40	92.86	55042	95.53
2002	WI	S	5-20 fa	Glass	Glass	unsexed	33.92	94.62	63015	93.59
2002	WI	S	5-20 fa	Graceful Crab	Cancer gracilis	female	1.57	100	36470	100
2002	WI	S	5-20 fa	Graceful Crab	Cancer gracilis	male	13.28	99.42	75148	96.62
2002	WI	S	5-20 fa	Great Sculpin	Myoxocephalus polyacanthocephalus	unsexed	0.08	100	1950	100
2002	WI	S	5-20 fa	Longfin Smelt	Spirinchus thaleichthys	unsexed	0.50	100	29754	100
2002	WI	S	5-20 fa	Longnose Skate	Raja rhina	unsexed	4.45	100	6125	100
2002	WI	S	5-20 fa	Marine vegetation	Marine vegetation	unsexed	65.45	100	6125	100
2002	WI	S	5-20 fa	Metridium uniden.	Metridium sp.	unsexed	380.43	72.65	964745	53.34

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate Coefficient of Variation		
2002	WI	S	5-20 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	0.25	100	1776	100
2002	WI	S	5-20 fa	Other man-made debris	Other man-made debris	unsexed	0.32	100	2145	100
2002	WI	S	5-20 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	0.40	100	11037	100
2002	WI	S	5-20 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	10.99	55.82	323976	47.8
2002	WI	S	5-20 fa	Pacific Pompano	<i>Peprilus simillimus</i>	unsexed	0.07	100	1776	100
2002	WI	S	5-20 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	54.03	99.47	526403	99.63
2002	WI	S	5-20 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	1.60	57.66	17452	58.09
2002	WI	S	5-20 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	4.95	48.22	59596	40.64
2002	WI	S	5-20 fa	Padded Sculpin	<i>Artedius fenestralis</i>	unsexed	0.19	68.62	9309	76.02
2002	WI	S	5-20 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	2.84	100	7756	100
2002	WI	S	5-20 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	1.65	58.28	29279	61.44
2002	WI	S	5-20 fa	Plastic	Plastic	unsexed	2.59	99.2	3921	64.95
2002	WI	S	5-20 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.02	100	3551	100
2002	WI	S	5-20 fa	Rainbow Nudibranch	<i>Dendronotus iris</i>	unsexed	0.04	100	2145	100
2002	WI	S	5-20 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.83	100	10342	100
2002	WI	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	unsexed	1.47	100	2585	100
2002	WI	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	female	3.35	86.87	14201	85.07
2002	WI	S	5-20 fa	Rosy Tritonia	<i>Tritonia diomedea</i>	unsexed	1.91	100	34325	100
2002	WI	S	5-20 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	2.20	66.47	96850	61.27
2002	WI	S	5-20 fa	Salt and Pepper Sea Cucumber	<i>Cucumaria piperata</i>	unsexed	0.04	100	1776	100
2002	WI	S	5-20 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	18.19	21.32	166059	31.15
2002	WI	S	5-20 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	0.16	100	2585	100
2002	WI	S	5-20 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	62.33	59.68	3747909	54.09
2002	WI	S	5-20 fa	Skate egg cases	<i>Rajidae egg case</i>	unsexed	1.95	100	5849	100
2002	WI	S	5-20 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	4.30	91.35	109190	86.7
2002	WI	S	5-20 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.04	100	1776	100
2002	WI	S	5-20 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.08	65.08	3983	65.08
2002	WI	S	5-20 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	85.22	52.74	1188190	70.33
2002	WI	S	5-20 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	7.62	31.13	262898	31.59
2002	WI	S	5-20 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	10.10	61.43	15859	53.98
2002	WI	S	5-20 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	55.76	87.18	122982	86.88
2002	WI	S	5-20 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	48.53	43.96	303900	44.94
2002	WI	S	5-20 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	2.57	75.56	154260	79.89
2002	WI	S	5-20 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	26.07	51.05	66230	53.47
2002	WI	S	5-20 fa	Sweet Potato Sea Cucumber	<i>Molpadia intermedia</i>	unsexed	0.27	66.9	4238	66.7
2002	WI	S	5-20 fa	Tubesnout	<i>Aulorhynchus flavidus</i>	unsexed	0.01	100	1950	100
2002	WI	S	5-20 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.84	77.88	38384	78.98
2002	WI	S	5-20 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	3.22	67.81	16502	68.27
2002	WI	S	5-20 fa	White-spotted Rose Anemone	<i>Urticina lofotensis</i>	unsexed	0.13	100	2585	100
2002	WI	T	21-40 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	7.22	99.18	844243	99.02
2002	WI	T	21-40 fa	Aluminum	Aluminum	unsexed	0.24	100	4037	100
2002	WI	T	21-40 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.65	100	9420	100
2002	WI	T	21-40 fa	Big Skate	<i>Raja binoculata</i>	unsexed	26.69	60.98	5128	49.56
2002	WI	T	21-40 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	114.31	45.83	6392104	44.21
2002	WI	T	21-40 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	0.09	100	4887	100
2002	WI	T	21-40 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	12.02	57.33	101103	57.8

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate Coefficient of Variation		
2002	WI	T	21-40 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	4.26	71.95	47123	69.03
2002	WI	T	21-40 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	16.36	49.62	650876	45.64
2002	WI	T	21-40 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	2.53	100	2648	100
2002	WI	T	21-40 fa	Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	unsexed	7.57	100	1262	100
2002	WI	T	21-40 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	0.30	100	2781	100
2002	WI	T	21-40 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	0.25	100	20186	100
2002	WI	T	21-40 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	18.51	73.21	92457	69.17
2002	WI	T	21-40 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.05	100	9774	100
2002	WI	T	21-40 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	17.93	74.71	1598899	82.91
2002	WI	T	21-40 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	1.12	52.24	17232	54.05
2002	WI	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	female	357.81	41.07	964059	48.67
2002	WI	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	male	712.90	31.11	1698808	36.98
2002	WI	T	21-40 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	308.71	38.51	7311599	28.09
2002	WI	T	21-40 fa	Fishing gear	Fishing gear	unsexed	65.10	64.44	8209	82.98
2002	WI	T	21-40 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	13.66	99.56	244572	97.55
2002	WI	T	21-40 fa	Glass	Glass	unsexed	24.55	44.97	49222	46.05
2002	WI	T	21-40 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	40.45	60.58	47641	62.94
2002	WI	T	21-40 fa	Longfin Smelt	<i>Spirinchus thaleichthys</i>	unsexed	0.14	100	4887	100
2002	WI	T	21-40 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	28.79	91.69	23205	84.75
2002	WI	T	21-40 fa	Longnose Skate egg case	<i>Raja rhina egg case</i>	unsexed	0.18	100	3971	100
2002	WI	T	21-40 fa	Longspine Combfish	<i>Zanolepis latipinnis</i>	unsexed	0.34	79.6	4043	69.62
2002	WI	T	21-40 fa	Metridium uniden.	Metridium sp.	unsexed	726.20	25.92	1684571	27.09
2002	WI	T	21-40 fa	Miscellaneous material		unsexed	15.83	29.47	22053	22.56
2002	WI	T	21-40 fa	Northern Rock Sole	<i>Lepidotsetta polyxystra</i>	unsexed	0.41	100	4887	100
2002	WI	T	21-40 fa	Other man-made debris	Other man-made debris	unsexed	0.04	100	2781	100
2002	WI	T	21-40 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	2.51	65.84	58650	41.22
2002	WI	T	21-40 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	2.18	51.78	53798	60.49
2002	WI	T	21-40 fa	Pacific Pompano	<i>Peprilus simillimus</i>	unsexed	0.88	66.27	18774	77.44
2002	WI	T	21-40 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	40.91	66.93	209380	63.9
2002	WI	T	21-40 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	67.10	69.21	904909	64.43
2002	WI	T	21-40 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	15.28	24.32	329947	28.47
2002	WI	T	21-40 fa	Padded Sculpin	<i>Artedius fenestralis</i>	unsexed	0.12	100	2781	100
2002	WI	T	21-40 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	56.10	37.69	1365155	32.52
2002	WI	T	21-40 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	2.43	87.61	19309	91.63
2002	WI	T	21-40 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	5.08	48.11	74971	28.77
2002	WI	T	21-40 fa	Plastic	Plastic	unsexed	9.35	44.07	25208	46.52
2002	WI	T	21-40 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	0.61	88.12	17086	83.53
2002	WI	T	21-40 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	5.88	63.8	21290	69.37
2002	WI	T	21-40 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.54	49.74	5124	49.49
2002	WI	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	female	0.47	100	1262	100
2002	WI	T	21-40 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	3.25	100	64595	100
2002	WI	T	21-40 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.13	100	1324	100
2002	WI	T	21-40 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	16.79	47.95	812354	47.62
2002	WI	T	21-40 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.17	66.76	2652	63.36
2002	WI	T	21-40 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	13.00	48.63	113536	46.16
2002	WI	T	21-40 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	256.74	23.87	17923867	26.09

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								Estimate		
2002	WI	T	21-40 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	0.45	88.28	30456	82.26
2002	WI	T	21-40 fa	Sixgill Shark	<i>Hexanchus griseus</i>	unsexed	228.60	100	5295	100
2002	WI	T	21-40 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	5.84	90.19	160707	88.7
2002	WI	T	21-40 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	1.11	55.12	117835	55.59
2002	WI	T	21-40 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.40	53.05	22891	40.27
2002	WI	T	21-40 fa	Southern Rock Sole	<i>Lepidotsetta bilineata</i>	unsexed	183.77	66.58	1461411	67.77
2002	WI	T	21-40 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	43.14	78.31	1598133	78.15
2002	WI	T	21-40 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	7.04	45	18987	52.04
2002	WI	T	21-40 fa	Spinyhead Sculpin	<i>Dasy cottus setiger</i>	unsexed	1.05	100	10590	100
2002	WI	T	21-40 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	1.31	59.36	68354	68.39
2002	WI	T	21-40 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	2.08	76.17	7667	66.73
2002	WI	T	21-40 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	0.28	80.53	20699	84.91
2002	WI	T	21-40 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	18.00	41.47	38142	40.03
2002	WI	T	21-40 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.51	53.41	7601	61.04
2002	WI	T	21-40 fa	Striped Seaperch	<i>Embiotoca lateralis</i>	unsexed	0.73	100	21180	100
2002	WI	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	13.70	37.03	568301	35.69
2002	WI	T	21-40 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	8.63	55.98	13129	49.71
2002	WI	T	21-40 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.68	100	40252	100
2002	WI	T	21-40 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	5.10	46.24	46632	49.17
2002	WI	U	41-60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	35.23	59.57	4425918	58.41
2002	WI	U	41-60 fa	Aluminum	Aluminum	unsexed	0.01	100	1200	100
2002	WI	U	41-60 fa	Bering Eelpout	<i>Lycodes beringi</i>	unsexed	0.31	82.7	6967	81.11
2002	WI	U	41-60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	0.12	63.66	4132	71.1
2002	WI	U	41-60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	16.56	30.28	761659	32.01
2002	WI	U	41-60 fa	Blackfin Poacher	<i>Bathyagonus nigripinnis</i>	unsexed	2.60	61.89	159852	61.45
2002	WI	U	41-60 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	0.18	74.95	22224	78.98
2002	WI	U	41-60 fa	Blue Mud Shrimp	<i>Upogebia pugettensis</i>	unsexed	0.01	100	1280	100
2002	WI	U	41-60 fa	Brown Cat Shark	<i>Apristurus brunneus</i>	unsexed	0.66	100	1200	100
2002	WI	U	41-60 fa	Buffalo Sculpin	<i>Enophry斯 bison</i>	unsexed	0.41	100	4475	100
2002	WI	U	41-60 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.30	58.37	8920	51.59
2002	WI	U	41-60 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	1.69	100	4475	100
2002	WI	U	41-60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.66	56.55	170061	50.9
2002	WI	U	41-60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.23	100	35797	100
2002	WI	U	41-60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	4.97	84.58	112350	97.46
2002	WI	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	male	64.59	26.3	97444	27.04
2002	WI	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	female	117.11	65.79	315235	67.75
2002	WI	U	41-60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	105.97	67.35	1341917	68.68
2002	WI	U	41-60 fa	Fishing gear	Fishing gear	unsexed	0.20	73.17	4374	68.53
2002	WI	U	41-60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	7.53	30.37	102339	36.23
2002	WI	U	41-60 fa	Giant Pacific Octopus	<i>Enteroctopus dofleini</i>	unsexed	0.46	100	1492	100
2002	WI	U	41-60 fa	Glass	Glass	unsexed	30.90	100	80631	100
2002	WI	U	41-60 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	3.97	100	2983	100
2002	WI	U	41-60 fa	Longfin Sculpin	<i>Jordania zonope</i>	unsexed	0.03	100	1442	100
2002	WI	U	41-60 fa	Longfin Smelt	<i>Spirinchus thaleichthys</i>	unsexed	0.27	100	4475	100
2002	WI	U	41-60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	9.20	55.96	29827	28.84
2002	WI	U	41-60 fa	Longnose Skate egg case	<i>Raja rhina egg case</i>	unsexed	0.15	65.15	5988	73.94

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								Estimate		
2002	WI	U	41-60 fa	Metridium uniden.	Metridium sp.	unsexed	284.35	69.63	474574	74.86
2002	WI	U	41-60 fa	Miscellaneous material		unsexed	6.56	72.53	7407	65.27
2002	WI	U	41-60 fa	Northern Anchovy	Engraulis mordax	unsexed	0.18	58.79	5596	51.13
2002	WI	U	41-60 fa	Other man-made debris	Other man-made debris	unsexed	2.31	73.17	2979	63.26
2002	WI	U	41-60 fa	Pacific Hake	Merluccius productus	unsexed	504.89	53.58	13564322	61.92
2002	WI	U	41-60 fa	Pacific Herring	Clupea pallasii	unsexed	0.49	44.44	14340	40.97
2002	WI	U	41-60 fa	Pacific Pompano	Peprilus simillimus	unsexed	0.33	100	16126	100
2002	WI	U	41-60 fa	Pacific Sanddab	Citharichthys sordidus	unsexed	4.63	62.38	33339	64.4
2002	WI	U	41-60 fa	Pacific Staghorn Sculpin	Leptocottus armatus	unsexed	4.29	89.66	38317	70.82
2002	WI	U	41-60 fa	Pacific Tomcod	Microgadus proximus	unsexed	9.78	66.5	181508	62.61
2002	WI	U	41-60 fa	Pile Perch	Rhacochilus vacca	unsexed	65.42	96.76	490044	94.42
2002	WI	U	41-60 fa	Pink Short-Spined Star	Pisaster brevispinus	unsexed	0.39	100	4539	100
2002	WI	U	41-60 fa	Plainfin Midshipman	Porichthys notatus	unsexed	9.82	38.66	142041	41.73
2002	WI	U	41-60 fa	Plastic	Plastic	unsexed	0.22	100	2883	100
2002	WI	U	41-60 fa	Puget Sound Rockfish	Sebastes emphaeus	unsexed	0.23	79	5941	74.42
2002	WI	U	41-60 fa	Quillback Rockfish	Sebastes maliger	unsexed	3.02	66.3	24681	87.17
2002	WI	U	41-60 fa	Rex Sole	Glyptocephalus zachirus	unsexed	2.08	83	53685	91.53
2002	WI	U	41-60 fa	Roughback Sculpin	Chitonotus pugetensis	unsexed	0.09	100	4475	100
2002	WI	U	41-60 fa	Sand Sole	Psettichthys melanostictus	unsexed	0.03	100	1442	100
2002	WI	U	41-60 fa	Sea cucumber uniden.	Class Holothuroidea	unsexed	0.02	100	1200	100
2002	WI	U	41-60 fa	Shiner Perch	Cymatogaster aggregata	unsexed	122.69	90.47	8078324	93.72
2002	WI	U	41-60 fa	Shortscale Eulaid	Eualus suckleyi	unsexed	0.03	81.11	12492	79.22
2002	WI	U	41-60 fa	Sidestriped Shrimp	Pandalus dispar	unsexed	48.49	66.57	4652709	70.26
2002	WI	U	41-60 fa	Slender Sole	Lyopsetta exilis	unsexed	32.78	46.32	1180946	45.39
2002	WI	U	41-60 fa	Southern Rock Sole	Lepidotsetta bilineata	unsexed	2.74	70.13	16178	61.98
2002	WI	U	41-60 fa	Spiny Dogfish	Squalus suckleyi	unsexed	22.72	48.6	41180	42.84
2002	WI	U	41-60 fa	Spiny Vermilion Star	Hippasteria spinosa	unsexed	0.36	100	4475	100
2002	WI	U	41-60 fa	Spinyhead Sculpin	Dasy cottus setiger	unsexed	0.52	46.38	12563	65.58
2002	WI	U	41-60 fa	Spot Prawn	Pandalus platyceros	unsexed	139.35	95.52	4818926	95.72
2002	WI	U	41-60 fa	Spotted Ratfish	Hydrolagus collicei	unsexed	81.94	47.85	173648	46.51
2002	WI	U	41-60 fa	Squat Lobster	Munida quadrispina	unsexed	0.17	63.65	19476	69.71
2002	WI	U	41-60 fa	Stubby Squid	Rossia pacifica	unsexed	0.08	100	5864	100
2002	WI	U	41-60 fa	Sunflower Star	Pycnopodia helianthoides	unsexed	1.32	100	4475	100
2002	WI	U	41-60 fa	Tanner Crab	Chionoecetes bairdi	female	0.24	100	1492	100
2002	WI	U	41-60 fa	Tanner Crab	Chionoecetes bairdi	male	0.30	100	1513	100
2002	WI	U	41-60 fa	Vermilion Star	Mediaster aequalis	unsexed	0.03	100	2932	100
2002	WI	V	>60 fa	Alaskan Pink Shrimp	Pandalus eous	unsexed	1.67	96.1	196309	95.86
2002	WI	V	>60 fa	Aluminum	Aluminum	unsexed	0.06	100	1599	100
2002	WI	V	>60 fa	Bering Eelpout	Lycodes beringi	unsexed	0.28	48.81	4562	47.33
2002	WI	V	>60 fa	Blackbelly Eelpout	Lycodes pacificus	unsexed	3.43	68.84	134533	73.95
2002	WI	V	>60 fa	Blackfin Poacher	Bathyagonus nigripinnis	unsexed	0.62	80.24	42979	87.5
2002	WI	V	>60 fa	Blacktip Poacher	Xeneretmus latifrons	unsexed	0.69	100	51008	100
2002	WI	V	>60 fa	Brown Cat Shark	Apristurus brunneus	unsexed	0.59	100	1521	100
2002	WI	V	>60 fa	California Sea Cucumber	Parastichopus californicus	unsexed	1.85	100	1398	100
2002	WI	V	>60 fa	Crangonid shrimp uniden.	Crangonidae	unsexed	0.19	51.92	55298	51.67
2002	WI	V	>60 fa	Dover Sole	Microstomus pacificus	unsexed	12.29	37.65	61652	38.06

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate Coefficient of Variation		
2002	WI	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	male	13.90	64.29	18666	65.07
2002	WI	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	female	66.66	50.49	158774	49.44
2002	WI	V	>60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	235.72	39.55	1075018	41.83
2002	WI	V	>60 fa	Fishing gear	Fishing gear	unsexed	943.69	70.01	4517	47.26
2002	WI	V	>60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	2.55	33.73	16988	45.55
2002	WI	V	>60 fa	Heart Urchin	<i>Briaster latifrons</i>	unsexed	0.76	59.07	21771	61.77
2002	WI	V	>60 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	0.01	100	1391	100
2002	WI	V	>60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	32.62	45.65	84951	35.42
2002	WI	V	>60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	53.85	57.5	102041	57.19
2002	WI	V	>60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	127.61	23.29	1004136	33.83
2002	WI	V	>60 fa	Pacific Herring	<i>Clupea pallasi</i>	unsexed	0.14	100	1599	100
2002	WI	V	>60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	0.83	50.68	4661	47.31
2002	WI	V	>60 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	2.67	83.7	78632	93.28
2002	WI	V	>60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	0.35	53.84	4510	47.27
2002	WI	V	>60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	10.36	53.97	146369	52.87
2002	WI	V	>60 fa	Plastic	Plastic	unsexed	0.10	100	1391	100
2002	WI	V	>60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	25.56	36.88	46020	40.13
2002	WI	V	>60 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.15	100	1398	100
2002	WI	V	>60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	0.16	100	1417	100
2002	WI	V	>60 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.20	70.3	7701	78.5
2002	WI	V	>60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	11.40	93.76	32125	94.58
2002	WI	V	>60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.42	88.78	30806	89.73
2002	WI	V	>60 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.04	65.28	19791	64.55
2002	WI	V	>60 fa	Shortspine Thornyhead	<i>Sebastolobus alascanus</i>	unsexed	0.87	100	1526	100
2002	WI	V	>60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	2.61	39.46	187509	40.57
2002	WI	V	>60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	68.57	45.23	1878889	45.31
2002	WI	V	>60 fa	Southern Rock Sole	<i>Lepidotsetta bilineata</i>	unsexed	0.26	100	1417	100
2002	WI	V	>60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	25.73	52.85	42249	50.5
2002	WI	V	>60 fa	Spinyhead Sculpin	<i>Dasy cottus setiger</i>	unsexed	0.08	67.78	3062	64.8
2002	WI	V	>60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	0.18	100	4936	100
2002	WI	V	>60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	1280.05	27.93	3059516	27.75
2002	WI	V	>60 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	0.16	100	1645	100
2002	WI	V	>60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	0.27	100	1391	100
2002	WI	V	>60 fa	Sweet Potato Sea Cucumber	<i>Molpadia intermedia</i>	unsexed	0.04	100	2782	100
2002	WI	V	>60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.13	100	7993	100
2002	WI	V	>60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	1.53	35.67	7441	38.69
2003	DB	S	5-20 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	1.10	59.57	407334	73.55
2003	DB	S	5-20 fa	Aluminum	Aluminum	unsexed	0.02	100	356	100
2003	DB	S	5-20 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.01	100	356	100
2003	DB	S	5-20 fa	Bent-nose Macoma	<i>Macoma nasuta</i>	unsexed	0.14	100	3429	100
2003	DB	S	5-20 fa	Big Skate	<i>Raja binoculata</i>	unsexed	1.47	91.8	1416	57.74
2003	DB	S	5-20 fa	Big Skate egg case	<i>Raja binoculata</i> egg case	unsexed	0.22	100	712	100
2003	DB	S	5-20 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	1.60	57.14	193465	57.51
2003	DB	S	5-20 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	8.15	100	146303	100
2003	DB	S	5-20 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.88	100	70437	100
2003	DB	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	0.62	100	356	100

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								Estimate Coefficient of Variation		
2003	DB	S	5-20 fa	Cerebratulus uniden.	Cerebratulus sp.	unsexed	0.01	100	571	100
2003	DB	S	5-20 fa	Coonstripe Shrimp	Pandalus hypsinotus	unsexed	4.87	28.68	1630345	42.55
2003	DB	S	5-20 fa	Crangonid shrimp uniden.	Crangonidae	unsexed	0.12	96.23	31825	94.13
2003	DB	S	5-20 fa	Dock Shrimp	Pandalus danae	unsexed	5.03	79.7	1318199	86.34
2003	DB	S	5-20 fa	Dover Sole	Microstomus pacificus	unsexed	0.21	57.74	15943	63.97
2003	DB	S	5-20 fa	Dungeness Crab	Cancer magister	female	8.85	55.33	26868	60.1
2003	DB	S	5-20 fa	Dungeness Crab	Cancer magister	male	14.01	57.04	51461	75.59
2003	DB	S	5-20 fa	English Sole	Parophrys vetulus	unsexed	3.00	42.22	152836	51.36
2003	DB	S	5-20 fa	Fishing gear	Fishing gear	unsexed	8.86	100	395	100
2003	DB	S	5-20 fa	Flathead Sole	Hippoglossoides elassodon	unsexed	0.06	100	2286	100
2003	DB	S	5-20 fa	Glass	Glass	unsexed	1.61	100	4273	100
2003	DB	S	5-20 fa	Graceful Crab	Cancer gracilis	female	0.27	63.85	6046	59.49
2003	DB	S	5-20 fa	Graceful Crab	Cancer gracilis	male	1.17	88.42	11601	85.5
2003	DB	S	5-20 fa	Gray Starsnout	Bathyagonus alascanus	unsexed	0.01	100	704	100
2003	DB	S	5-20 fa	Great Sculpin	Myoxocephalus polyacanthocephalus	unsexed	14.25	62.41	44951	57.59
2003	DB	S	5-20 fa	Humpy Shrimp	Pandalus goniurus	unsexed	0.15	100	149633	100
2003	DB	S	5-20 fa	Longspine Combfish	Zanolepis latipinnis	unsexed	0.16	69.46	7040	46.03
2003	DB	S	5-20 fa	Marine vegetation	Marine vegetation	unsexed	91.71	80.83	27552	54.78
2003	DB	S	5-20 fa	Metridium uniden.	Metridium sp.	unsexed	127.39	94.6	184037	92.7
2003	DB	S	5-20 fa	Miscellaneous material		unsexed	1.08	65.78	4258	79.49
2003	DB	S	5-20 fa	Northern Kelp Crab	Pugettia producta	unsexed	0.00	100	356	100
2003	DB	S	5-20 fa	Orange Sea Pen	Ptilosarcus gurneyi	unsexed	0.53	100	9257	100
2003	DB	S	5-20 fa	Pacific Herring	Clupea pallasii	unsexed	3.20	58.35	143697	90.31
2003	DB	S	5-20 fa	Pacific Lyre Crab	Hyas lyratus	unsexed	0.00	100	356	100
2003	DB	S	5-20 fa	Pacific Sanddab	Citharichthys sordidus	unsexed	1.43	85.5	61053	89.86
2003	DB	S	5-20 fa	Pacific Tomcod	Micromesistius proximus	unsexed	1.93	53.7	71118	54.14
2003	DB	S	5-20 fa	Pentamera uniden.	Pentamera sp.	unsexed	0.03	83.01	2071	78.76
2003	DB	S	5-20 fa	Pink Short-Spined Star	Pisaster brevispinus	unsexed	0.55	100	1068	100
2003	DB	S	5-20 fa	Plainfin Midshipman	Porichthys notatus	unsexed	0.01	100	712	100
2003	DB	S	5-20 fa	Plastic	Plastic	unsexed	0.20	77.07	1894	50.73
2003	DB	S	5-20 fa	Pygmy Poacher	Odontopyxis trispinosa	unsexed	0.00	100	704	100
2003	DB	S	5-20 fa	Pygmy Rock Crab	Cancer oregonensis	unsexed	0.00	100	1068	100
2003	DB	S	5-20 fa	Red Octopus	Octopus rubescens	unsexed	0.02	100	1068	100
2003	DB	S	5-20 fa	Red Rock Crab	Cancer productus	male	3.14	40.98	7810	40.42
2003	DB	S	5-20 fa	Red Rock Crab	Cancer productus	female	1.44	37.84	9571	33.87
2003	DB	S	5-20 fa	Redstripe Rockfish	Sebastodes proriger	unsexed	1.78	82.39	301579	80.9
2003	DB	S	5-20 fa	Rex Sole	Glyptocephalus zachirus	unsexed	0.04	61.97	6433	63.27
2003	DB	S	5-20 fa	Roughback Sculpin	Chitonotus pugetensis	unsexed	0.06	76.04	8154	60.53
2003	DB	S	5-20 fa	Sailfin Sculpin	Nautichthys oculofasciatus	unsexed	0.06	100	2113	100
2003	DB	S	5-20 fa	Sand Sole	Psettichthys melanostictus	unsexed	0.16	100	356	100
2003	DB	S	5-20 fa	Sand Star	Luidia foliolata	unsexed	0.08	88.72	928	60.77
2003	DB	S	5-20 fa	Sea Nymph uniden.	Family Nereididae	unsexed	0.02	100	571	100
2003	DB	S	5-20 fa	Shiner Perch	Cymatogaster aggregata	unsexed	0.04	100	2113	100
2003	DB	S	5-20 fa	Snake Prickleback	Lumpenus sagitta	unsexed	0.02	60.77	3354	64.9
2003	DB	S	5-20 fa	Southern Rock Sole	Lepidotretis bilineata	unsexed	0.28	76.74	1765	75.53
2003	DB	S	5-20 fa	Speckled Sanddab	Citharichthys stigmaeus	unsexed	0.60	91.83	26653	78.78

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								Estimate		
2003	DB	S	5-20 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	21.22	43.18	26252	41.03
2003	DB	S	5-20 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	128.60	73.68	9398080	66.04
2003	DB	S	5-20 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	28.67	26.02	50677	25.39
2003	DB	S	5-20 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	0.04	100	712	100
2003	DB	S	5-20 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.04	77.65	8523	78.23
2003	DB	S	5-20 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	4.25	42.52	9431	28.26
2003	DB	S	5-20 fa	Tubesnout	<i>Aulorhynchus flavidus</i>	unsexed	0.01	100	704	100
2003	DB	T	21-40 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	25.69	17.69	8268092	17.16
2003	DB	T	21-40 fa	Aluminum	<i>Aluminum</i>	unsexed	0.00	100	439	100
2003	DB	T	21-40 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.00	100	229	100
2003	DB	T	21-40 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	0.14	69.5	5948	66.08
2003	DB	T	21-40 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	0.06	84.16	921	75.25
2003	DB	T	21-40 fa	Big Skate	<i>Raja binoculata</i>	unsexed	0.33	67.6	655	70.37
2003	DB	T	21-40 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	3.83	24.25	532142	28.04
2003	DB	T	21-40 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	8.27	62.79	166606	60.43
2003	DB	T	21-40 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	0.09	66.79	2232	68.02
2003	DB	T	21-40 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.48	42.43	43493	65.22
2003	DB	T	21-40 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	0.87	66.78	684	69.95
2003	DB	T	21-40 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	8.31	19.65	1101065	19.82
2003	DB	T	21-40 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.30	36.67	90432	43.96
2003	DB	T	21-40 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.00	100	2985	100
2003	DB	T	21-40 fa	Danas Blade Shrimp	<i>Spirontocaris lamellicornis</i>	unsexed	0.01	67.79	7148	67.79
2003	DB	T	21-40 fa	Divaricate Nut Clam	<i>Acila castrensis</i>	unsexed	0.06	100	39661	100
2003	DB	T	21-40 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	1.16	83.35	176890	88.71
2003	DB	T	21-40 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	0.08	40.62	10403	69.19
2003	DB	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	female	32.50	21.53	84458	20.38
2003	DB	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	male	48.82	24.89	94322	27.94
2003	DB	T	21-40 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	6.39	15.38	192889	15.69
2003	DB	T	21-40 fa	False Ochre Star	<i>Easterias troschelii</i>	unsexed	0.31	43.14	1938	51.79
2003	DB	T	21-40 fa	Fine-lined Lucine	<i>Parvilucina tenuisculpta</i>	unsexed	0.06	100	39661	100
2003	DB	T	21-40 fa	Fishing gear	<i>Fishing gear</i>	unsexed	0.05	100	439	100
2003	DB	T	21-40 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	1.24	14.98	68159	20.51
2003	DB	T	21-40 fa	Giant Wrymouth	<i>Cryptacanthodes giganteus</i>	unsexed	0.24	100	426	100
2003	DB	T	21-40 fa	Glass	<i>Glass</i>	unsexed	0.34	50.87	1539	53.49
2003	DB	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	male	0.79	100	9706	100
2003	DB	T	21-40 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	13.45	57.96	22115	54.63
2003	DB	T	21-40 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	0.01	100	264	100
2003	DB	T	21-40 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	7.51	35.08	1538897	42.05
2003	DB	T	21-40 fa	Kennerley's Venus	<i>Humilaria kennnerleyi</i>	unsexed	0.00	100	2197	100
2003	DB	T	21-40 fa	Longhorned Decorator Crab	<i>Chorilis longipes</i>	unsexed	0.04	67.85	5227	67.51
2003	DB	T	21-40 fa	Longspine Combfish	<i>Zaniolepis latipinnis</i>	unsexed	0.23	39.67	6930	46.19
2003	DB	T	21-40 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	75.93	69.57	5421	19.45
2003	DB	T	21-40 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	39.78	63.12	112355	56.52
2003	DB	T	21-40 fa	Miscellaneous material		unsexed	87.98	94.28	3589	41.97
2003	DB	T	21-40 fa	Night Smelt	<i>Spirinchus starksii</i>	unsexed	0.00	100	245	100
2003	DB	T	21-40 fa	Northern Ronquil	<i>Ronquilus jordani</i>	unsexed	0.02	66.73	509	66.73

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2003	DB	T	21-40 fa	Orange Sea Pen	<i>Ptilosarcus gurneyi</i>	unsexed	0.14	100	5324	100	
2003	DB	T	21-40 fa	Other man-made debris	Other man-made debris	unsexed	5.27	65.91	5351	63.57	
2003	DB	T	21-40 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	37.04	49.15	2453158	55.25	
2003	DB	T	21-40 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.03	46.2	3199	46.6	
2003	DB	T	21-40 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	1.00	30.11	27603	37.78	
2003	DB	T	21-40 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	0.10	63.68	1295	64.03	
2003	DB	T	21-40 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	4.17	33.51	134030	30.98	
2003	DB	T	21-40 fa	Pentameria uniden.	<i>Pentamera sp.</i>	unsexed	0.03	73.72	3120	74.19	
2003	DB	T	21-40 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	1.66	74.11	1614	69.06	
2003	DB	T	21-40 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	0.06	74.13	948	66.71	
2003	DB	T	21-40 fa	Plastic	Plastic	unsexed	0.01	57.96	734	51.07	
2003	DB	T	21-40 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	0.00	100	229	100	
2003	DB	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	male	3.06	41.75	7064	40.85	
2003	DB	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	female	1.54	46.87	7684	50.47	
2003	DB	T	21-40 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	0.15	66.67	9137	67.4	
2003	DB	T	21-40 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	0.35	26.41	70944	30.97	
2003	DB	T	21-40 fa	Ribbon Snailfish	<i>Liparis cyclopus</i>	unsexed	0.00	100	229	100	
2003	DB	T	21-40 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.01	100	245	100	
2003	DB	T	21-40 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	0.11	100	1600	100	
2003	DB	T	21-40 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	0.91	89.89	4959	78.18	
2003	DB	T	21-40 fa	Sea whip uniden.	<i>Virgulariidae</i>	unsexed	0.17	100	735	100	
2003	DB	T	21-40 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	3.60	30.5	303846	30.94	
2003	DB	T	21-40 fa	Shortfin Eelpout	<i>Lycodes brevipes</i>	unsexed	0.06	39.65	3167	37.61	
2003	DB	T	21-40 fa	Shortscale Equalid	<i>Eualus suckleyi</i>	unsexed	0.01	68.09	6558	68.23	
2003	DB	T	21-40 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.00	100	245	100	
2003	DB	T	21-40 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.29	40.75	37814	43.05	
2003	DB	T	21-40 fa	Speckled Sanddab	<i>Citharichthys stigmatus</i>	unsexed	0.02	66.89	493	66.88	
2003	DB	T	21-40 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	58.88	54.35	71155	53.71	
2003	DB	T	21-40 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	19.61	59.03	791180	57.37	
2003	DB	T	21-40 fa	Stalked Trumpet Sponge	<i>Stylissa stipitata</i>	unsexed	0.01	100	439	100	
2003	DB	T	21-40 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	31.41	20.35	61087	20.85	
2003	DB	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.03	83.1	1397	72.71	
2003	DB	T	21-40 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	11.87	34.23	13582	26.41	
2003	DB	T	21-40 fa	Tadpole Sculpin	<i>Psychrolutes paradoxus</i>	unsexed	0.00	100	2971	100	
2003	DB	T	21-40 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	0.04	83.12	2306	88.83	
2003	DB	T	21-40 fa	White Sea Cucumber	<i>Eupentacta quinquesemita</i>	unsexed	0.20	100	19735	100	
2003	JE	S	5-20 fa	Barnacle uniden.	Order Thoracica	unsexed	23.81	100	163326	100	
2003	JE	S	5-20 fa	Big Skate	<i>Raja binoculata</i>	unsexed	32.54	100	3389	100	
2003	JE	S	5-20 fa	Big Skate egg case	<i>Raja binoculata egg case</i>	unsexed	31.53	93.15	101346	96.14	
2003	JE	S	5-20 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	23.49	40.5	176225	43.76	
2003	JE	S	5-20 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	0.32	100	3991	100	
2003	JE	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	389.66	44.16	434150	44.23	
2003	JE	S	5-20 fa	Clown Nudibranch	<i>Triopha catalinae</i>	unsexed	0.04	100	4087	100	
2003	JE	S	5-20 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.04	65.97	8940	65.97	
2003	JE	S	5-20 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.03	100	6948	100	
2003	JE	S	5-20 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	22.19	97.59	6109802	97.47	

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2003	JE	S	5-20 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	0.20	100	3991	100
2003	JE	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	female	59.57	59.53	136868	61.13
2003	JE	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	male	119.77	60.8	191170	64.87
2003	JE	S	5-20 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	51.21	95.66	927681	94.94
2003	JE	S	5-20 fa	False Ochre Star	<i>Easterias troschelii</i>	unsexed	36.77	92.55	80236	93.15
2003	JE	S	5-20 fa	Fish-eating Star	<i>Stylasterias forneri</i>	unsexed	5.10	100	13072	100
2003	JE	S	5-20 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	0.45	100	3764	100
2003	JE	S	5-20 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	3.79	100	52287	100
2003	JE	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	male	0.81	56.83	11842	48.84
2003	JE	S	5-20 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.59	50.47	98226	51.3
2003	JE	S	5-20 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	37.79	72.47	129788	66.46
2003	JE	S	5-20 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	1.02	100	3389	100
2003	JE	S	5-20 fa	Grunt Sculpin	<i>Rhamphocottus richardsoni</i>	unsexed	0.73	88.79	29908	86.52
2003	JE	S	5-20 fa	Gumboot Chiton	<i>Cryptochiton stelleri</i>	unsexed	16.02	100	12261	100
2003	JE	S	5-20 fa	Helmet Crab	<i>Telmessus cheiragonus</i>	unsexed	1.88	100	83373	100
2003	JE	S	5-20 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.17	78.79	29617	87.37
2003	JE	S	5-20 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	0.54	100	4949	100
2003	JE	S	5-20 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	51.20	100	3991	100
2003	JE	S	5-20 fa	Longspine Combfish	<i>Zanolepis latipinnis</i>	unsexed	0.15	100	3764	100
2003	JE	S	5-20 fa	Marbled Snailfish	<i>Liparis dennysi</i>	unsexed	0.10	100	3474	100
2003	JE	S	5-20 fa	Marine vegetation	Marine vegetation	unsexed	417.98	66.42	32274	36.92
2003	JE	S	5-20 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	236.08	100	653589	100
2003	JE	S	5-20 fa	Nudibranch uniden.	Order Nudibranchia	unsexed	0.04	100	3764	100
2003	JE	S	5-20 fa	Orange Sea Pen	<i>Ptilosarcus gurneyi</i>	unsexed	0.20	100	8174	100
2003	JE	S	5-20 fa	Pacific Halibut	<i>Hippoglossus stenolepis</i>	unsexed	0.75	100	3389	100
2003	JE	S	5-20 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	18.84	100	1201222	100
2003	JE	S	5-20 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.17	100	6948	100
2003	JE	S	5-20 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	120.02	95.44	2323557	92.87
2003	JE	S	5-20 fa	Pacific Spiny Lumpsucker	<i>Eumicrotremus orbis</i>	unsexed	0.07	100	6778	100
2003	JE	S	5-20 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	1.40	100	15963	100
2003	JE	S	5-20 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	0.35	70.87	11746	70.87
2003	JE	S	5-20 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	36.99	39.47	21662	47.42
2003	JE	S	5-20 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	3.79	100	67843	100
2003	JE	S	5-20 fa	Plastic	Plastic	unsexed	0.22	77.47	28136	87.05
2003	JE	S	5-20 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.05	100	4949	100
2003	JE	S	5-20 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	14.12	46.55	41452	44.68
2003	JE	S	5-20 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.90	100	3764	100
2003	JE	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	female	8.99	74.74	42743	64.09
2003	JE	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	male	37.99	49.5	116713	50.09
2003	JE	S	5-20 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	16.73	75.35	18446	81.07
2003	JE	S	5-20 fa	Redstripe Rockfish	<i>Sebastodes proriger</i>	unsexed	0.08	100	3764	100
2003	JE	S	5-20 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	0.34	100	79815	100
2003	JE	S	5-20 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	4.99	69.41	313386	73.03
2003	JE	S	5-20 fa	Ringed Dorid	<i>Diaulula sandiegensis</i>	unsexed	0.08	100	4087	100
2003	JE	S	5-20 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.54	59.45	33451	66.49
2003	JE	S	5-20 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	1.18	100	26144	100

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2003	JE	S	5-20 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	8.14	100	43898	100	
2003	JE	S	5-20 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	2.40	81.14	21053	67.97	
2003	JE	S	5-20 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	3.69	65.63	137603	92.05	
2003	JE	S	5-20 fa	Silverspotted Sculpin	<i>Blepsias cirrhosus</i>	unsexed	0.31	100	20843	100	
2003	JE	S	5-20 fa	Slippersnail uniden.	<i>Crepidula sp.</i>	unsexed	0.05	100	4949	100	
2003	JE	S	5-20 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	4.99	62.14	144380	53.52	
2003	JE	S	5-20 fa	Southern Rock Sole	<i>Lepidotetta bilineata</i>	unsexed	65.43	31.91	399853	26.35	
2003	JE	S	5-20 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	2.53	60.33	92555	57.08	
2003	JE	S	5-20 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	195.49	60.78	147804	63.34	
2003	JE	S	5-20 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	45.05	83.27	1118742	81.83	
2003	JE	S	5-20 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	6.76	62.81	11325	48.97	
2003	JE	S	5-20 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	799.71	66.16	1832157	72.33	
2003	JE	S	5-20 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei egg case</i>	unsexed	0.10	100	6778	100	
2003	JE	S	5-20 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	28.53	52.91	36790	59.13	
2003	JE	S	5-20 fa	Steven's Hermit Crab	<i>Pagurus stevensae</i>	unsexed	0.83	94.52	13985	72.61	
2003	JE	S	5-20 fa	Striped Seaperch	<i>Embiotoca lateralis</i>	unsexed	0.08	100	3764	100	
2003	JE	S	5-20 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.08	100	3991	100	
2003	JE	S	5-20 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.23	81.86	11519	69.46	
2003	JE	S	5-20 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	187.76	51.54	153950	46.76	
2003	JE	S	5-20 fa	Swimming Anemone	<i>Stomphia coccinea</i>	unsexed	0.45	100	4087	100	
2003	JE	S	5-20 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	0.12	100	3991	100	
2003	JE	S	5-20 fa	Tubesnout	<i>Aulorhynchus flavidus</i>	unsexed	0.03	100	3474	100	
2003	JE	S	5-20 fa	Vermilion Rockfish	<i>Sebastes miniatus</i>	unsexed	1.91	69.09	32275	76.89	
2003	JE	S	5-20 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	1.58	100	90344	100	
2003	JE	S	5-20 fa	Warty Poacher	<i>Occella verrucosa</i>	unsexed	1.05	100	52287	100	
2003	JE	S	5-20 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	6.63	100	623608	100	
2003	JE	S	5-20 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	1.95	83.17	18322	80.55	
2003	JE	T	21-40 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	23.42	69.98	17005424	90.35	
2003	JE	T	21-40 fa	Aluminum	<i>Aluminum</i>	unsexed	0.58	100	12807	100	
2003	JE	T	21-40 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.29	100	29883	100	
2003	JE	T	21-40 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	7.86	97.97	423342	96.69	
2003	JE	T	21-40 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	5.60	60.36	22684	43.77	
2003	JE	T	21-40 fa	Big Skate	<i>Raja binoculata</i>	unsexed	56.81	97.43	28349	67.29	
2003	JE	T	21-40 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	0.46	100	37321	100	
2003	JE	T	21-40 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	1.27	100	11045	100	
2003	JE	T	21-40 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	0.50	100	8294	100	
2003	JE	T	21-40 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	4.68	61.86	34625	61.73	
2003	JE	T	21-40 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	12.19	72.4	24276	66.79	
2003	JE	T	21-40 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	9.54	66.82	2080792	71.93	
2003	JE	T	21-40 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.14	71.74	29805	72.77	
2003	JE	T	21-40 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.04	100	3977	100	
2003	JE	T	21-40 fa	Curlfin Sole	<i>Pleuronichthys decurrens</i>	unsexed	1.79	100	3977	100	
2003	JE	T	21-40 fa	Diamondback Nudibranch	<i>Tritonia festiva</i>	unsexed	0.03	100	3178	100	
2003	JE	T	21-40 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	216.65	62.35	35944340	60.83	
2003	JE	T	21-40 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	1.91	68.01	56322	53.42	
2003	JE	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	male	164.63	58.46	160380	56.53	

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								Estimate		
2003	JE	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	female	386.42	64.62	725543	64.32
2003	JE	T	21-40 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	88.49	51.85	1524665	47.54
2003	JE	T	21-40 fa	False Ochre Star	<i>Evasterias troschelii</i>	unsexed	17.33	93.14	48212	88.01
2003	JE	T	21-40 fa	Fish-eating Star	<i>Styela sterias forsteri</i>	unsexed	5.31	70.72	10892	67.82
2003	JE	T	21-40 fa	Fishing gear	Fishing gear	unsexed	0.18	100	5914	100
2003	JE	T	21-40 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	8.38	92.57	199902	84.7
2003	JE	T	21-40 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	140.86	72.39	2240008	84.15
2003	JE	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	female	0.58	100	12807	100
2003	JE	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	male	9.21	99.04	89357	95.16
2003	JE	T	21-40 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.32	53.54	21320	61.55
2003	JE	T	21-40 fa	Graceful Kelp Crab	<i>Pugettia gracilis</i>	unsexed	0.25	100	8479	100
2003	JE	T	21-40 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	76.62	37.95	210403	46.2
2003	JE	T	21-40 fa	Greenstriped Rockfish	<i>Sebastodes elongatus</i>	unsexed	0.29	100	29883	100
2003	JE	T	21-40 fa	Grunt Sculpin	<i>Rhamphocottus richardsoni</i>	unsexed	0.69	45.75	68839	48.84
2003	JE	T	21-40 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.30	52.3	51735	52.67
2003	JE	T	21-40 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	0.81	100	102456	100
2003	JE	T	21-40 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	3.16	66.68	27361	67.75
2003	JE	T	21-40 fa	Lanternfish uniden.	<i>Myctophidae</i>	unsexed	0.02	100	3695	100
2003	JE	T	21-40 fa	Leafy Hornmouth	<i>Ceratostoma foliatum</i>	unsexed	0.34	100	11469	100
2003	JE	T	21-40 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	1.35	100	3977	100
2003	JE	T	21-40 fa	Marine vegetation	Marine vegetation	unsexed	166.66	53.82	125711	79.68
2003	JE	T	21-40 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	33.16	60.8	135121	75
2003	JE	T	21-40 fa	Miscellaneous material		unsexed	34.49	100	12807	100
2003	JE	T	21-40 fa	Northern Ronquil	<i>Ronquilus jordani</i>	unsexed	1.72	39.26	45641	39.14
2003	JE	T	21-40 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	1.56	63.15	66344	61.51
2003	JE	T	21-40 fa	Orangepeel Nudibranch	<i>Tochuina tetraquetra</i>	unsexed	1.80	65.73	13628	53.07
2003	JE	T	21-40 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	0.59	67.38	14002	68.5
2003	JE	T	21-40 fa	Other man-made debris	Other man-made debris	unsexed	955.82	89.44	19424	68.02
2003	JE	T	21-40 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	4.64	73.85	23281	72.01
2003	JE	T	21-40 fa	Pacific Herring	<i>Clupea pallasi</i>	unsexed	4.07	70.49	139084	67.13
2003	JE	T	21-40 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.56	100	31817	100
2003	JE	T	21-40 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	221.52	37.85	2873973	48.26
2003	JE	T	21-40 fa	Pacific Spiny Lumpsucker	<i>Eumicrotremus orbis</i>	unsexed	0.26	100	14779	100
2003	JE	T	21-40 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	4.70	66.67	27632	68.32
2003	JE	T	21-40 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	8.40	72.46	283551	71.5
2003	JE	T	21-40 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	53.91	100	29883	100
2003	JE	T	21-40 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	1.53	100	37321	100
2003	JE	T	21-40 fa	Plastic	Plastic	unsexed	1.64	87.79	22865	58.82
2003	JE	T	21-40 fa	Puget Sound Rockfish	<i>Sebastodes emphaeus</i>	unsexed	0.99	80.95	198160	98.23
2003	JE	T	21-40 fa	Quillback Rockfish	<i>Sebastodes maliger</i>	unsexed	0.22	100	3178	100
2003	JE	T	21-40 fa	Rainbow Star	<i>Orthasterias koehlereri</i>	unsexed	1.81	100	9071	100
2003	JE	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	female	1.05	100	5522	100
2003	JE	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	male	12.95	77.2	35405	84.11
2003	JE	T	21-40 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	220.58	62.22	221287	62.93
2003	JE	T	21-40 fa	Redstripe Rockfish	<i>Sebastodes proriger</i>	unsexed	7.50	74.71	418990	76.33
2003	JE	T	21-40 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	2.86	62.17	374449	64.18

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Coefficient of Variation		
2003	JE	T	21-40 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	13.84	47.38	505493	48.08
2003	JE	T	21-40 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.13	100	3178	100
2003	JE	T	21-40 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	1.36	68.3	45727	49.74
2003	JE	T	21-40 fa	Roughspine Sculpin	<i>Triglops macellus</i>	unsexed	0.70	67.69	16998	70.42
2003	JE	T	21-40 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.06	100	5522	100
2003	JE	T	21-40 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	4.10	100	11931	100
2003	JE	T	21-40 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	1.79	73.7	9499	67.76
2003	JE	T	21-40 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	69.63	98.73	12563279	99.48
2003	JE	T	21-40 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.51	100	102456	100
2003	JE	T	21-40 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.25	83.66	33005	87.43
2003	JE	T	21-40 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	8.34	100	11828	100
2003	JE	T	21-40 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	27.65	72.49	1454761	74.84
2003	JE	T	21-40 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.41	73.01	55130	78.21
2003	JE	T	21-40 fa	Southern Rock Sole	<i>Lepidotsetta bilineata</i>	unsexed	155.52	39.98	693243	27.9
2003	JE	T	21-40 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	0.41	100	5914	100
2003	JE	T	21-40 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	155.26	46.04	109487	40.84
2003	JE	T	21-40 fa	Spiny Lebtheid	<i>Lebbeus groenlandicus</i>	unsexed	0.06	100	11828	100
2003	JE	T	21-40 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	8.51	96.7	359070	95.4
2003	JE	T	21-40 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	1.39	70.67	15110	79.43
2003	JE	T	21-40 fa	Spinyhead Sculpin	<i>Dasy cottus setiger</i>	unsexed	0.12	100	4147	100
2003	JE	T	21-40 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	2.65	54.9	14615	53.11
2003	JE	T	21-40 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	419.73	99.87	77256843	99.96
2003	JE	T	21-40 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	1385.60	45.88	2907524	45.15
2003	JE	T	21-40 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei egg case</i>	unsexed	0.12	100	11828	100
2003	JE	T	21-40 fa	Stalked Trumpet Sponge	<i>Styliissa stipitata</i>	unsexed	0.22	100	3178	100
2003	JE	T	21-40 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	69.08	86.05	41428	80.26
2003	JE	T	21-40 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	1.11	66.97	38151	71.15
2003	JE	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	3.47	62.66	246160	71.5
2003	JE	T	21-40 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	226.05	88.95	211091	81.47
2003	JE	T	21-40 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	0.66	100	4147	100
2003	JE	T	21-40 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	7.84	100	29028	100
2003	JE	T	21-40 fa	Tubesnout	<i>Aulorhynchus flavidus</i>	unsexed	0.14	100	29883	100
2003	JE	T	21-40 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.32	100	3178	100
2003	JE	T	21-40 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	80.92	39.29	8161247	65.5
2003	JE	T	21-40 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	1.04	100	4147	100
2003	JE	T	21-40 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	1.36	100	4536	100
2003	JE	U	41-60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	421.09	48.05	109839696	48.93
2003	JE	U	41-60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	23.74	42.22	473111	46.66
2003	JE	U	41-60 fa	Barnacle uniden.	Order Thoracica	unsexed	0.27	100	87832	100
2003	JE	U	41-60 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	2.56	68.7	9952	66.76
2003	JE	U	41-60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	434.73	38.31	123810	33.29
2003	JE	U	41-60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	1.77	64.78	104752	74.42
2003	JE	U	41-60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.07	68.69	15292	74.16
2003	JE	U	41-60 fa	Brittle star uniden.	<i>Ophiuridae</i>	unsexed	0.03	100	10979	100
2003	JE	U	41-60 fa	Brown Box Crab	<i>Lopholithodes foraminatus</i>	unsexed	11.18	100	4839	100
2003	JE	U	41-60 fa	Brown Irish Lord	<i>Hemilepidotus spinosus</i>	unsexed	2.15	51.52	18899	53.05

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								Estimate		
2003	JE	U	41-60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	0.24	100	4737	100
2003	JE	U	41-60 fa	Cloud Sponge	<i>Aphrocallistes vastus</i>	unsexed	41.28	100	5490	100
2003	JE	U	41-60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.74	93.12	182002	94.36
2003	JE	U	41-60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	26.87	48.21	3279739	48.06
2003	JE	U	41-60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	17.73	32.61	355193	33.52
2003	JE	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	female	3.23	100	4313	100
2003	JE	U	41-60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	124.96	47.08	1514066	45.4
2003	JE	U	41-60 fa	False Ochre Star	<i>Easterias troschelii</i>	unsexed	2.20	100	12940	100
2003	JE	U	41-60 fa	Fish-eating Star	<i>Stylasterias forreri</i>	unsexed	1.08	100	4303	100
2003	JE	U	41-60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	12.31	51.32	98405	54.85
2003	JE	U	41-60 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	0.11	100	5490	100
2003	JE	U	41-60 fa	Glass	Glass	unsexed	2.32	100	4737	100
2003	JE	U	41-60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.05	100	5215	100
2003	JE	U	41-60 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.39	87.77	21773	79.49
2003	JE	U	41-60 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	167.34	57.58	204367	56.23
2003	JE	U	41-60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	7.19	62.28	75304	51.79
2003	JE	U	41-60 fa	Grunt Sculpin	<i>Rhamphocottus richardsoni</i>	unsexed	0.05	100	4839	100
2003	JE	U	41-60 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.09	100	4562	100
2003	JE	U	41-60 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.90	41.41	162077	53.25
2003	JE	U	41-60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	4.34	69.11	12744	70.88
2003	JE	U	41-60 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.26	64.94	34145	57.3
2003	JE	U	41-60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	1.52	100	9474	100
2003	JE	U	41-60 fa	Marine vegetation	Marine vegetation	unsexed	10.66	51.23	22715	43.68
2003	JE	U	41-60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	47.22	74.34	114485	72.49
2003	JE	U	41-60 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	1.25	100	5215	100
2003	JE	U	41-60 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	51.03	100	1699520	100
2003	JE	U	41-60 fa	Northern Ronquil	<i>Ronquilus jordani</i>	unsexed	2.23	32.62	56700	33.17
2003	JE	U	41-60 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	0.71	31.11	56500	35.56
2003	JE	U	41-60 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	5.82	70.33	201020	71.04
2003	JE	U	41-60 fa	Orangepeel Nudibranch	<i>Tochuina tetraqueta</i>	unsexed	1.04	100	9474	100
2003	JE	U	41-60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	3.54	66.7	14772	73.4
2003	JE	U	41-60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	1.64	57.08	61905	60.01
2003	JE	U	41-60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	1.08	100	30118	100
2003	JE	U	41-60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	18.59	32.07	521706	29.03
2003	JE	U	41-60 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.09	100	4313	100
2003	JE	U	41-60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	229.30	47.92	1382964	46.19
2003	JE	U	41-60 fa	Pacific Spiny Lumpsucker	<i>Eumicrotremus orbis</i>	unsexed	0.15	100	9678	100
2003	JE	U	41-60 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	5.70	69.5	23336	68.62
2003	JE	U	41-60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	6.08	51.21	176667	52.54
2003	JE	U	41-60 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	1.51	73.58	49966	67.07
2003	JE	U	41-60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	1.77	100	5215	100
2003	JE	U	41-60 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	37.99	38.31	82022	62.23
2003	JE	U	41-60 fa	Red Irish Lord	<i>Hemilepidotus hemilepidotus</i>	unsexed	0.90	100	5630	100
2003	JE	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	male	1.29	100	4313	100
2003	JE	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	female	0.65	100	4313	100
2003	JE	U	41-60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	63.35	87.55	129161	89.36

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								Estimate		
2003	JE	U	41-60 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	18.75	52.51	459481	52.51
2003	JE	U	41-60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	17.66	50.95	812806	43.7
2003	JE	U	41-60 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	19.40	72.16	500812	70.5
2003	JE	U	41-60 fa	Rough Patch Shrimp	<i>Pandalus stenolepis</i>	unsexed	0.34	74.98	131748	82
2003	JE	U	41-60 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.72	56.76	19275	52.68
2003	JE	U	41-60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	2.02	100	8605	100
2003	JE	U	41-60 fa	Sandpaper Skate	<i>Bathyraja kincaidi</i>	unsexed	2.39	100	4342	100
2003	JE	U	41-60 fa	Sea mouse uniden.	Family Aphroditidae	unsexed	1.85	100	8605	100
2003	JE	U	41-60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.65	67.31	32636	67.74
2003	JE	U	41-60 fa	Shortscale Eulaid	<i>Eualus suckleyi</i>	unsexed	0.11	100	38723	100
2003	JE	U	41-60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	29.25	58.92	2691189	58.57
2003	JE	U	41-60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.69	100	26054	100
2003	JE	U	41-60 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.18	66.75	18554	77.56
2003	JE	U	41-60 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	11.52	51.29	35895	46.05
2003	JE	U	41-60 fa	Smooth Alligatorfish	<i>Anoplagonus inermis</i>	unsexed	0.04	100	4303	100
2003	JE	U	41-60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	43.26	44.87	1939139	44.51
2003	JE	U	41-60 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.05	100	4562	100
2003	JE	U	41-60 fa	Soft Sculpin	<i>Psychrolutes sigalutes</i>	unsexed	0.05	100	4737	100
2003	JE	U	41-60 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	5.05	64.98	19408	41.07
2003	JE	U	41-60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	388.35	65.39	430296	59.54
2003	JE	U	41-60 fa	Spiny Lebtheid	<i>Lebbeus groenlandicus</i>	unsexed	0.79	48.69	294088	57.85
2003	JE	U	41-60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	7.63	69.12	311833	71.63
2003	JE	U	41-60 fa	Spinyhead Sculpin	<i>Dasyctonus setiger</i>	unsexed	2.57	84.63	52313	81.32
2003	JE	U	41-60 fa	Sponge uniden.	Phylum Porifera	unsexed	66.30	76.19	18899	53.05
2003	JE	U	41-60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	129.38	38.32	4063859	37.82
2003	JE	U	41-60 fa	Spotted Ratfish	<i>Hydrolagus collicei</i>	unsexed	4101.94	20.73	9295673	28.05
2003	JE	U	41-60 fa	Spotted Ratfish egg case	<i>Hydrolagus collicei egg case</i>	unsexed	0.23	100	11259	100
2003	JE	U	41-60 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	1.40	59.3	184194	56.23
2003	JE	U	41-60 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.29	100	14517	100
2003	JE	U	41-60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	3.43	77.14	94044	80.77
2003	JE	U	41-60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	134.06	88.7	133767	93.01
2003	JE	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	2.07	74.69	9300	66.68
2003	JE	U	41-60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	2.29	100	30192	100
2003	JE	U	41-60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	479.80	39.62	23827003	38.86
2003	JE	U	41-60 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	0.19	100	33160	100
2003	JE	U	41-60 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	2.15	100	12908	100
2003	JE	U	41-60 fa	Yellow-leg Pandalid	<i>Pandalus tridens</i>	unsexed	0.05	100	16469	100
2003	JE	V	>60 fa	Alaskan Pink Shrimp	<i>Pandalus eos</i>	unsexed	10.55	52.81	1988474	54.45
2003	JE	V	>60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	12.16	35.53	74400	31.09
2003	JE	V	>60 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	1.03	100	4497	100
2003	JE	V	>60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	276.69	34.89	44587	34.51
2003	JE	V	>60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.13	84.27	9329	67.99
2003	JE	V	>60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	1.49	100	8258	100
2003	JE	V	>60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	0.52	100	3967	100
2003	JE	V	>60 fa	Cloud Sponge	<i>Aphrocallytes vastus</i>	unsexed	11.71	69.86	13592	52.4
2003	JE	V	>60 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	2.05	100	7466	100

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								Estimate Coefficient of Variation		
2003	JE	V	>60 fa	Crangonid shrimp uniden.	Crangonidae	unsexed	0.10	57.64	46466	38.79
2003	JE	V	>60 fa	Dock Shrimp	Pandalus danae	unsexed	0.18	53.56	18164	53.56
2003	JE	V	>60 fa	Dover Sole	Microstomus pacificus	unsexed	152.31	40.86	1379156	33.85
2003	JE	V	>60 fa	English Sole	Parophrys vetulus	unsexed	50.61	85.27	200717	69.58
2003	JE	V	>60 fa	Flathead Sole	Hippoglossoides elassodon	unsexed	1.73	60.58	12480	51.77
2003	JE	V	>60 fa	Giant Pacific Octopus	Enteroctopus dofleini	unsexed	95.97	67.45	12850	73.21
2003	JE	V	>60 fa	Great Sculpin	Myoxocephalus polyacanthocephalus	unsexed	4.56	100	3967	100
2003	JE	V	>60 fa	Green Sea Urchin	Strongylocentrotus droebachiensis	unsexed	24.24	58.18	188387	51.62
2003	JE	V	>60 fa	Lingcod	Ophiodon elongatus	unsexed	42.05	100	8994	100
2003	JE	V	>60 fa	Lion's Mane Jelly	Cyanea capillata	unsexed	0.54	100	8994	100
2003	JE	V	>60 fa	Longnose Skate	Raja rhina	unsexed	209.90	34.13	141943	21.54
2003	JE	V	>60 fa	Marbled Snailfish	Liparis dennyi	unsexed	0.08	100	3885	100
2003	JE	V	>60 fa	Marine vegetation	Marine vegetation	unsexed	22.07	51.97	47178	27.77
2003	JE	V	>60 fa	Metridium uniden.	Metridium sp.	unsexed	1.06	54.22	14871	52.17
2003	JE	V	>60 fa	Morning Sun Star	Solaster dawsoni	unsexed	1.43	100	3967	100
2003	JE	V	>60 fa	Northern Horse Mussel	Modiolus modiolus	unsexed	0.04	100	4098	100
2003	JE	V	>60 fa	Pacific Cod	Gadus macrocephalus	unsexed	43.46	42.58	82490	58.15
2003	JE	V	>60 fa	Pacific Eulachon	Thaleichthys pacificus	unsexed	3.48	64.8	121403	72.75
2003	JE	V	>60 fa	Pacific Hake	Merluccius productus	unsexed	3.16	100	5362	100
2003	JE	V	>60 fa	Pacific Halibut	Hippoglossus stenolepis	unsexed	41.28	100	4497	100
2003	JE	V	>60 fa	Pacific Herring	Clupea pallasi	unsexed	13.90	28.83	204907	28.74
2003	JE	V	>60 fa	Pacific Sanddab	Citharichthys sordidus	unsexed	1.26	100	4483	100
2003	JE	V	>60 fa	Pacific Tomcod	Microgadus proximus	unsexed	3.40	68.5	29130	69.24
2003	JE	V	>60 fa	Petrale Sole	Eopsetta jordani	unsexed	2.69	69.36	8595	67.17
2003	JE	V	>60 fa	Plastic	Plastic	unsexed	0.17	100	5734	100
2003	JE	V	>60 fa	Pygmy Rock Crab	Cancer oregonensis	unsexed	0.00	100	3733	100
2003	JE	V	>60 fa	Rainbow Star	Orthasterias koehleri	unsexed	36.75	49.17	97604	44.55
2003	JE	V	>60 fa	Red Sea Urchin	Strongylocentrotus franciscanus	unsexed	24.27	71.09	31916	71.53
2003	JE	V	>60 fa	Redstripe Rockfish	Sebastes proriger	unsexed	0.42	68.35	9832	68.21
2003	JE	V	>60 fa	Rex Sole	Glyptocephalus zachirus	unsexed	18.46	33.7	331299	31.59
2003	JE	V	>60 fa	Rose Star	Crossaster papposus	unsexed	0.90	100	3733	100
2003	JE	V	>60 fa	Rough Patch Shrimp	Pandalus stenolepis	unsexed	0.02	100	4497	100
2003	JE	V	>60 fa	Sablefish	Anoplopoma fimbria	unsexed	5.00	100	12295	100
2003	JE	V	>60 fa	Sandpaper Skate	Bathyraja kincaidi	unsexed	23.29	63.89	42497	65.88
2003	JE	V	>60 fa	Shortspine Thornyhead	Sebastolobus alascanus	unsexed	1.27	100	3967	100
2003	JE	V	>60 fa	Sidestriped Shrimp	Pandalus dispar	unsexed	8.06	28.22	516895	27.74
2003	JE	V	>60 fa	Slender Sole	Lyopsetta exilis	unsexed	0.30	69.24	7618	67.1
2003	JE	V	>60 fa	Slime Star	Pteraster tesselatus	unsexed	6.02	72.99	11963	69.56
2003	JE	V	>60 fa	Smooth Pink Scallop	Chlamys rubida	unsexed	11.89	65.7	742231	68.6
2003	JE	V	>60 fa	Soft Sculpin	Psychrolutes sigalutes	unsexed	0.10	67.68	10231	67.68
2003	JE	V	>60 fa	Spiny Dogfish	Squalus suckleyi	unsexed	276.65	32.87	175942	30.21
2003	JE	V	>60 fa	Spiny Lebtheid	Lebbeus groenlandicus	unsexed	0.06	70.15	8464	67.24
2003	JE	V	>60 fa	Spiny Pink Scallop	Chlamys hastata	unsexed	0.20	80.22	7851	67.09
2003	JE	V	>60 fa	Sponge uniden.	Phylum Porifera	unsexed	4.60	100	3967	100
2003	JE	V	>60 fa	Spot Prawn	Pandalus platyceros	unsexed	58.85	51.51	1472221	52.66
2003	JE	V	>60 fa	Spotted Ratfish	Hydrolagus collei	unsexed	8997.54	29.15	25443051	29.84

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2003	JE	V	>60 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.53	67.78	9467	68.89
2003	JE	V	>60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.12	100	4129	100
2003	JE	V	>60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	2.66	100	4098	100
2003	JE	V	>60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	565.58	63.19	15498176	71.55
2003	JE	V	>60 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	0.22	100	89940	100
2003	JE	V	>60 fa	White Sea Urchin	<i>Strongylocentrotus pallidus</i>	unsexed	6.22	69.56	71864	72.67
2003	JW	S	5-20 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	1.29	100	4035	100
2003	JW	S	5-20 fa	Black Rockfish	<i>Sebastes melanops</i>	unsexed	29.15	100	45023	100
2003	JW	S	5-20 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.13	79.56	7670	69.3
2003	JW	S	5-20 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	1.97	82.45	6596	73.17
2003	JW	S	5-20 fa	Cabezon	<i>Scorpaenichthys marmoratus</i>	unsexed	25.09	100	5238	100
2003	JW	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	121.10	38.48	196265	35.14
2003	JW	S	5-20 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.02	100	2432	100
2003	JW	S	5-20 fa	Curlfin Sole	<i>Pleuronichthys decurrens</i>	unsexed	0.56	100	5628	100
2003	JW	S	5-20 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.13	100	12663	100
2003	JW	S	5-20 fa	Fish-eating Star	<i>Stylasterias forneri</i>	unsexed	2.67	57.48	11662	48.37
2003	JW	S	5-20 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	2.26	100	8071	100
2003	JW	S	5-20 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.08	63.7	10173	81.3
2003	JW	S	5-20 fa	Graceful Kelp Crab	<i>Pugettia gracilis</i>	unsexed	0.11	100	5628	100
2003	JW	S	5-20 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	3.93	100	8442	100
2003	JW	S	5-20 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	17.83	87.42	185781	71.25
2003	JW	S	5-20 fa	Gumboot Chiton	<i>Cryptochiton stelleri</i>	unsexed	5.08	72.72	9459	63.79
2003	JW	S	5-20 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.03	100	1732	100
2003	JW	S	5-20 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	108.76	40.78	240295	39.87
2003	JW	S	5-20 fa	Leather Star	<i>Dermasterias imbricata</i>	unsexed	3.92	68.29	6970	74.29
2003	JW	S	5-20 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	24.36	90.01	12224	51.81
2003	JW	S	5-20 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.08	100	4221	100
2003	JW	S	5-20 fa	Longnose Skate egg case	<i>Raja rhina</i> egg case	unsexed	0.42	100	4221	100
2003	JW	S	5-20 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	217.32	52.3	19251	27.92
2003	JW	S	5-20 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	28.94	81.08	83504	84.75
2003	JW	S	5-20 fa	Orange Burrowing Sea Cucumber	<i>Cucumaria miniata</i>	unsexed	0.78	100	4864	100
2003	JW	S	5-20 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	1.96	38.34	22479	34.83
2003	JW	S	5-20 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	0.63	63.75	10823	63.32
2003	JW	S	5-20 fa	Pacific Spiny Lumpsucker	<i>Eumicrotremus orbis</i>	unsexed	0.03	100	1732	100
2003	JW	S	5-20 fa	Plastic	Plastic	unsexed	0.01	100	1732	100
2003	JW	S	5-20 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	4.61	100	5238	100
2003	JW	S	5-20 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	6.56	45.4	41155	39.9
2003	JW	S	5-20 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	626.39	99.22	1348018	99.08
2003	JW	S	5-20 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	0.21	100	8658	100
2003	JW	S	5-20 fa	Ringed Dorid	<i>Diaulula sandiegensis</i>	unsexed	0.04	100	4035	100
2003	JW	S	5-20 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.14	100	1732	100
2003	JW	S	5-20 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	9.81	100	12106	100
2003	JW	S	5-20 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	40.21	99.24	1230950	98.42
2003	JW	S	5-20 fa	Southern Rock Sole	<i>Lepidotretta bilineata</i>	unsexed	83.21	35.8	240319	33.9
2003	JW	S	5-20 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	1.00	63.7	61906	63.64
2003	JW	S	5-20 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	1.47	100	67534	100

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2003	JW	S	5-20 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	0.71	100	1732	100	
2003	JW	S	5-20 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	8.29	100	2432	100	
2003	JW	S	5-20 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	573.44	46.37	944859	46.76	
2003	JW	S	5-20 fa	Steven's Hermit Crab	<i>Pagurus stevensae</i>	unsexed	2.35	57.36	33180	46.72	
2003	JW	S	5-20 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.04	100	4035	100	
2003	JW	S	5-20 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	42.42	54.71	25478	47.04	
2003	JW	S	5-20 fa	Surf Smelt	<i>Hypomesus pretiosus</i>	unsexed	0.05	100	2432	100	
2003	JW	S	5-20 fa	Vermilion Rockfish	<i>Sebastes miniatus</i>	unsexed	6.17	60.42	39553	59.33	
2003	JW	T	21-40 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	0.33	100	3154	100	
2003	JW	T	21-40 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	2.09	45.75	6384	45.65	
2003	JW	T	21-40 fa	Brittle star uniden.	<i>Ophiuridae</i>	unsexed	0.07	70.54	8109	51.49	
2003	JW	T	21-40 fa	Brown Irish Lord	<i>Hemilepidotus spinosus</i>	unsexed	0.10	100	2057	100	
2003	JW	T	21-40 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	1.72	80.89	7671	78.9	
2003	JW	T	21-40 fa	Cloud Sponge	<i>Aphrocallistes vastus</i>	unsexed	8.14	88.09	5612	47.47	
2003	JW	T	21-40 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.01	100	1459	100	
2003	JW	T	21-40 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	4.68	67.06	32363	69.26	
2003	JW	T	21-40 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	14.08	93.08	92144	81.08	
2003	JW	T	21-40 fa	Fish-eating Star	<i>Stylasterias forneri</i>	unsexed	2.60	51.24	13511	55.91	
2003	JW	T	21-40 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	0.30	100	5375	100	
2003	JW	T	21-40 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	4.19	100	5375	100	
2003	JW	T	21-40 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	40.37	92.62	395915	88.54	
2003	JW	T	21-40 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	0.31	100	6171	100	
2003	JW	T	21-40 fa	Grunt Sculpin	<i>Rhamphocottus richardsoni</i>	unsexed	0.05	100	3583	100	
2003	JW	T	21-40 fa	Gumboot Chiton	<i>Cryptochiton stelleri</i>	unsexed	0.44	100	1577	100	
2003	JW	T	21-40 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	5.77	49.33	31863	49.34	
2003	JW	T	21-40 fa	Leather Star	<i>Dermasterias imbricata</i>	unsexed	1.55	100	1459	100	
2003	JW	T	21-40 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	2.12	100	1459	100	
2003	JW	T	21-40 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	7.45	100	2535	100	
2003	JW	T	21-40 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	18.02	50.93	6328	31.93	
2003	JW	T	21-40 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	26.72	46.33	89895	47.37	
2003	JW	T	21-40 fa	Northern Ronquil	<i>Ronquilus jordani</i>	unsexed	0.26	49.05	5426	45.25	
2003	JW	T	21-40 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	0.58	58.62	26006	51.27	
2003	JW	T	21-40 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	0.72	100	10750	100	
2003	JW	T	21-40 fa	Other man-made debris	<i>Other man-made debris</i>	unsexed	75.00	100	1500	100	
2003	JW	T	21-40 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	14.31	41.83	44399	32.21	
2003	JW	T	21-40 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	6.44	41.64	145453	47.38	
2003	JW	T	21-40 fa	Pacific Spiny Lumpsucker	<i>Eumicrotremus orbis</i>	unsexed	0.05	100	5375	100	
2003	JW	T	21-40 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	3.81	83.43	16055	63.82	
2003	JW	T	21-40 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	8.29	78.6	8707	71.04	
2003	JW	T	21-40 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	7.58	41.71	36313	46.56	
2003	JW	T	21-40 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	1.08	100	1792	100	
2003	JW	T	21-40 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	27.70	99.16	564016	98.66	
2003	JW	T	21-40 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	1.50	100	29961	100	
2003	JW	T	21-40 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	0.95	63.06	25596	64.99	
2003	JW	T	21-40 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.24	100	1500	100	
2003	JW	T	21-40 fa	Roughspine Sculpin	<i>Triglops macellus</i>	unsexed	0.23	65.72	9171	68.68	

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								Coefficient of Variation		
2003	JW	T	21-40 fa	Sand Rose Anemone	<i>Urticina columbiana</i>	unsexed	0.08	100	1577	100
2003	JW	T	21-40 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	0.35	100	2057	100
2003	JW	T	21-40 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	3.15	70.82	5057	64.87
2003	JW	T	21-40 fa	Slipper Sea Cucumber	<i>Psolus chitonoides</i>	unsexed	0.05	100	1792	100
2003	JW	T	21-40 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	17.75	47.34	885832	46.03
2003	JW	T	21-40 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	24.79	27.96	130746	35.02
2003	JW	T	21-40 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	0.07	100	1792	100
2003	JW	T	21-40 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	1.11	62.24	18753	50.74
2003	JW	T	21-40 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	1.60	75.71	11519	80.49
2003	JW	T	21-40 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	8.29	100	2057	100
2003	JW	T	21-40 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	872.81	28.57	1922848	20.66
2003	JW	T	21-40 fa	Steven's Hermit Crab	<i>Pagurus stevensae</i>	unsexed	0.03	100	1500	100
2003	JW	T	21-40 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.08	100	2535	100
2003	JW	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.17	65.85	3036	63.32
2003	JW	T	21-40 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.03	100	1577	100
2003	JW	T	21-40 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	5.01	85.24	164764	88.82
2003	JW	T	21-40 fa	Widehand Hermit Crab	<i>Elassochirus tenuimanus</i>	unsexed	0.07	100	1792	100
2003	JW	U	41-60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	4.24	86.25	1238950	84.81
2003	JW	U	41-60 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.12	93.04	1228	72.78
2003	JW	U	41-60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	3.14	36.37	20485	34.6
2003	JW	U	41-60 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	0.58	100	1941	100
2003	JW	U	41-60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	65.59	56.14	17764	57.31
2003	JW	U	41-60 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	0.00	100	809	100
2003	JW	U	41-60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.01	100	894	100
2003	JW	U	41-60 fa	Brittle star uniden.	<i>Ophiuridae</i>	unsexed	0.02	100	2683	100
2003	JW	U	41-60 fa	Brown Irish Lord	<i>Hemilepidotus spinosus</i>	unsexed	0.03	100	1029	100
2003	JW	U	41-60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	1.86	96.27	14503	94.08
2003	JW	U	41-60 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.15	65.12	9630	74.75
2003	JW	U	41-60 fa	Cloud Sponge	<i>Aphrocallistes vastus</i>	unsexed	2.90	57.84	2904	45.68
2003	JW	U	41-60 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	0.32	100	809	100
2003	JW	U	41-60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.08	90.15	10508	78.33
2003	JW	U	41-60 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.00	100	806	100
2003	JW	U	41-60 fa	Cucumaria spp.	<i>Cucumaria sp.</i>	unsexed	0.02	100	842	100
2003	JW	U	41-60 fa	Curlfin Sole	<i>Pleuronichthys decurrens</i>	unsexed	0.77	100	1611	100
2003	JW	U	41-60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.75	73.08	87903	76.33
2003	JW	U	41-60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	56.76	62.6	367563	55.38
2003	JW	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	female	1.15	100	1611	100
2003	JW	U	41-60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	6.00	52.78	38956	47.65
2003	JW	U	41-60 fa	Fish-eating Star	<i>Stylasterias forsteri</i>	unsexed	0.25	91.84	1149	71.63
2003	JW	U	41-60 fa	Fishing gear	Fishing gear	unsexed	0.00	80.4	1245	68.02
2003	JW	U	41-60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	0.23	73.06	1615	67.42
2003	JW	U	41-60 fa	Giant Pacific Octopus	<i>Enteroctopus dofleini</i>	unsexed	15.15	54.74	2794	58.33
2003	JW	U	41-60 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.02	81.19	1651	67.44
2003	JW	U	41-60 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	10.02	84.86	14557	88.62
2003	JW	U	41-60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	5.86	56.67	57183	52.55
2003	JW	U	41-60 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	2.99	41.57	45365	35.41

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass Estimate Coefficient of Variation		Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Coefficient of Variation	Abundance Estimate		
2003	JW	U	41-60 fa	Grunt Sculpin	<i>Rhamphocottus richardsoni</i>	unsexed	0.04	100	1941	100	
2003	JW	U	41-60 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.01	100	2417	100	
2003	JW	U	41-60 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.08	100	8091	100	
2003	JW	U	41-60 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	0.31	100	1941	100	
2003	JW	U	41-60 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	6.69	75.34	6796	60.74	
2003	JW	U	41-60 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.02	53.37	4132	53.37	
2003	JW	U	41-60 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	110.02	79.13	6058	22.85	
2003	JW	U	41-60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	6.67	89.7	32372	89.18	
2003	JW	U	41-60 fa	Northern Ronquil	<i>Ronquilus jordani</i>	unsexed	0.72	49.73	16023	45.3	
2003	JW	U	41-60 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	0.08	67.42	2866	74.7	
2003	JW	U	41-60 fa	Orange Burrowing Sea Cucumber	<i>Cucumaria miniata</i>	unsexed	0.01	100	894	100	
2003	JW	U	41-60 fa	Other man-made debris	<i>Other man-made debris</i>	unsexed	24.84	74.85	1593	68.03	
2003	JW	U	41-60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	84.59	44.31	157062	34.88	
2003	JW	U	41-60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	2.97	60.25	129605	59.97	
2003	JW	U	41-60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	0.87	100	1485	100	
2003	JW	U	41-60 fa	Pacific Halibut	<i>Hippoglossus stenolepis</i>	unsexed	7.01	68.15	1505	67.43	
2003	JW	U	41-60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	0.84	40.69	14098	40.64	
2003	JW	U	41-60 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.02	100	806	100	
2003	JW	U	41-60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	12.79	36.6	91334	45.31	
2003	JW	U	41-60 fa	Pacific Spiny Lumpsucker	<i>Eumicrotremus orbis</i>	unsexed	0.03	70.7	1704	67.52	
2003	JW	U	41-60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	0.54	58.72	10922	67.14	
2003	JW	U	41-60 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	8.26	67.21	20917	61.35	
2003	JW	U	41-60 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	0.25	100	3881	100	
2003	JW	U	41-60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	7.15	75.65	15241	76.87	
2003	JW	U	41-60 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	1.95	37	10072	37.06	
2003	JW	U	41-60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	3.58	100	4472	100	
2003	JW	U	41-60 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	5.57	96.66	102795	95.97	
2003	JW	U	41-60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	1.67	45.55	32358	58.95	
2003	JW	U	41-60 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	0.11	75.08	2391	72.31	
2003	JW	U	41-60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.08	100	842	100	
2003	JW	U	41-60 fa	Roughspine Sculpin	<i>Triglops macellus</i>	unsexed	0.06	67.68	1245	68.02	
2003	JW	U	41-60 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	1.72	100	1611	100	
2003	JW	U	41-60 fa	Sandpaper Skate	<i>Bathyraja kincaidi</i>	unsexed	2.60	72.19	2361	72.78	
2003	JW	U	41-60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	0.47	99.1	31134	98.65	
2003	JW	U	41-60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.66	64.99	9117	63.83	
2003	JW	U	41-60 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	2.97	57.58	7231	40.56	
2003	JW	U	41-60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	4.25	49.98	268413	60.35	
2003	JW	U	41-60 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	17.37	34.49	42068	31.29	
2003	JW	U	41-60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	61.16	52.22	47422	52.93	
2003	JW	U	41-60 fa	Spiny Lithode Crab	<i>Acantholithodes hispidus</i>	unsexed	0.01	100	1093	100	
2003	JW	U	41-60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	0.01	100	386	100	
2003	JW	U	41-60 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	0.08	100	842	100	
2003	JW	U	41-60 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	13.85	84.48	4838	42.97	
2003	JW	U	41-60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	2.36	85.74	116579	86.43	
2003	JW	U	41-60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	587.32	19.68	1680923	25.26	
2003	JW	U	41-60 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei egg case</i>	unsexed	0.04	61.13	2592	59.69	

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								Estimate		
2003	JW	U	41-60 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	0.30	100	698	100
2003	JW	U	41-60 fa	Stripetail Rockfish	<i>Sebastes saxicola</i>	unsexed	0.03	100	1093	100
2003	JW	U	41-60 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.33	47.7	6560	40.28
2003	JW	U	41-60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.68	54.18	14605	61.62
2003	JW	U	41-60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	0.56	74.41	1704	67.52
2003	JW	U	41-60 fa	Tadpole Sculpin	<i>Psychrolutes paradoxus</i>	unsexed	0.00	100	698	100
2003	JW	U	41-60 fa	Threadfin Sculpin	<i>Icelinus filamentosus</i>	unsexed	1.90	66.65	12128	67.08
2003	JW	U	41-60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.01	100	547	100
2003	JW	U	41-60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	90.40	46.93	3496631	48.06
2003	JW	U	41-60 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	0.01	100	894	100
2003	JW	U	41-60 fa	Wolf-eel	<i>Anarrhichthys ocellatus</i>	unsexed	8.66	69.15	2268	72.08
2003	JW	V	>60 fa	Alaskan Pink Shrimp	<i>Pandalus eos</i>	unsexed	7.39	79.52	1685397	81.38
2003	JW	V	>60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	288.06	29.45	836110	33.46
2003	JW	V	>60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	73.19	100	4344	100
2003	JW	V	>60 fa	Bigeye Poacher	<i>Bathyagonus pentacanthus</i>	unsexed	0.10	100	4761	100
2003	JW	V	>60 fa	British Columbia Crenella	<i>Solamen columbianum</i>	unsexed	0.20	59.09	23746	55.33
2003	JW	V	>60 fa	Cloud Sponge	<i>Aphrocallistes vastus</i>	unsexed	0.14	100	3476	100
2003	JW	V	>60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.00	100	4485	100
2003	JW	V	>60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	366.67	23.98	1715916	16.79
2003	JW	V	>60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	7.95	41.01	33561	38.97
2003	JW	V	>60 fa	Fish-eating Star	<i>Styelaasterias forsteri</i>	unsexed	0.72	100	4807	100
2003	JW	V	>60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	2.44	72.67	15204	78.88
2003	JW	V	>60 fa	Fragile Sea Urchin	<i>Strongylocentrotus fragilis</i>	unsexed	3.40	42.88	28587	42.23
2003	JW	V	>60 fa	Giant Pacific Octopus	<i>Enteroctopus dofleini</i>	unsexed	62.45	69.9	16270	75.42
2003	JW	V	>60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	11.68	30.87	123778	22.92
2003	JW	V	>60 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	4.36	63.11	34961	63.07
2003	JW	V	>60 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	8.67	100	5254	100
2003	JW	V	>60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	475.72	34.55	151684	27.59
2003	JW	V	>60 fa	Marbled Snailfish	<i>Liparis dennyi</i>	unsexed	0.14	100	4541	100
2003	JW	V	>60 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	15.54	41.49	47075	26.74
2003	JW	V	>60 fa	Other man-made debris	<i>Other man-made debris</i>	unsexed	76.28	100	4761	100
2003	JW	V	>60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	675.17	24.5	689137	26.23
2003	JW	V	>60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	63.09	44.64	2596153	44.17
2003	JW	V	>60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	263.32	25.91	203471	28.68
2003	JW	V	>60 fa	Pacific Halibut	<i>Hippoglossus stenolepis</i>	unsexed	162.48	100	9614	100
2003	JW	V	>60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	0.31	100	5154	100
2003	JW	V	>60 fa	Pacific Ocean Perch	<i>Sebastes alutus</i>	unsexed	6.30	100	4344	100
2003	JW	V	>60 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	5.72	65.58	29307	58.5
2003	JW	V	>60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	3.81	100	5154	100
2003	JW	V	>60 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	0.68	70.97	8943	68.36
2003	JW	V	>60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	6.71	58.11	21801	56.88
2003	JW	V	>60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	48.55	52.43	366591	56.56
2003	JW	V	>60 fa	Sablefish	<i>Anoplopoma fimbria</i>	unsexed	16.23	42.24	21658	38.02
2003	JW	V	>60 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	1.99	100	4412	100
2003	JW	V	>60 fa	Sandpaper Skate	<i>Bathyraja kincaidi</i>	unsexed	32.48	53.87	39776	61.55
2003	JW	V	>60 fa	Sea star uniden.	<i>Class Asteroidea</i>	unsexed	0.05	100	5254	100

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								Estimate		
2003	JW	V	>60 fa	Shortspine Thornyhead	<i>Sebastolobus alascanus</i>	unsexed	5.27	68.65	16490	74.83
2003	JW	V	>60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	16.42	27	1141016	25.85
2003	JW	V	>60 fa	Sixgill Shark	<i>Hexanchus griseus</i>	unsexed	123.80	100	4761	100
2003	JW	V	>60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	2.27	42.07	33505	40.31
2003	JW	V	>60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	0.04	100	4485	100
2003	JW	V	>60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	572.35	25.49	483296	24.31
2003	JW	V	>60 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	0.41	68.14	8630	69.61
2003	JW	V	>60 fa	Splitnose Rockfish	<i>Sebastes diploproa</i>	unsexed	0.24	100	4027	100
2003	JW	V	>60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	1.85	82.59	49463	72.93
2003	JW	V	>60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	5809.95	17.29	14506820	20.61
2003	JW	V	>60 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei egg case</i>	unsexed	0.13	70.01	18364	68.73
2003	JW	V	>60 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	0.10	100	5154	100
2003	JW	V	>60 fa	Stripetail Rockfish	<i>Sebastes saxicola</i>	unsexed	0.24	100	4027	100
2003	JW	V	>60 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.09	100	4545	100
2003	JW	V	>60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.66	100	8823	100
2003	JW	V	>60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	19.16	62.64	19974	58.34
2003	JW	V	>60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	1.09	100	4027	100
2003	JW	V	>60 fa	Threadfin Sculpin	<i>Icelinus filamentosus</i>	unsexed	2.58	100	15463	100
2003	JW	V	>60 fa	Variable Topsnail	<i>Calliostoma variegatum</i>	unsexed	0.04	100	4027	100
2003	JW	V	>60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.58	58.77	23568	62.62
2003	JW	V	>60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	806.02	40.42	8093778	54.42
2003	JW	V	>60 fa	White Sea Urchin	<i>Strongylocentrotus pallidus</i>	unsexed	0.37	100	3689	100
2004	GB	S	5-20 fa	Aluminum	Aluminum	unsexed	1.39	62.1	19360	54.21
2004	GB	S	5-20 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	3.76	60.2	43164	61.11
2004	GB	S	5-20 fa	Axe Yoldia	<i>Megayoldia thraciaeformis</i>	unsexed	0.09	100	4357	100
2004	GB	S	5-20 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	0.89	100	20921	100
2004	GB	S	5-20 fa	Big Skate	<i>Raja binoculata</i>	unsexed	58.01	33.06	120221	22.39
2004	GB	S	5-20 fa	Big Skate egg case	<i>Raja binoculata egg case</i>	unsexed	7.10	69.6	14433	68.14
2004	GB	S	5-20 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	0.36	73.59	8582	68.94
2004	GB	S	5-20 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	8.12	95.33	35993	80.96
2004	GB	S	5-20 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	1.96	77.68	18267	72.14
2004	GB	S	5-20 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	496.79	70.29	3119479	63.98
2004	GB	S	5-20 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.15	100	9014	100
2004	GB	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	35.15	81.59	36258	85.76
2004	GB	S	5-20 fa	Clam uniden.	Class Bivalvia	unsexed	0.01	100	2541	100
2004	GB	S	5-20 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	5.50	97.82	28972	90.09
2004	GB	S	5-20 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	0.03	100	2541	100
2004	GB	S	5-20 fa	Crangonid shrimp uniden.	Crangonidae	unsexed	0.81	41.77	271808	39.61
2004	GB	S	5-20 fa	Divaricate Nut Clam	<i>Acila castrensis</i>	unsexed	0.06	100	36056	100
2004	GB	S	5-20 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	2.18	87.97	846593	90.54
2004	GB	S	5-20 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	1.62	82.34	20864	74.44
2004	GB	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	male	3083.66	24.34	7545240	28.36
2004	GB	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	female	1947.63	39.39	6591635	40.23
2004	GB	S	5-20 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	1982.20	30.94	13540933	22.38
2004	GB	S	5-20 fa	False Ochre Star	<i>Easterias troschelii</i>	unsexed	4.63	61.38	14135	46.6
2004	GB	S	5-20 fa	Fishing gear	Fishing gear	unsexed	88.77	99.72	15737	50.8

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								Estimate		
2004	GB	S	5-20 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	203.69	35.21	1602158	34.85
2004	GB	S	5-20 fa	Glass	Glass	unsexed	41.18	50.53	106337	44.02
2004	GB	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	male	1.38	44.54	49820	37.77
2004	GB	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	female	1.83	85.89	38619	70.29
2004	GB	S	5-20 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.34	39.28	31637	35.42
2004	GB	S	5-20 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	22.85	47.96	57639	45.04
2004	GB	S	5-20 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	0.37	100	10460	100
2004	GB	S	5-20 fa	Larval fish uniden.	Larval fish	unsexed	0.02	100	6009	100
2004	GB	S	5-20 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	2.00	90.07	6904	68.8
2004	GB	S	5-20 fa	Longfin Smelt	<i>Spirinchus thaleichthys</i>	unsexed	11.11	32.58	1427205	30.11
2004	GB	S	5-20 fa	Marine vegetation	Marine vegetation	unsexed	39.62	38.87	37128	24.31
2004	GB	S	5-20 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	110.83	53.09	159375	50.69
2004	GB	S	5-20 fa	Miscellaneous material		unsexed	1.10	100	6160	100
2004	GB	S	5-20 fa	Mixed catch		unsexed	261.97	100	3080	100
2004	GB	S	5-20 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	0.22	100	7187	100
2004	GB	S	5-20 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	64.56	77.22	819278	86.04
2004	GB	S	5-20 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	0.10	100	10460	100
2004	GB	S	5-20 fa	Orange Sea Pen	<i>Ptilosarcus gurneyi</i>	unsexed	34.14	87.68	443995	90.44
2004	GB	S	5-20 fa	Other man-made debris	Other man-made debris	unsexed	27.84	88.29	10234	53.84
2004	GB	S	5-20 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	27.74	22.41	1076324	27.43
2004	GB	S	5-20 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.11	100	7247	100
2004	GB	S	5-20 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	115.17	48.65	673853	52.03
2004	GB	S	5-20 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	95.21	57.43	812558	79.23
2004	GB	S	5-20 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	15.99	40.4	419812	41.99
2004	GB	S	5-20 fa	Pile Perch	<i>Rhacocheilus vacca</i>	unsexed	0.10	100	2541	100
2004	GB	S	5-20 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	286.13	48.45	925683	50.9
2004	GB	S	5-20 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	156.16	50.87	3186958	51.2
2004	GB	S	5-20 fa	Plastic	Plastic	unsexed	11.06	54.04	59162	41.97
2004	GB	S	5-20 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	0.06	100	2821	100
2004	GB	S	5-20 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.10	100	4906	100
2004	GB	S	5-20 fa	Rainbow Nudibranch	<i>Dendronotus iris</i>	unsexed	1.71	44.73	89232	42.06
2004	GB	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	female	2.45	47.7	20448	49.1
2004	GB	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	male	19.64	42.43	69584	41.44
2004	GB	S	5-20 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	7.75	89.96	175752	89.31
2004	GB	S	5-20 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	3.12	63.08	153397	64.8
2004	GB	S	5-20 fa	Rosy Tritonia	<i>Tritonia diomedea</i>	unsexed	1.42	90.49	23689	88.7
2004	GB	S	5-20 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	6.52	48.92	253644	48.14
2004	GB	S	5-20 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.08	100	2821	100
2004	GB	S	5-20 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	349.03	27.26	1512831	23.21
2004	GB	S	5-20 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	158.11	29.55	1957504	30.17
2004	GB	S	5-20 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.83	38.16	69391	35.11
2004	GB	S	5-20 fa	Shortfin Eelpout	<i>Lycodes brevipes</i>	unsexed	0.03	100	2541	100
2004	GB	S	5-20 fa	Showy Snailfish	<i>Liparis pulchellus</i>	unsexed	0.25	100	3080	100
2004	GB	S	5-20 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.27	58.93	28351	47.11
2004	GB	S	5-20 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	277.77	41.48	1775757	49.84
2004	GB	S	5-20 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	31.72	36.89	881805	35.97

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2004	GB	S	5-20 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	463.55	20.83	299189	30.5
2004	GB	S	5-20 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	0.21	100	10460	100
2004	GB	S	5-20 fa	Spinyhead Sculpin	<i>Dasycttus setiger</i>	unsexed	1.62	100	15690	100
2004	GB	S	5-20 fa	Squid egg case	<i>Squid egg case</i>	unsexed	0.09	100	3005	100
2004	GB	S	5-20 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	3596.80	42.58	8148316	42.07
2004	GB	S	5-20 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	3.24	82.25	140124	85.89
2004	GB	S	5-20 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.20	100	2821	100
2004	GB	S	5-20 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	5.88	46.1	354539	51.47
2004	GB	S	5-20 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	164.51	46.23	222537	24.26
2004	GB	S	5-20 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	1.37	53.35	68654	54.19
2004	GB	S	5-20 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	1.96	47.84	98863	50.74
2004	GB	S	5-20 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	0.86	98.15	25755	78.53
2004	GB	S	5-20 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	0.13	100	2541	100
2004	GB	S	5-20 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	3.01	42.6	32954	45.01
2004	GB	S	5-20 fa	Yoldia uniden.	<i>Yoldiidae sp</i>	unsexed	0.04	100	17427	100
2004	GB	T	21-40 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	85.66	47.86	17844654	54.06
2004	GB	T	21-40 fa	Aluminum	<i>Aluminum</i>	unsexed	0.10	100	6115	100
2004	GB	T	21-40 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.40	69.73	4349	66.4
2004	GB	T	21-40 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	4.39	48.42	89115	49.15
2004	GB	T	21-40 fa	Big Skate	<i>Raja binoculata</i>	unsexed	40.05	15.24	116306	20.12
2004	GB	T	21-40 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	1.73	43.87	52615	45.83
2004	GB	T	21-40 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	0.27	100	4193	100
2004	GB	T	21-40 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	4.12	91.43	40303	94.08
2004	GB	T	21-40 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.01	100	2174	100
2004	GB	T	21-40 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	144.33	99.86	258842	99.13
2004	GB	T	21-40 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.76	44.97	425379	48.56
2004	GB	T	21-40 fa	Danas Blade Shrimp	<i>Spirontocaris lamellicornis</i>	unsexed	0.08	100	32614	100
2004	GB	T	21-40 fa	Diamondback Nudibranch	<i>Tritonia festiva</i>	unsexed	0.02	100	8154	100
2004	GB	T	21-40 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	12.71	50.86	1979744	40.58
2004	GB	T	21-40 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	8.21	30.52	110436	22.92
2004	GB	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	female	337.23	32.25	951198	33.18
2004	GB	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	male	2012.37	22.26	4224617	29.78
2004	GB	T	21-40 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	211.55	33.06	1332804	31.64
2004	GB	T	21-40 fa	Fishing gear	<i>Fishing gear</i>	unsexed	1.51	100	2007	100
2004	GB	T	21-40 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	91.36	48.87	601927	58.3
2004	GB	T	21-40 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	6.88	74.51	86294	74.79
2004	GB	T	21-40 fa	Giant Pacific Octopus	<i>Enteroctopus dofleini</i>	unsexed	18.53	100	2038	100
2004	GB	T	21-40 fa	Glassy Tunicate	<i>Ascidia paratropa</i>	unsexed	0.37	100	6115	100
2004	GB	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	female	0.13	92.67	7880	78.04
2004	GB	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	male	1.02	68.86	28341	85.06
2004	GB	T	21-40 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.64	85.56	56804	80.86
2004	GB	T	21-40 fa	Gray Starsnout	<i>Bathyagonus aliascanus</i>	unsexed	0.27	66.07	48711	77.38
2004	GB	T	21-40 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	480.29	91.9	936490	90.5
2004	GB	T	21-40 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	0.26	100	6115	100
2004	GB	T	21-40 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.03	100	8154	100
2004	GB	T	21-40 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.18	85.29	60934	77.51

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2004	GB	T	21-40 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	16.60	74.15	8367505	81.56
2004	GB	T	21-40 fa	Krill uniden.	Order Euphausiacea	unsexed	0.01	100	8154	100
2004	GB	T	21-40 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	0.41	100	1764	100
2004	GB	T	21-40 fa	Longfin Smelt	<i>Spirinchus thaleichthys</i>	unsexed	0.45	62.75	47118	60.71
2004	GB	T	21-40 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	2.55	60.7	6142	50.01
2004	GB	T	21-40 fa	Marbled Snailfish	<i>Liparis dennyi</i>	unsexed	0.08	66.15	6173	70.38
2004	GB	T	21-40 fa	Marine vegetation	Marine vegetation	unsexed	330.98	96.15	16168	12.75
2004	GB	T	21-40 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	68.66	44.65	213608	38.07
2004	GB	T	21-40 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	1.66	100	2342	100
2004	GB	T	21-40 fa	Northern Kelp Crab	<i>Pugettia producta</i>	unsexed	0.08	100	16307	100
2004	GB	T	21-40 fa	Northern Ronquil	<i>Ronquilus jordani</i>	unsexed	0.21	79.69	9122	77.57
2004	GB	T	21-40 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	0.13	52.97	17748	63.89
2004	GB	T	21-40 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	1.23	73.58	45255	75.4
2004	GB	T	21-40 fa	Nuttall Cockle	<i>Clinocardium nuttallii</i>	unsexed	0.55	100	4193	100
2004	GB	T	21-40 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	0.16	100	2342	100
2004	GB	T	21-40 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	0.69	100	2097	100
2004	GB	T	21-40 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	0.93	71.36	46088	69.59
2004	GB	T	21-40 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	1.39	86.38	48389	82.71
2004	GB	T	21-40 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	38.25	46.05	711932	44.21
2004	GB	T	21-40 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	2.29	88.35	122742	81.41
2004	GB	T	21-40 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	93.98	49.85	574097	53.26
2004	GB	T	21-40 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	27.47	28.78	156593	28.43
2004	GB	T	21-40 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	2.15	36.02	47569	41
2004	GB	T	21-40 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	0.19	100	1904	100
2004	GB	T	21-40 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	0.05	100	1764	100
2004	GB	T	21-40 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	11.67	46.9	17595	44.65
2004	GB	T	21-40 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	3.27	100	54184	100
2004	GB	T	21-40 fa	Plastic	Plastic	unsexed	1.71	98.75	10057	80.91
2004	GB	T	21-40 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	0.27	78.9	8929	78.9
2004	GB	T	21-40 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.03	68.12	10250	79.62
2004	GB	T	21-40 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	0.08	100	2097	100
2004	GB	T	21-40 fa	Rainbow Nudibranch	<i>Dendronotus iris</i>	unsexed	0.02	100	8154	100
2004	GB	T	21-40 fa	Red Irish Lord	<i>Hemilepidotus hemilepidotus</i>	unsexed	1.08	100	2342	100
2004	GB	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	male	6.84	32.1	24706	29.93
2004	GB	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	female	3.97	58.85	22144	51.51
2004	GB	T	21-40 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	3.38	100	4193	100
2004	GB	T	21-40 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	0.35	100	7026	100
2004	GB	T	21-40 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	26.30	29.47	697121	32.9
2004	GB	T	21-40 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	2.62	70.63	87847	69.46
2004	GB	T	21-40 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.16	100	2342	100
2004	GB	T	21-40 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	2.27	88.55	67856	86.07
2004	GB	T	21-40 fa	Saddleback Gunnel	<i>Pholis ornata</i>	unsexed	0.02	100	2038	100
2004	GB	T	21-40 fa	Sand Rose Anemone	<i>Urticina columbiana</i>	unsexed	0.08	100	2038	100
2004	GB	T	21-40 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	5.00	100	52177	100
2004	GB	T	21-40 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	5.81	33.29	61250	38.29
2004	GB	T	21-40 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.20	43.75	9914	44.26

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								Estimate Coefficient of Variation		
2004	GB	T	21-40 fa	Shortfin Eelpout	<i>Lycodes brevipes</i>	unsexed	0.18	100	10192	100
2004	GB	T	21-40 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.07	63.29	40776	60
2004	GB	T	21-40 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	1.22	84.89	214689	86.98
2004	GB	T	21-40 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	5.83	31.79	237385	37.75
2004	GB	T	21-40 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.09	54	8574	54
2004	GB	T	21-40 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	1.64	66.63	6170	71.42
2004	GB	T	21-40 fa	Smelt uniden.	<i>Osmeridae</i>	unsexed	0.02	100	2342	100
2004	GB	T	21-40 fa	Smooth Alligatorfish	<i>Anoplagonus inermis</i>	unsexed	0.02	100	2342	100
2004	GB	T	21-40 fa	Snail uniden.	<i>Class Gastropoda</i>	unsexed	0.08	79.14	3972	66.67
2004	GB	T	21-40 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.18	100	12230	100
2004	GB	T	21-40 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	54.95	58.9	187509	65.33
2004	GB	T	21-40 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	0.20	100	5929	100
2004	GB	T	21-40 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	141.11	22.09	131100	27.77
2004	GB	T	21-40 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	0.05	100	4684	100
2004	GB	T	21-40 fa	Spinyhead Sculpin	<i>Dasy cottus setiger</i>	unsexed	9.73	46.21	160126	41.04
2004	GB	T	21-40 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	0.32	86.41	25034	90.96
2004	GB	T	21-40 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	129.96	54.58	395469	56.57
2004	GB	T	21-40 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	4.02	56.57	12438	50.05
2004	GB	T	21-40 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	1.92	100	10192	100
2004	GB	T	21-40 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.75	78.53	11406	81.84
2004	GB	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.23	50.96	10205	60.12
2004	GB	T	21-40 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	43.86	34.24	36936	35.31
2004	GB	T	21-40 fa	Tadpole Sculpin	<i>Psychrolutes paradoxus</i>	unsexed	0.01	100	2342	100
2004	GB	T	21-40 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	3.96	36.56	71355	63.2
2004	GB	T	21-40 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	3.55	81.36	67723	79.54
2004	GB	T	21-40 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	10.18	33.68	219939	25.08
2004	GB	T	21-40 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	12.14	95.97	607029	95.96
2004	GB	T	21-40 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	4.30	50.72	61638	48.02
2004	GB	T	21-40 fa	Weathervane Scallop	<i>Patinopecten caurinus</i>	unsexed	4.91	52.77	10140	52.34
2004	GB	T	21-40 fa	White Sea Cucumber	<i>Eupentacta quinquesemita</i>	unsexed	0.09	100	6623	100
2004	GB	T	21-40 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	0.10	100	1976	100
2004	GB	U	41-60 fa	Alaskan Pink Shrimp	<i>Pandalus eos</i>	unsexed	18.61	100	3235120	100
2004	GB	U	41-60 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.12	100	1245	100
2004	GB	U	41-60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	0.61	63.71	2730	63.25
2004	GB	U	41-60 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	1.62	100	13813	100
2004	GB	U	41-60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	28.47	46.1	39429	27.87
2004	GB	U	41-60 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	0.15	100	1290	100
2004	GB	U	41-60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	0.73	100	1381	100
2004	GB	U	41-60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.18	77.85	69734	80.42
2004	GB	U	41-60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	5.57	100	805327	100
2004	GB	U	41-60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	16.17	38.62	119636	35.07
2004	GB	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	female	93.76	22.49	237573	22.01
2004	GB	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	male	387.06	29.33	675223	39.2
2004	GB	U	41-60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	252.53	24.11	1321043	22.3
2004	GB	U	41-60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	3.19	38.54	20934	40.21
2004	GB	U	41-60 fa	Glass	<i>Glass</i>	unsexed	0.58	100	2809	100

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate Coefficient of Variation		
2004	GB	U	41-60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.07	78.49	4144	68.31
2004	GB	U	41-60 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.03	100	2763	100
2004	GB	U	41-60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	2.90	100	49729	100
2004	GB	U	41-60 fa	Hermit crabs uniden.	Paguridae	unsexed	0.12	100	2763	100
2004	GB	U	41-60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	4.48	44.8	9329	25.92
2004	GB	U	41-60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	8.49	46.91	17119	35.79
2004	GB	U	41-60 fa	Magister Armhook Squid	<i>Berryteuthis magister</i>	unsexed	0.05	100	1290	100
2004	GB	U	41-60 fa	Marine vegetation	Marine vegetation	unsexed	11.42	57.61	5516	31.63
2004	GB	U	41-60 fa	Metridium uniden.	Metridium sp.	unsexed	7.66	50.19	34034	49.31
2004	GB	U	41-60 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	1.35	100	4144	100
2004	GB	U	41-60 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	3.91	100	149186	100
2004	GB	U	41-60 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	0.04	100	5525	100
2004	GB	U	41-60 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	0.25	100	5525	100
2004	GB	U	41-60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	7.42	63.25	2730	63.25
2004	GB	U	41-60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	0.23	48.11	15800	40.56
2004	GB	U	41-60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	17.54	37.79	79993	42.96
2004	GB	U	41-60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	1.53	57.95	21937	60.63
2004	GB	U	41-60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	4.80	82.24	19344	85.49
2004	GB	U	41-60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	0.29	100	4214	100
2004	GB	U	41-60 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	4.16	84.71	4112	68.63
2004	GB	U	41-60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	4.32	57.72	60631	69.65
2004	GB	U	41-60 fa	Plastic	Plastic	unsexed	0.13	100	1349	100
2004	GB	U	41-60 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	0.04	100	1349	100
2004	GB	U	41-60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	0.86	100	1381	100
2004	GB	U	41-60 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	0.08	100	1381	100
2004	GB	U	41-60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	8.40	17.86	162073	18.47
2004	GB	U	41-60 fa	Ridged Whelk	<i>Neptunea lyrata</i>	unsexed	0.10	100	1381	100
2004	GB	U	41-60 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.04	69.72	2626	63.37
2004	GB	U	41-60 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	1.00	100	1349	100
2004	GB	U	41-60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	16.70	57.38	64852	39.49
2004	GB	U	41-60 fa	Sandpaper Skate	<i>Bathyraja kincaidi</i>	unsexed	4.06	100	2809	100
2004	GB	U	41-60 fa	Shaggy Dovesnail	<i>Alia gausapata</i>	unsexed	3.06	100	10791	100
2004	GB	U	41-60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.01	100	1381	100
2004	GB	U	41-60 fa	Shortfin Eelpout	<i>Lycodes brevipes</i>	unsexed	0.11	100	2809	100
2004	GB	U	41-60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	5.34	64.49	584301	88.49
2004	GB	U	41-60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	33.15	38.68	278260	39.96
2004	GB	U	41-60 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	1.48	100	2763	100
2004	GB	U	41-60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	3.14	100	113271	100
2004	GB	U	41-60 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	1.57	83.49	3988	68.9
2004	GB	U	41-60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	52.76	38.84	54142	29.52
2004	GB	U	41-60 fa	Spiny Lebbeid	<i>Lebbeus groenlandicus</i>	unsexed	0.22	100	44203	100
2004	GB	U	41-60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	0.57	100	17958	100
2004	GB	U	41-60 fa	Spinyhead Sculpin	<i>Dasyctonus setiger</i>	unsexed	1.11	100	12432	100
2004	GB	U	41-60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	21.98	100	718302	100
2004	GB	U	41-60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	407.13	47.54	1909068	75.49
2004	GB	U	41-60 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	1.39	100	2698	100

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass Estimate Coefficient of Variation		Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
2004	GB	U	41-60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.02	100	1245	100	
2004	GB	U	41-60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	2.26	75.31	2786	63.25	
2004	GB	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	0.16	100	1245	100	
2004	GB	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	1.12	75.81	3988	68.9	
2004	GB	U	41-60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	46.48	84.92	1005654	84.48	
2004	GB	U	41-60 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	1.86	43.54	20750	43.39	
2004	GB	V	>60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	0.06	65.12	8670	59.34	
2004	GB	V	>60 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	13.02	88.11	16668	82.59	
2004	GB	V	>60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	4.60	69.51	5975	68.83	
2004	GB	V	>60 fa	Barnacle uniden.	<i>Order Thoracica</i>	unsexed	0.01	100	1479	100	
2004	GB	V	>60 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	1.74	51.95	16118	51.76	
2004	GB	V	>60 fa	Bent-nose Macoma	<i>Macoma nasuta</i>	unsexed	0.03	100	2779	100	
2004	GB	V	>60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	314.64	32.85	57927	27.75	
2004	GB	V	>60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.01	100	1479	100	
2004	GB	V	>60 fa	Brittle star uniden.	<i>Ophiuridae</i>	unsexed	0.05	69.32	21793	73.46	
2004	GB	V	>60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	0.68	74.46	2748	68.83	
2004	GB	V	>60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.05	63.74	20733	64.81	
2004	GB	V	>60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.07	48.66	14537	50.63	
2004	GB	V	>60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	59.90	15.73	271655	15.14	
2004	GB	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	male	11.95	39.98	18456	41.11	
2004	GB	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	female	206.75	40.66	447219	39.95	
2004	GB	V	>60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	221.76	25.59	701479	24.33	
2004	GB	V	>60 fa	Finger Sponge uniden.	<i>Neoesperiopsis sp.</i>	unsexed	0.03	100	1479	100	
2004	GB	V	>60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	16.64	47.37	48682	50.12	
2004	GB	V	>60 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	0.31	100	2834	100	
2004	GB	V	>60 fa	Glass	Glass	unsexed	1.27	69.15	2827	68.84	
2004	GB	V	>60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.01	100	1472	100	
2004	GB	V	>60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	8.92	51.95	65938	48.72	
2004	GB	V	>60 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	0.40	100	1417	100	
2004	GB	V	>60 fa	Heavy Macoma	<i>Macoma brota</i>	unsexed	0.14	100	2775	100	
2004	GB	V	>60 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	5.65	31.52	107044	37.19	
2004	GB	V	>60 fa	Hydrocoral uniden.	<i>Order Anthoathecata</i>	unsexed	0.01	100	1472	100	
2004	GB	V	>60 fa	Krill uniden.	<i>Order Euphausiacea</i>	unsexed	0.00	100	3537	100	
2004	GB	V	>60 fa	Leafy Hornmouth	<i>Ceratostoma foliatum</i>	unsexed	0.14	100	1388	100	
2004	GB	V	>60 fa	Lewis's Moon Snail	<i>Euspira lewisi</i>	unsexed	0.11	100	1173	100	
2004	GB	V	>60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	23.00	33.12	61323	18.2	
2004	GB	V	>60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	96.51	27.15	101295	22.81	
2004	GB	V	>60 fa	Lyre Whelk	<i>Buccinum pectrum</i>	unsexed	0.66	72.05	25123	73.16	
2004	GB	V	>60 fa	Magister Armhook Squid	<i>Berryteuthis magister</i>	unsexed	0.85	98.35	2827	68.9	
2004	GB	V	>60 fa	Marine vegetation	Marine vegetation	unsexed	22.10	57.8	20954	13.5	
2004	GB	V	>60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	2.09	56.26	16907	58.82	
2004	GB	V	>60 fa	Mottled Anemone	<i>Urticina crassicornis</i>	unsexed	0.19	75.61	8315	84.2	
2004	GB	V	>60 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	77.69	57.88	2548592	57.84	
2004	GB	V	>60 fa	Northern Rock Sole	<i>Lepidotretta polyxystra</i>	unsexed	0.13	100	1417	100	
2004	GB	V	>60 fa	Orangepeel Nudibranch	<i>Tochuina tetraquetra</i>	unsexed	0.21	69.06	2811	68.83	
2004	GB	V	>60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	41.44	44.72	21367	40.56	

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								Estimate Coefficient of Variation		
2004	GB	V	>60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	0.30	63.42	8542	60.83
2004	GB	V	>60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	263.57	20.64	780554	17.86
2004	GB	V	>60 fa	Pacific Halibut	<i>Hippoglossus stenolepis</i>	unsexed	11.68	100	1487	100
2004	GB	V	>60 fa	Pacific Herring	<i>Clupea pallasi</i>	unsexed	0.24	50.77	6765	49.31
2004	GB	V	>60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	0.69	68.86	2619	69.11
2004	GB	V	>60 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	0.30	100	1409	100
2004	GB	V	>60 fa	Pale Northern Moonsnail	<i>Euspira pallida</i>	unsexed	0.01	100	1533	100
2004	GB	V	>60 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	1.00	100	1179	100
2004	GB	V	>60 fa	Phoenician Whelk	<i>Neptunea phoenicea</i>	unsexed	0.05	100	1533	100
2004	GB	V	>60 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	1.82	100	1423	100
2004	GB	V	>60 fa	Plastic	Plastic	unsexed	3.01	96.72	11840	46.05
2004	GB	V	>60 fa	Polychaete worm uniden.	Class Polychaeta	unsexed	0.01	100	1173	100
2004	GB	V	>60 fa	Predaceous Aeolis	<i>Flabellina trophina</i>	unsexed	0.01	100	1732	100
2004	GB	V	>60 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	0.48	68.83	2769	68.85
2004	GB	V	>60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	13.71	19.51	253209	19.24
2004	GB	V	>60 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	0.07	100	2945	100
2004	GB	V	>60 fa	Ridged Whelk	<i>Neptunea lyrata</i>	unsexed	4.25	59.85	60597	57.88
2004	GB	V	>60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.23	100	1732	100
2004	GB	V	>60 fa	Sand Rose Anemone	<i>Urticina columbiana</i>	unsexed	0.15	90.42	2862	68.86
2004	GB	V	>60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	58.60	43.53	166664	51.56
2004	GB	V	>60 fa	Sandpaper Skate	<i>Bathyraja kincaidi</i>	unsexed	64.71	35.97	75245	37.09
2004	GB	V	>60 fa	Sea anemone uniden.	Order Actiniaria	unsexed	0.07	100	1390	100
2004	GB	V	>60 fa	Shaggy Dovesnail	<i>Alia gausapata</i>	unsexed	0.02	100	1173	100
2004	GB	V	>60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.01	100	1196	100
2004	GB	V	>60 fa	Shortscale Equalid	<i>Eualus suckleyi</i>	unsexed	0.01	86.3	3155	69.19
2004	GB	V	>60 fa	Shortspine Thornyhead	<i>Sebastolobus alascanus</i>	unsexed	1.04	72.23	2824	68.83
2004	GB	V	>60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	5.37	55.93	620875	55.14
2004	GB	V	>60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.56	46.42	8722	35.35
2004	GB	V	>60 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	13.54	59.96	38388	45.08
2004	GB	V	>60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	0.24	87.78	10339	75.58
2004	GB	V	>60 fa	Snail uniden.	Class Gastropoda	unsexed	0.01	100	1435	100
2004	GB	V	>60 fa	Southern Rock Sole	<i>Lepidotsetta bilineata</i>	unsexed	1.16	69.04	2778	68.84
2004	GB	V	>60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	1079.21	33.79	998919	41.65
2004	GB	V	>60 fa	Spinyhead Sculpin	<i>Dasycottus setiger</i>	unsexed	0.22	100	1472	100
2004	GB	V	>60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	0.10	75.93	2822	68.84
2004	GB	V	>60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	5660.96	21.59	13660404	18.78
2004	GB	V	>60 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei egg case</i>	unsexed	0.10	50.93	5973	46.15
2004	GB	V	>60 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.07	100	1388	100
2004	GB	V	>60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	11.59	62.55	4146	54.98
2004	GB	V	>60 fa	Tadpole Sculpin	<i>Psychrolutes paradoxus</i>	unsexed	0.01	100	1472	100
2004	GB	V	>60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	0.57	71.08	2675	69.25
2004	GB	V	>60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	0.60	55.31	4240	54.66
2004	GB	V	>60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	238.77	31.77	1000985	26.44
2004	GB	V	>60 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	0.18	76.52	2375	68.83
2004	GB	V	>60 fa	Weathervane Scallop	<i>Patinopecten caurinus</i>	unsexed	0.37	100	1196	100
2004	GB	V	>60 fa	Yelloweye Rockfish	<i>Sebastes ruberrimus</i>	unsexed	0.65	100	1377	100

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								Estimate		
2004	JE	S	5-20 fa	Alaskan Hermit Crab	<i>Pagurus ochotensis</i>	unsexed	0.59	94.97	8477	66.69
2004	JE	S	5-20 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.25	100	14888	100
2004	JE	S	5-20 fa	Big Skate	<i>Raja binoculata</i>	unsexed	25.23	76.87	109481	94.88
2004	JE	S	5-20 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	14.86	93.17	133451	83.94
2004	JE	S	5-20 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	1.88	100	58100	100
2004	JE	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	466.62	59.91	469588	55.74
2004	JE	S	5-20 fa	Clown Nudibranch	<i>Triopha catalinae</i>	unsexed	0.03	100	3308	100
2004	JE	S	5-20 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	1.22	99.51	586168	98.98
2004	JE	S	5-20 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.53	100	190568	100
2004	JE	S	5-20 fa	Curlfin Sole	<i>Pleuronichthys decurrens</i>	unsexed	2.70	84.55	17967	55.67
2004	JE	S	5-20 fa	Dall's Dendronotid	<i>Dendronotus dalli</i>	unsexed	0.20	100	19606	100
2004	JE	S	5-20 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	2.07	53.69	633577	45.37
2004	JE	S	5-20 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	2.25	100	85213	100
2004	JE	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	female	84.71	49.57	178953	50.84
2004	JE	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	male	167.16	82.91	424611	92
2004	JE	S	5-20 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	104.35	73.82	3477352	83.28
2004	JE	S	5-20 fa	False Ochre Star	<i>Evasterias troschelii</i>	unsexed	10.98	73.69	30641	70.84
2004	JE	S	5-20 fa	Fish-eating Urticina	<i>Urticina piscivora</i>	unsexed	2.35	100	34310	100
2004	JE	S	5-20 fa	Fishing gear	Fishing gear	unsexed	0.02	100	3873	100
2004	JE	S	5-20 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	0.76	85.19	18085	65.47
2004	JE	S	5-20 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	25.91	100	115796	100
2004	JE	S	5-20 fa	Glass	Glass	unsexed	1.05	100	3873	100
2004	JE	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	female	0.74	100	7747	100
2004	JE	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	male	10.95	72.39	137140	80.88
2004	JE	S	5-20 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.49	42.39	74199	53.11
2004	JE	S	5-20 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	101.14	63.41	224920	69.19
2004	JE	S	5-20 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	0.03	100	5294	100
2004	JE	S	5-20 fa	Grunt Sculpin	<i>Rhamphocottus richardsoni</i>	unsexed	0.10	100	6617	100
2004	JE	S	5-20 fa	Gumboot Chiton	<i>Cryptochiton stelleri</i>	unsexed	19.59	58.08	15425	47.17
2004	JE	S	5-20 fa	Helmet Crab	<i>Telmessus cheiragonus</i>	unsexed	0.38	100	7747	100
2004	JE	S	5-20 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.26	100	3308	100
2004	JE	S	5-20 fa	Leather Star	<i>Dermasterias imbricata</i>	unsexed	12.26	100	4733	100
2004	JE	S	5-20 fa	Lewis's Moon Snail	<i>Euspira lewisi</i>	unsexed	2.37	67.12	9635	64.56
2004	JE	S	5-20 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	0.14	68.7	12709	66.68
2004	JE	S	5-20 fa	Longfin Smelt	<i>Spirinchus thaleichthys</i>	unsexed	0.09	100	7747	100
2004	JE	S	5-20 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.09	100	4733	100
2004	JE	S	5-20 fa	Marine vegetation	Marine vegetation	unsexed	5417.93	88.02	32242	6.03
2004	JE	S	5-20 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	84.31	98.79	67142	91.33
2004	JE	S	5-20 fa	Miscellaneous material		unsexed	37.89	100	7747	100
2004	JE	S	5-20 fa	Mixed catch		unsexed	93.19	100	3873	100
2004	JE	S	5-20 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	0.43	100	4733	100
2004	JE	S	5-20 fa	Northern Kelp Crab	<i>Pugettia producta</i>	unsexed	0.09	100	18933	100
2004	JE	S	5-20 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	0.11	100	5294	100
2004	JE	S	5-20 fa	Orange Sea Pen	<i>Ptilosarcus gurneyi</i>	unsexed	0.43	100	3308	100
2004	JE	S	5-20 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	0.56	100	6617	100
2004	JE	S	5-20 fa	Other man-made debris	Other man-made debris	unsexed	0.54	100	7747	100

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2004	JE	S	5-20 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	0.74	86	128801	95.78
2004	JE	S	5-20 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	0.19	100	7747	100
2004	JE	S	5-20 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.16	100	10338	100
2004	JE	S	5-20 fa	Pacific Pompano	<i>Peprilus simillimus</i>	unsexed	0.58	100	7747	100
2004	JE	S	5-20 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	34.19	73.28	980782	87.77
2004	JE	S	5-20 fa	Pacific Spiny Lumpsucker	<i>Eumicrotremus orbis</i>	unsexed	0.24	58.1	19331	51.48
2004	JE	S	5-20 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	0.57	100	5169	100
2004	JE	S	5-20 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	1.31	100	58100	100
2004	JE	S	5-20 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	17.32	100	4963	100
2004	JE	S	5-20 fa	Plastic	Plastic	unsexed	0.08	100	3873	100
2004	JE	S	5-20 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	11.83	38.66	34718	43.55
2004	JE	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	female	24.37	56.99	177845	55.3
2004	JE	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	male	56.34	49.13	217029	50.72
2004	JE	S	5-20 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	10.08	66.36	10256	64.6
2004	JE	S	5-20 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	0.09	100	7747	100
2004	JE	S	5-20 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	0.66	51.41	30310	54.65
2004	JE	S	5-20 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.49	65.66	24974	67.14
2004	JE	S	5-20 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	0.87	64.86	17672	65.23
2004	JE	S	5-20 fa	Sea anemone uniden.	Order Actiniaria	unsexed	0.45	100	9925	100
2004	JE	S	5-20 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.10	100	5169	100
2004	JE	S	5-20 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	0.10	100	6617	100
2004	JE	S	5-20 fa	Southern Rock Sole	<i>Lepidotsetta bilineata</i>	unsexed	127.34	43.31	620420	43.51
2004	JE	S	5-20 fa	Speckled Sanddab	<i>Citharichthys stigmatus</i>	unsexed	5.62	23.87	311632	33.41
2004	JE	S	5-20 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	243.55	49.52	118825	45.11
2004	JE	S	5-20 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	0.83	100	23159	100
2004	JE	S	5-20 fa	Spotted Ratfish	<i>Hydrologus collicei</i>	unsexed	88.96	75.98	177003	74.82
2004	JE	S	5-20 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	824.26	40.23	633352	46.18
2004	JE	S	5-20 fa	Steven's Hermit Crab	<i>Pagurus stevensae</i>	unsexed	0.20	100	4963	100
2004	JE	S	5-20 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	1.99	50.6	72539	54.4
2004	JE	S	5-20 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	373.89	46.19	308357	39.17
2004	JE	S	5-20 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.20	100	4901	100
2004	JE	S	5-20 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	0.35	64.26	103106	85.29
2004	JE	S	5-20 fa	Wrinkled Dogwinkle	<i>Nucella lamellosa</i>	unsexed	0.26	100	29776	100
2004	JE	T	21-40 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	0.07	71.36	20994	66.45
2004	JE	T	21-40 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	2.02	58.53	78243	71.13
2004	JE	T	21-40 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	0.55	77.47	37958	88.23
2004	JE	T	21-40 fa	Barnacle uniden.	Order Thoracica	unsexed	0.58	100	74061	100
2004	JE	T	21-40 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	5.84	79.89	27475	82.5
2004	JE	T	21-40 fa	Big Skate	<i>Raja binoculata</i>	unsexed	49.02	100	12613	100
2004	JE	T	21-40 fa	Big Skate egg case	<i>Raja binoculata egg case</i>	unsexed	1.47	100	4204	100
2004	JE	T	21-40 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	0.35	66.22	12980	69.76
2004	JE	T	21-40 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.15	73.12	9576	66.53
2004	JE	T	21-40 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	5.04	82	95855	84.91
2004	JE	T	21-40 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	2.90	66.37	28716	66.23
2004	JE	T	21-40 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	8.74	71.88	21222	68.25
2004	JE	T	21-40 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	0.40	67.14	12072	68.6

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								Coefficient of Variation	Abundance Estimate (number of individuals)		
2004	JE	T	21-40 fa	Crangonid shrimp uniden.	Crangonidae	unsexed	0.17	100	15001	100	
2004	JE	T	21-40 fa	Dock Shrimp	Pandalus danae	unsexed	32.09	69.3	4289011	62.77	
2004	JE	T	21-40 fa	Dover Sole	Microstomus pacificus	unsexed	6.82	41.82	182530	41.86	
2004	JE	T	21-40 fa	Dungeness Crab	Cancer magister	female	299.33	52.11	763181	54.43	
2004	JE	T	21-40 fa	Dungeness Crab	Cancer magister	male	625.09	79.19	786212	80.68	
2004	JE	T	21-40 fa	English Sole	Parophrys vetulus	unsexed	420.26	57.85	7601905	67.67	
2004	JE	T	21-40 fa	Fish-eating Star	Stylasterias forneri	unsexed	3.53	100	11384	100	
2004	JE	T	21-40 fa	Flathead Sole	Hippoglossoides elassodon	unsexed	38.31	59.87	608546	66.89	
2004	JE	T	21-40 fa	Giant Barnacle	Balanus nubilis	unsexed	11.14	55.64	102353	52.07	
2004	JE	T	21-40 fa	Glass	Glass	unsexed	2.33	100	3750	100	
2004	JE	T	21-40 fa	Glassy Tunicate	Ascidia paratropa	unsexed	0.22	100	4331	100	
2004	JE	T	21-40 fa	Graceful Crab	Cancer gracilis	female	0.29	100	4204	100	
2004	JE	T	21-40 fa	Graceful Decorator Crab	Oregonia gracilis	unsexed	0.05	100	4572	100	
2004	JE	T	21-40 fa	Gray Starsnout	Bathyagonus alascanus	unsexed	0.05	100	5244	100	
2004	JE	T	21-40 fa	Great Sculpin	Myoxocephalus polyacanthocephalus	unsexed	186.91	79.49	263360	79.69	
2004	JE	T	21-40 fa	Green Sea Urchin	Strongylocentrotus droebachiensis	unsexed	13.76	62.91	244730	66.99	
2004	JE	T	21-40 fa	Grunt Sculpin	Rhamphocottus richardsoni	unsexed	0.47	55.94	47290	55.94	
2004	JE	T	21-40 fa	Hermit crabs uniden.	Paguridae	unsexed	0.65	69.74	16644	66.56	
2004	JE	T	21-40 fa	Horned Shrimp	Paracrangon echinata	unsexed	0.18	56.13	46028	64.45	
2004	JE	T	21-40 fa	Lampshell Brachiopod	Terebratalia transversa	unsexed	0.03	100	5244	100	
2004	JE	T	21-40 fa	Lingcod	Ophiodon elongatus	unsexed	2.21	100	8662	100	
2004	JE	T	21-40 fa	Lion's Mane Jelly	Cyanea capillata	unsexed	2.45	73.13	8535	66.15	
2004	JE	T	21-40 fa	Longhorned Decorator Crab	Chorilia longipes	unsexed	0.04	100	8229	100	
2004	JE	T	21-40 fa	Longnose Skate	Raja rhina	unsexed	12.71	100	15001	100	
2004	JE	T	21-40 fa	Marine vegetation	Marine vegetation	unsexed	29.49	49.19	22619	31.71	
2004	JE	T	21-40 fa	Metridium uniden.	Metridium sp.	unsexed	56.83	49.71	168143	50.52	
2004	JE	T	21-40 fa	Miscellaneous material		unsexed	18.96	100	7501	100	
2004	JE	T	21-40 fa	Mixed catch		unsexed	150.13	100	3750	100	
2004	JE	T	21-40 fa	Northern Horse Mussel	Modiolus modiolus	unsexed	153.82	100	7363269	100	
2004	JE	T	21-40 fa	Northern Rock Sole	Lepidopsetta polyxystra	unsexed	0.64	100	9143	100	
2004	JE	T	21-40 fa	Northern Ronquil	Ronquilus jordani	unsexed	0.95	53.84	31278	57.84	
2004	JE	T	21-40 fa	Northern Sculpin	Icelinus borealis	unsexed	1.55	94.18	165564	94.54	
2004	JE	T	21-40 fa	Northern Spearnose Poacher	Agonopsis vulsa	unsexed	3.03	66.7	115405	65.75	
2004	JE	T	21-40 fa	Orange Sea Pen	Ptilosarcus gurneyi	unsexed	0.30	66.57	16644	66.56	
2004	JE	T	21-40 fa	Orangepeel Nudibranch	Tochuina tetraquetra	unsexed	0.94	94.94	12412	72.5	
2004	JE	T	21-40 fa	Oregon Hairy Triton	Fusitriton oregonensis	unsexed	7.23	52.75	127340	69.12	
2004	JE	T	21-40 fa	Pacific Eulachon	Thaleichthys pacificus	unsexed	3.06	83.13	143008	88.81	
2004	JE	T	21-40 fa	Pacific Herring	Clupea pallasii	unsexed	19.48	78.41	651817	78.52	
2004	JE	T	21-40 fa	Pacific Pompano	Peprilus simillimus	unsexed	0.18	100	4572	100	
2004	JE	T	21-40 fa	Pacific Sanddab	Citharichthys sordidus	unsexed	478.52	33.24	7009222	37.68	
2004	JE	T	21-40 fa	Pacific Spiny Lumpsucker	Eumicrotremus orbis	unsexed	0.09	100	9414	100	
2004	JE	T	21-40 fa	Pacific Staghorn Sculpin	Leptocottus armatus	unsexed	10.45	66.15	103615	66.29	
2004	JE	T	21-40 fa	Pacific Tomcod	Microgadus proximus	unsexed	13.05	68.76	463518	74.44	
2004	JE	T	21-40 fa	Petrale Sole	Eopsetta jordani	unsexed	0.37	100	4572	100	
2004	JE	T	21-40 fa	Pile Perch	Rhacochilus vacca	unsexed	0.32	100	9143	100	
2004	JE	T	21-40 fa	Pink Short-Spined Star	Pisaster brevispinus	unsexed	17.13	78.67	7955	66.28	

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								Estimate		
2004	JE	T	21-40 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	17.14	70.73	321878	77.32
2004	JE	T	21-40 fa	Plastic	Plastic	unsexed	0.17	100	4204	100
2004	JE	T	21-40 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	0.43	76.66	21703	76.66
2004	JE	T	21-40 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	22.25	55.19	50650	54.52
2004	JE	T	21-40 fa	Red anemone uniden.	<i>Urticina sp.</i>	unsexed	0.34	100	8409	100
2004	JE	T	21-40 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	1.60	71.25	9038	66.22
2004	JE	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	female	0.80	100	4707	100
2004	JE	T	21-40 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	103.93	62.52	123343	58.51
2004	JE	T	21-40 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	4.14	74.15	197926	89.09
2004	JE	T	21-40 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	28.95	53.01	1346159	50.68
2004	JE	T	21-40 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	23.35	43.91	949138	43.14
2004	JE	T	21-40 fa	Ridged Whelk	<i>Neptunea lyrata</i>	unsexed	5.48	100	134541	100
2004	JE	T	21-40 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.27	80.43	9576	66.53
2004	JE	T	21-40 fa	Rough Patch Shrimp	<i>Pandalus stenolepis</i>	unsexed	0.18	100	36711	100
2004	JE	T	21-40 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	2.42	91.56	165480	90.8
2004	JE	T	21-40 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	1.68	100	7501	100
2004	JE	T	21-40 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	8.64	44.56	55945	40.11
2004	JE	T	21-40 fa	Sea anemone uniden.	Order Actiniaria	unsexed	0.09	100	4331	100
2004	JE	T	21-40 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	17.99	80.58	1243602	82.13
2004	JE	T	21-40 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.34	74.85	24145	68.6
2004	JE	T	21-40 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	0.37	100	5244	100
2004	JE	T	21-40 fa	Smooth Alligatorfish	<i>Anoplagonus inermis</i>	unsexed	0.05	100	5244	100
2004	JE	T	21-40 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	34.14	89.53	1398050	87.38
2004	JE	T	21-40 fa	Snailfish uniden.	<i>Liparis</i>	unsexed	0.26	100	15733	100
2004	JE	T	21-40 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	80.05	32.49	578573	35.75
2004	JE	T	21-40 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	0.05	100	4707	100
2004	JE	T	21-40 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	1164.56	41.23	797662	39.89
2004	JE	T	21-40 fa	Spiny Lebbeid	<i>Lebbeus groenlandicus</i>	unsexed	0.46	100	173068	100
2004	JE	T	21-40 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	17.65	61.77	795730	60.98
2004	JE	T	21-40 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	0.38	100	4707	100
2004	JE	T	21-40 fa	Spinyhead Sculpin	<i>Dasyctonus setiger</i>	unsexed	0.52	100	5244	100
2004	JE	T	21-40 fa	Sponge uniden.	Phylum Porifera	unsexed	117.38	96.24	60202	85.7
2004	JE	T	21-40 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	37.48	98.33	1549140	97.21
2004	JE	T	21-40 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	573.01	76.67	1156105	76.19
2004	JE	T	21-40 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	0.05	100	10489	100
2004	JE	T	21-40 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	14.97	56.05	17098	56.47
2004	JE	T	21-40 fa	Steven's Hermit Crab	<i>Pagurus stevensae</i>	unsexed	2.99	100	51973	100
2004	JE	T	21-40 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.47	100	9414	100
2004	JE	T	21-40 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	0.61	62.06	28349	57.6
2004	JE	T	21-40 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.71	67.11	20789	79.3
2004	JE	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	2.05	58.8	69626	51.81
2004	JE	T	21-40 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	280.90	56.42	287181	60.93
2004	JE	T	21-40 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	0.05	100	4572	100
2004	JE	T	21-40 fa	Vermilion Rockfish	<i>Sebastes miniatus</i>	unsexed	0.69	100	4331	100
2004	JE	T	21-40 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	1.61	67.55	29884	74.23
2004	JE	T	21-40 fa	Walleye Pollack	<i>Gadus chalcogrammus</i>	unsexed	37.59	45.98	1602753	53.71

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass Estimate Coefficient of Variation		Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
2004	JE	T	21-40 fa	Wrinkled Dogwinkle	<i>Nucella lamellosa</i>	unsexed	0.23	100	9143	100	
2004	JE	U	41-60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	217.09	39.19	54985645	39.18	
2004	JE	U	41-60 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	3.48	73.96	185546	78.66	
2004	JE	U	41-60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	3.52	60.56	90707	52.8	
2004	JE	U	41-60 fa	Barnacle uniden.	<i>Order Thoracica</i>	unsexed	9.87	57.6	1511595	51.7	
2004	JE	U	41-60 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	3.02	92.06	11174	71.15	
2004	JE	U	41-60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	130.02	75.45	33397	49.92	
2004	JE	U	41-60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	0.50	82.42	22966	81.2	
2004	JE	U	41-60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.26	72.45	20387	57.98	
2004	JE	U	41-60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	16.62	100	118221	100	
2004	JE	U	41-60 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.22	100	4342	100	
2004	JE	U	41-60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	2.81	68.43	9213	66.67	
2004	JE	U	41-60 fa	Cloud Sponge	<i>Aphrocallistes vastus</i>	unsexed	20.09	72.75	8361	67.16	
2004	JE	U	41-60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.53	63.23	201173	54.58	
2004	JE	U	41-60 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.14	75.45	35519	89.36	
2004	JE	U	41-60 fa	Curlfin Sole	<i>Pleuronichthys decurrens</i>	unsexed	1.48	100	4636	100	
2004	JE	U	41-60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	45.01	44.17	5686022	42.63	
2004	JE	U	41-60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	14.38	73.1	203697	52.2	
2004	JE	U	41-60 fa	Drab Six-armed Star	<i>Leptasterias hexactis</i>	unsexed	0.04	100	3725	100	
2004	JE	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	male	2.40	100	3582	100	
2004	JE	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	female	44.92	100	67047	100	
2004	JE	U	41-60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	75.84	52	869523	63.88	
2004	JE	U	41-60 fa	Finger Sponge uniden.	<i>Neoesperiopsis sp.</i>	unsexed	0.32	100	4636	100	
2004	JE	U	41-60 fa	Fishing gear	<i>Fishing gear</i>	unsexed	0.15	100	3725	100	
2004	JE	U	41-60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	1.69	100	8685	100	
2004	JE	U	41-60 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	4.99	100	45765	100	
2004	JE	U	41-60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.14	100	9153	100	
2004	JE	U	41-60 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.70	38.04	68951	44.2	
2004	JE	U	41-60 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	347.33	57.63	494313	60.14	
2004	JE	U	41-60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	38.61	34.57	466734	37.88	
2004	JE	U	41-60 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.59	81.15	12410	73.02	
2004	JE	U	41-60 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.42	89.34	82953	89.25	
2004	JE	U	41-60 fa	Lampshell Brachiopod	<i>Terebratalia transversa</i>	unsexed	0.17	100	8685	100	
2004	JE	U	41-60 fa	Leafy Hornmouth	<i>Ceratostoma foliatum</i>	unsexed	0.19	100	3725	100	
2004	JE	U	41-60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	8.30	71.35	9199	66.67	
2004	JE	U	41-60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	38.71	93.65	43537	55.22	
2004	JE	U	41-60 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	75.45	50.04	28851	32.57	
2004	JE	U	41-60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	85.72	97.76	162872	92.69	
2004	JE	U	41-60 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	0.37	100	3725	100	
2004	JE	U	41-60 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	26.20	96.45	896035	94.02	
2004	JE	U	41-60 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	1.35	100	4342	100	
2004	JE	U	41-60 fa	Northern Ronquil	<i>Ronquilus jordanii</i>	unsexed	3.58	52.96	122592	53.67	
2004	JE	U	41-60 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	0.64	61.07	78286	70.9	
2004	JE	U	41-60 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	6.22	46.92	201655	48.28	
2004	JE	U	41-60 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	2.35	82.87	34375	74.89	
2004	JE	U	41-60 fa	Other man-made debris	<i>Other man-made debris</i>	unsexed	217.30	99.91	7893	67.09	

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2004	JE	U	41-60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	1.88	100	3550	100
2004	JE	U	41-60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	2.25	43.5	105269	42.94
2004	JE	U	41-60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	0.43	100	21712	100
2004	JE	U	41-60 fa	Pacific Halibut	<i>Hippoglossus stenolepis</i>	unsexed	32.73	100	4636	100
2004	JE	U	41-60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	16.53	73.38	489561	79.56
2004	JE	U	41-60 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.07	100	3725	100
2004	JE	U	41-60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	96.16	44.22	652833	42.89
2004	JE	U	41-60 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	1.35	100	8685	100
2004	JE	U	41-60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	0.70	65.82	18718	59.37
2004	JE	U	41-60 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	1.72	69.49	8067	66.91
2004	JE	U	41-60 fa	Puget Sound Rockfish	<i>Sebastes empheaeus</i>	unsexed	0.11	100	3550	100
2004	JE	U	41-60 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.01	100	3582	100
2004	JE	U	41-60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	10.58	95.29	13779	71.21
2004	JE	U	41-60 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	94.14	43.65	102121	29.93
2004	JE	U	41-60 fa	Red Irish Lord	<i>Hemilepidotus hemilepidotus</i>	unsexed	5.20	100	18250	100
2004	JE	U	41-60 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	1.39	100	9272	100
2004	JE	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	male	1.42	100	3725	100
2004	JE	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	female	1.38	100	7450	100
2004	JE	U	41-60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	233.16	78.81	349078	80.05
2004	JE	U	41-60 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	49.13	90.56	687681	83.36
2004	JE	U	41-60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	33.14	59.45	1471098	61.91
2004	JE	U	41-60 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	3.69	49.56	103611	48.6
2004	JE	U	41-60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	1.75	66.83	8361	67.16
2004	JE	U	41-60 fa	Rough Patch Shrimp	<i>Pandalus stenolepis</i>	unsexed	0.69	64.59	240582	67.87
2004	JE	U	41-60 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.36	55.58	18044	55.58
2004	JE	U	41-60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	0.71	69.5	8067	66.91
2004	JE	U	41-60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	4.50	66.89	228371	65.33
2004	JE	U	41-60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	28.51	51.18	2601223	49.06
2004	JE	U	41-60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.79	68.81	39718	67.32
2004	JE	U	41-60 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.53	70.36	53363	70.36
2004	JE	U	41-60 fa	Slipper Sea Cucumber	<i>Psolus chitonoides</i>	unsexed	0.04	100	3725	100
2004	JE	U	41-60 fa	Slipskin Snailfish	<i>Liparis fucensis</i>	unsexed	0.15	100	3725	100
2004	JE	U	41-60 fa	Smalldisk Snailfish	<i>Careproctus gilberti</i>	unsexed	0.02	100	4576	100
2004	JE	U	41-60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	45.85	56.58	2474883	62.47
2004	JE	U	41-60 fa	Snailfish uniden.	<i>Liparis</i>	unsexed	0.20	69.69	12410	73.02
2004	JE	U	41-60 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.14	100	4576	100
2004	JE	U	41-60 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	31.57	46.7	81306	52.08
2004	JE	U	41-60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	995.11	44.38	719988	41.85
2004	JE	U	41-60 fa	Spiny Lebtheid	<i>Lebbeus groenlandicus</i>	unsexed	1.42	53.24	249288	60.66
2004	JE	U	41-60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	27.70	48.42	1129980	47.03
2004	JE	U	41-60 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	4.39	66.78	8067	66.91
2004	JE	U	41-60 fa	Spinyhead Sculpin	<i>Dasy cottus setiger</i>	unsexed	2.15	62.34	20477	64.2
2004	JE	U	41-60 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	61.25	97.92	9213	66.67
2004	JE	U	41-60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	165.53	35.88	4911106	38.88
2004	JE	U	41-60 fa	Spotted Ratfish	<i>Hydro lagus colliei</i>	unsexed	5438.67	33.18	12879537	34.07
2004	JE	U	41-60 fa	Spotted Ratfish egg case	<i>Hydro lagus colliei egg case</i>	unsexed	0.08	66.98	7778	66.98

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								Estimate		
2004	JE	U	41-60 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	1.64	97.5	191359	97.86
2004	JE	U	41-60 fa	Steven's Hermit Crab	<i>Pagurus stevensae</i>	unsexed	0.36	66.72	8067	66.91
2004	JE	U	41-60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	10.09	44.71	316567	48.74
2004	JE	U	41-60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	77.07	100	26074	100
2004	JE	U	41-60 fa	Swifts Star	<i>Gephyreaster swifti</i>	unsexed	3.65	100	3725	100
2004	JE	U	41-60 fa	Tadpole Sculpin	<i>Psychrolutes paradoxus</i>	unsexed	0.02	100	7165	100
2004	JE	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	1.30	100	13027	100
2004	JE	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	8.90	100	21712	100
2004	JE	U	41-60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.48	66.91	8067	66.91
2004	JE	U	41-60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	91.44	30.81	3386870	27.91
2004	JE	U	41-60 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	0.37	100	3725	100
2004	JE	U	41-60 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	1.91	100	17369	100
2004	JE	V	>60 fa	Alaskan Deepwater Star	<i>Pseudarchaster alascensis</i>	unsexed	0.12	100	2937	100
2004	JE	V	>60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	1.89	26.2	403008	26.55
2004	JE	V	>60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	17.16	29.75	86016	42.72
2004	JE	V	>60 fa	Barnacle uniden.	Order Thoracica	unsexed	0.18	100	23462	100
2004	JE	V	>60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	387.00	43.52	49642	32.06
2004	JE	V	>60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.69	55.97	26987	48.32
2004	JE	V	>60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	0.92	54.52	8915	53.46
2004	JE	V	>60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	0.77	100	3489	100
2004	JE	V	>60 fa	Cloud Sponge	<i>Aphrocallistes vastus</i>	unsexed	36.34	82.88	9055	69.09
2004	JE	V	>60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.14	44.54	40014	35.45
2004	JE	V	>60 fa	Danas Blade Shrimp	<i>Spirontocaris lamellicornis</i>	unsexed	0.01	100	5865	100
2004	JE	V	>60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.36	54.76	42623	59.33
2004	JE	V	>60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	96.86	31.27	690515	28.55
2004	JE	V	>60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	35.67	60.55	162676	68.74
2004	JE	V	>60 fa	Fish-eating Star	<i>Stylasterias forneri</i>	unsexed	0.73	100	2796	100
2004	JE	V	>60 fa	Fishing gear	Fishing gear	unsexed	0.09	100	2961	100
2004	JE	V	>60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	0.99	100	3950	100
2004	JE	V	>60 fa	Fragile Sea Urchin	<i>Strongylocentrotus fragilis</i>	unsexed	1.03	100	5438	100
2004	JE	V	>60 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.10	69.88	9695	69.88
2004	JE	V	>60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	61.22	35.67	590747	30.27
2004	JE	V	>60 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.79	70.32	19150	61.3
2004	JE	V	>60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	8.86	69.03	15100	55.66
2004	JE	V	>60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	82.55	39.16	68722	33.32
2004	JE	V	>60 fa	Longnose Skate egg case	<i>Raja rhina</i> egg case	unsexed	0.06	100	2933	100
2004	JE	V	>60 fa	Marine vegetation	Marine vegetation	unsexed	40.17	31.59	39322	18.33
2004	JE	V	>60 fa	Metridium uniden.	<i>Metridium</i> sp.	unsexed	3.19	44.94	34238	45.33
2004	JE	V	>60 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	2.79	71.27	6758	68.81
2004	JE	V	>60 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	1.56	62.14	85723	75.38
2004	JE	V	>60 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	0.11	75.18	10659	75.18
2004	JE	V	>60 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	0.10	100	3234	100
2004	JE	V	>60 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	0.73	78.2	6285	68.62
2004	JE	V	>60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	30.64	49.94	17815	47.48
2004	JE	V	>60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	2.51	40.77	134406	40.05
2004	JE	V	>60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	17.47	46.14	15594	38.23

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								Coefficient of Variation	Abundance Estimate		
2004	JE	V	>60 fa	Pacific Halibut	<i>Hippoglossus stenolepis</i>	unsexed	19.47	100	2674	100	
2004	JE	V	>60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	3.54	67.69	52461	62.65	
2004	JE	V	>60 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.13	100	6468	100	
2004	JE	V	>60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	0.51	100	3950	100	
2004	JE	V	>60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	1.87	88.61	35102	91.2	
2004	JE	V	>60 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	0.77	69	5652	68.19	
2004	JE	V	>60 fa	Plastic		unsexed	0.11	97.29	5733	68.16	
2004	JE	V	>60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	35.01	100	31404	100	
2004	JE	V	>60 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	24.96	51.02	47297	45.02	
2004	JE	V	>60 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.16	100	5234	100	
2004	JE	V	>60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	16.90	60.27	29159	55.5	
2004	JE	V	>60 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	2.25	40.88	28548	38.6	
2004	JE	V	>60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	48.46	26.24	1352341	29.95	
2004	JE	V	>60 fa	Rough Patch Shrimp	<i>Pandalus stenolepis</i>	unsexed	0.15	100	32260	100	
2004	JE	V	>60 fa	Sablefish	<i>Anoplopoma fimbria</i>	unsexed	0.70	100	2933	100	
2004	JE	V	>60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	4.31	47.84	19737	46.44	
2004	JE	V	>60 fa	Sandpaper Skate	<i>Bathyraja kincaidi</i>	unsexed	29.68	37.44	37966	33.23	
2004	JE	V	>60 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.00	100	3950	100	
2004	JE	V	>60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	7.70	22.76	571943	23.23	
2004	JE	V	>60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.14	68.98	6887	68.98	
2004	JE	V	>60 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	9.46	68.15	8856	72.48	
2004	JE	V	>60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	9.82	41.17	503683	42.71	
2004	JE	V	>60 fa	Snailfish uniden.	<i>Liparis</i>	unsexed	0.09	72.28	5899	68.14	
2004	JE	V	>60 fa	Southern Rock Sole	<i>Lepidotsetta bilineata</i>	unsexed	0.22	100	2719	100	
2004	JE	V	>60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	197.65	29.91	153332	31.51	
2004	JE	V	>60 fa	Spiny Lebtheid	<i>Lebbeus groenlandicus</i>	unsexed	0.06	78.49	12664	78.49	
2004	JE	V	>60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	0.29	58.41	15851	60.87	
2004	JE	V	>60 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	4.56	82.14	8970	72.67	
2004	JE	V	>60 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	67.12	60.85	12065	44.37	
2004	JE	V	>60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	30.57	52.21	742799	53.44	
2004	JE	V	>60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	7372.52	14.66	19365737	17	
2004	JE	V	>60 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei egg case</i>	unsexed	0.28	58.86	21976	60.83	
2004	JE	V	>60 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	0.06	100	5744	100	
2004	JE	V	>60 fa	Stripetail Rockfish	<i>Sebastes saxicola</i>	unsexed	0.72	100	3151	100	
2004	JE	V	>60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.35	56.16	9100	53.87	
2004	JE	V	>60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	16.76	69.32	5953	68.43	
2004	JE	V	>60 fa	Tadpole Sculpin	<i>Psychrolutes paradoxus</i>	unsexed	0.03	100	11489	100	
2004	JE	V	>60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.81	76.6	16613	82.56	
2004	JE	V	>60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	153.03	23.72	2642825	28.15	
2004	JE	V	>60 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	0.06	100	2961	100	
2004	JE	V	>60 fa	White Sea Cucumber	<i>Eupentacta quinquesemita</i>	unsexed	0.03	100	2961	100	
2004	JE	V	>60 fa	Wolf-eel	<i>Anarrhichthys ocellatus</i>	unsexed	10.87	100	3234	100	
2004	JE	V	>60 fa	Yellowtail Rockfish	<i>Sebastes flavidus</i>	unsexed	0.86	100	2674	100	
2004	JW	S	5-20 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	0.83	100	1987	100	
2004	JW	S	5-20 fa	Big Skate	<i>Raja binoculata</i>	unsexed	23.94	73.72	8420	65.53	
2004	JW	S	5-20 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.01	100	1987	100	

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass Estimate Coefficient of Variation		Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
2004	JW	S	5-20 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	4.16	50.83	32797	43.91	
2004	JW	S	5-20 fa	Butterfly Crab	<i>Cryptolithodes typicus</i>	unsexed	0.01	100	2882	100	
2004	JW	S	5-20 fa	Cabezon	<i>Scorpaenichthys marmoratus</i>	unsexed	28.18	59.05	11303	45.65	
2004	JW	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	330.91	67.11	349419	64.1	
2004	JW	S	5-20 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.08	65.53	42102	65.53	
2004	JW	S	5-20 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	0.13	68.93	7554	71.79	
2004	JW	S	5-20 fa	False Ochre Star	<i>Easterias troschelii</i>	unsexed	4.57	100	5934	100	
2004	JW	S	5-20 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	0.10	100	1987	100	
2004	JW	S	5-20 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.11	71.99	27422	87.46	
2004	JW	S	5-20 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	15.78	35.99	21975	35.64	
2004	JW	S	5-20 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	3.24	73.32	78273	64.11	
2004	JW	S	5-20 fa	Gumboot Chiton	<i>Cryptochiton stelleri</i>	unsexed	15.41	57.95	34800	63.97	
2004	JW	S	5-20 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.57	97.82	11265	79.8	
2004	JW	S	5-20 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	1.14	61.41	14016	76.92	
2004	JW	S	5-20 fa	Lewis's Moon Snail	<i>Euspira lewisi</i>	unsexed	0.93	100	5453	100	
2004	JW	S	5-20 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.06	100	11869	100	
2004	JW	S	5-20 fa	Longnose Skate egg case	<i>Raja rhina</i> egg case	unsexed	0.07	100	1856	100	
2004	JW	S	5-20 fa	Marine vegetation	Marine vegetation	unsexed	89.57	74.83	10432	26.74	
2004	JW	S	5-20 fa	Metridium uniden.	<i>Metridium</i> sp.	unsexed	3.94	95.65	11265	79.8	
2004	JW	S	5-20 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	0.40	100	2882	100	
2004	JW	S	5-20 fa	Northern Kelp Crab	<i>Pugettia producta</i>	unsexed	0.06	100	11869	100	
2004	JW	S	5-20 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	1.65	47.18	23401	66.31	
2004	JW	S	5-20 fa	Pacific Spiny Lumpsucker	<i>Eumicrotremus orbis</i>	unsexed	0.06	100	11869	100	
2004	JW	S	5-20 fa	Plastic	Plastic	unsexed	0.01	100	2882	100	
2004	JW	S	5-20 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	14.16	35.73	50085	36.09	
2004	JW	S	5-20 fa	Red Irish Lord	<i>Hemilepidotus hemilepidotus</i>	unsexed	1.25	100	2967	100	
2004	JW	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	male	2.34	98.55	11628	74.25	
2004	JW	S	5-20 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	1527.59	98.71	3029539	99.16	
2004	JW	S	5-20 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	0.87	92.21	37616	93.95	
2004	JW	S	5-20 fa	Ringed Lucine	<i>Lucinoma annulata</i>	unsexed	0.52	100	2727	100	
2004	JW	S	5-20 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.45	62.38	10673	72.42	
2004	JW	S	5-20 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.04	100	1987	100	
2004	JW	S	5-20 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	0.95	92.42	42701	91.56	
2004	JW	S	5-20 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	96.60	26.88	194501	18.58	
2004	JW	S	5-20 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	0.57	42.12	31237	52.46	
2004	JW	S	5-20 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	0.25	61.86	7554	71.79	
2004	JW	S	5-20 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	1658.01	69.18	2957085	68.86	
2004	JW	S	5-20 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei</i> egg case	unsexed	0.10	63.89	6679	61.87	
2004	JW	S	5-20 fa	Steven's Hermit Crab	<i>Pagurus stevensae</i>	unsexed	0.58	61.3	22923	62.14	
2004	JW	S	5-20 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	84.45	67	44490	48.59	
2004	JW	S	5-20 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.02	100	1987	100	
2004	JW	S	5-20 fa	Wrinkled Amphissa	<i>Amphissa columbiana</i>	unsexed	0.01	100	2882	100	
2004	JW	T	21-40 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	4.93	45.68	32609	67.77	
2004	JW	T	21-40 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	0.35	100	1650	100	
2004	JW	T	21-40 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.05	63.27	5492	63.27	
2004	JW	T	21-40 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	1.17	100	7304	100	

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								Estimate		
2004	JW	T	21-40 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	1.98	46.78	10878	48.69
2004	JW	T	21-40 fa	Cloud Sponge	<i>Aphrocallistes vastus</i>	unsexed	0.54	100	1543	100
2004	JW	T	21-40 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	4.88	100	3652	100
2004	JW	T	21-40 fa	Crab uniden.	<i>Decapoda</i>	unsexed	0.02	100	1650	100
2004	JW	T	21-40 fa	Curlfin Sole	<i>Pleuronichthys decurrens</i>	unsexed	20.23	100	34695	100
2004	JW	T	21-40 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	47.87	68.11	313962	60.01
2004	JW	T	21-40 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	14.09	91.09	55015	79.77
2004	JW	T	21-40 fa	Fish-eating Star	<i>Stylasterias forsteri</i>	unsexed	1.84	68.23	7472	62.76
2004	JW	T	21-40 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	0.79	100	4386	100
2004	JW	T	21-40 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	64.64	59.36	1124086	51.29
2004	JW	T	21-40 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	0.59	81.74	16283	78.49
2004	JW	T	21-40 fa	Grunt Sculpin	<i>Rhamphocottus richardsoni</i>	unsexed	0.07	100	2193	100
2004	JW	T	21-40 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.12	100	1543	100
2004	JW	T	21-40 fa	Horseshoe Tunicate	<i>Chelyosoma productum</i>	unsexed	0.04	100	6579	100
2004	JW	T	21-40 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	0.00	100	3921	100
2004	JW	T	21-40 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	2.26	52.46	21895	67.09
2004	JW	T	21-40 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	11.00	74.83	8954	79.01
2004	JW	T	21-40 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.01	100	1650	100
2004	JW	T	21-40 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	1.02	100	1543	100
2004	JW	T	21-40 fa	Longnose Skate egg case	<i>Raja rhina</i> egg case	unsexed	0.12	100	1650	100
2004	JW	T	21-40 fa	Marine vegetation	Marine vegetation	unsexed	12.60	42.18	9483	33.16
2004	JW	T	21-40 fa	Metridium uniden.	<i>Metridium</i> sp.	unsexed	2.41	100	10956	100
2004	JW	T	21-40 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	7.27	91	21280	91.21
2004	JW	T	21-40 fa	Northern Ronquil	<i>Ronquilus jordanii</i>	unsexed	0.54	77.35	11441	84.16
2004	JW	T	21-40 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	0.15	100	8772	100
2004	JW	T	21-40 fa	Orange Burrowing Sea Cucumber	<i>Cucumaria miniata</i>	unsexed	0.12	100	3921	100
2004	JW	T	21-40 fa	Orange Sea Pen	<i>Ptilosarcus gurneyi</i>	unsexed	0.26	100	7304	100
2004	JW	T	21-40 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	44.76	67.07	53517	56.04
2004	JW	T	21-40 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	0.71	97.12	52779	96.14
2004	JW	T	21-40 fa	Pacific Herring	<i>Clupea pallasi</i>	unsexed	0.18	100	1826	100
2004	JW	T	21-40 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	35.54	51.43	360456	41.74
2004	JW	T	21-40 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	12.59	59.64	56765	53.56
2004	JW	T	21-40 fa	Rainbow Star	<i>Orthasterias koehlerae</i>	unsexed	30.70	83.03	167495	83.29
2004	JW	T	21-40 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	5.06	95.98	79994	94.93
2004	JW	T	21-40 fa	Ringed Lucine	<i>Lucinoma annulata</i>	unsexed	0.02	100	3921	100
2004	JW	T	21-40 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	5.11	71.21	52314	65.25
2004	JW	T	21-40 fa	Roughspine Sculpin	<i>Triglops macellus</i>	unsexed	0.13	100	3299	100
2004	JW	T	21-40 fa	Sand Rose Anemone	<i>Urticina columbiana</i>	unsexed	0.04	100	1826	100
2004	JW	T	21-40 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	4.44	100	5478	100
2004	JW	T	21-40 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	2.49	82.31	10907	82.4
2004	JW	T	21-40 fa	Sandpaper Skate	<i>Bathyraja kincaidi</i>	unsexed	4.49	100	3652	100
2004	JW	T	21-40 fa	Sea Lemon	<i>Anisodoris nobilis</i>	unsexed	0.73	94.43	3476	61.37
2004	JW	T	21-40 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.06	100	1543	100
2004	JW	T	21-40 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.02	100	1543	100
2004	JW	T	21-40 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	20.62	89.46	46296	88.04
2004	JW	T	21-40 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	110.40	66.72	4984410	62.85

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								Coefficient of Variation		
2004	JW	T	21-40 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	96.24	43.14	441426	53.65
2004	JW	T	21-40 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	0.27	67.43	6821	67.43
2004	JW	T	21-40 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	4.72	70.61	26015	71.7
2004	JW	T	21-40 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	22.86	100	1650	100
2004	JW	T	21-40 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	1259.67	19.91	3634173	19.14
2004	JW	T	21-40 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei</i> egg case	unsexed	0.07	100	6599	100
2004	JW	T	21-40 fa	Steven's Hermit Crab	<i>Pagurus stevensae</i>	unsexed	0.64	61.27	14886	71.76
2004	JW	T	21-40 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	1.41	65.42	24793	50.43
2004	JW	T	21-40 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	0.04	100	1826	100
2004	JW	T	21-40 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.02	100	3086	100
2004	JW	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.92	64.73	16844	61.6
2004	JW	T	21-40 fa	Swifts Star	<i>Gephyreaster swifti</i>	unsexed	0.90	100	6579	100
2004	JW	T	21-40 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.07	67.43	5279	62.68
2004	JW	T	21-40 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	17.11	68.41	472829	77.99
2004	JW	U	41-60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	1.92	93.83	409070	95.19
2004	JW	U	41-60 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.04	100	890	100
2004	JW	U	41-60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	14.13	31.57	90673	31.72
2004	JW	U	41-60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	35.04	67.77	11596	47.72
2004	JW	U	41-60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.01	100	1010	100
2004	JW	U	41-60 fa	Brown Irish Lord	<i>Hemilepidotus spinosus</i>	unsexed	0.24	100	2560	100
2004	JW	U	41-60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	9.45	58.32	87588	54.03
2004	JW	U	41-60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	1.24	72.49	4311	73.22
2004	JW	U	41-60 fa	Cloud Sponge	<i>Aphrocallistes vastus</i>	unsexed	0.16	100	941	100
2004	JW	U	41-60 fa	Crab uniden.	<i>Decapoda</i>	unsexed	0.02	100	1010	100
2004	JW	U	41-60 fa	Curlfin Sole	<i>Pleuronichthys decurrens</i>	unsexed	3.73	100	6912	100
2004	JW	U	41-60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	50.72	40.46	302712	37.44
2004	JW	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	female	0.72	100	1108	100
2004	JW	U	41-60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	22.45	64.7	116518	66.57
2004	JW	U	41-60 fa	Fishing gear	Fishing gear	unsexed	0.00	100	864	100
2004	JW	U	41-60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	0.20	100	890	100
2004	JW	U	41-60 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	0.27	100	2560	100
2004	JW	U	41-60 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.03	82.41	2048	66.94
2004	JW	U	41-60 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	10.80	83.42	12885	86.18
2004	JW	U	41-60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	2.37	80.54	19184	75.37
2004	JW	U	41-60 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	2.57	60.51	35790	61.54
2004	JW	U	41-60 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.37	55.66	7531	49.47
2004	JW	U	41-60 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.02	100	4706	100
2004	JW	U	41-60 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	2.51	84.39	1951	66.72
2004	JW	U	41-60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	3.77	100	6232	100
2004	JW	U	41-60 fa	Marine vegetation	Marine vegetation	unsexed	14.41	54.76	5827	27.46
2004	JW	U	41-60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	1.55	55.67	11064	56.38
2004	JW	U	41-60 fa	Northern Kelp Crab	<i>Pugettia producta</i>	unsexed	0.01	100	890	100
2004	JW	U	41-60 fa	Northern Ronquil	<i>Ronquilus jordani</i>	unsexed	1.26	44.95	30969	44.61
2004	JW	U	41-60 fa	Orange Sea Pen	<i>Ptilosarcus gurneyi</i>	unsexed	0.01	100	1010	100
2004	JW	U	41-60 fa	Other man-made debris	Other man-made debris	unsexed	21.57	67.84	1954	66.72
2004	JW	U	41-60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	54.49	48.48	43297	50.22

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass Estimate Coefficient of Variation		Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
2004	JW	U	41-60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	0.69	92.73	42918	83.89	
2004	JW	U	41-60 fa	Pacific Halibut	<i>Hippoglossus stenolepis</i>	unsexed	11.58	100	1252	100	
2004	JW	U	41-60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	3.49	84.01	52207	83.86	
2004	JW	U	41-60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	31.25	33.52	207317	34.95	
2004	JW	U	41-60 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	0.22	100	864	100	
2004	JW	U	41-60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	0.25	57.37	8063	55.38	
2004	JW	U	41-60 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	4.73	71.41	18775	60.04	
2004	JW	U	41-60 fa	Plastic	Plastic	unsexed	0.01	100	890	100	
2004	JW	U	41-60 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.01	100	1010	100	
2004	JW	U	41-60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	26.48	69.63	30553	67.15	
2004	JW	U	41-60 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	1.02	41.34	5035	43.95	
2004	JW	U	41-60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	5.30	82.34	8526	87.59	
2004	JW	U	41-60 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	0.24	100	2020	100	
2004	JW	U	41-60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	6.97	64.09	120155	52.73	
2004	JW	U	41-60 fa	Roughspine Sculpin	<i>Triglops macellus</i>	unsexed	0.14	80.54	3501	75.05	
2004	JW	U	41-60 fa	Sablefish	<i>Anoplopoma fimbria</i>	unsexed	0.31	100	940	100	
2004	JW	U	41-60 fa	Salp uniden.	Family Salpidae	unsexed	0.15	100	1781	100	
2004	JW	U	41-60 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	1.97	100	1280	100	
2004	JW	U	41-60 fa	Sandpaper Skate	<i>Bathyraja kincaidi</i>	unsexed	5.90	66.13	8084	50.96	
2004	JW	U	41-60 fa	Sea cucumber uniden.	Class Holothuroidea	unsexed	0.16	100	1252	100	
2004	JW	U	41-60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.04	84.09	2368	74.95	
2004	JW	U	41-60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.69	54.94	23563	45.36	
2004	JW	U	41-60 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.02	100	940	100	
2004	JW	U	41-60 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	0.06	100	2823	100	
2004	JW	U	41-60 fa	Slipper Sea Cucumber	<i>Psolus chitonoides</i>	unsexed	0.04	100	2027	100	
2004	JW	U	41-60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	4.88	54.43	388169	57.21	
2004	JW	U	41-60 fa	Snailfish uniden.	<i>Liparis</i>	unsexed	0.02	100	864	100	
2004	JW	U	41-60 fa	Southern Rock Sole	<i>Lepidotetta bilineata</i>	unsexed	4.95	58.04	14464	62.76	
2004	JW	U	41-60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	1.34	100	1728	100	
2004	JW	U	41-60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	0.17	66.64	8367	62.22	
2004	JW	U	41-60 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	0.12	100	1781	100	
2004	JW	U	41-60 fa	Sponge uniden.	Phylum Porifera	unsexed	10.04	94.04	4317	54.07	
2004	JW	U	41-60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	0.19	80.41	4994	81.26	
2004	JW	U	41-60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	534.27	18.9	1522173	13.52	
2004	JW	U	41-60 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei egg case</i>	unsexed	0.01	100	1013	100	
2004	JW	U	41-60 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	0.69	100	1010	100	
2004	JW	U	41-60 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.12	75.37	4778	79.29	
2004	JW	U	41-60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	3.20	38.3	83145	40.03	
2004	JW	U	41-60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	3.87	47.64	6086	44.33	
2004	JW	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	0.17	100	864	100	
2004	JW	U	41-60 fa	Threadfin Sculpin	<i>Icelinus filamentosus</i>	unsexed	2.89	52.88	17199	51.9	
2004	JW	U	41-60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.04	43.61	4217	41.25	
2004	JW	U	41-60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	65.48	52.32	771306	31.94	
2004	JW	U	>60 fa	Wolf-eel	<i>Anarrhichthys ocellatus</i>	unsexed	3.82	100	890	100	
2004	JW	V	>60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	7.77	83	1249674	79.82	
2004	JW	V	>60 fa	Aluminum	Aluminum	unsexed	0.05	100	2646	100	

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2004	JW	V	>60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	212.10	28.46	496748	26.16
2004	JW	V	>60 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	0.98	100	2636	100
2004	JW	V	>60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	182.29	54.81	16028	40.07
2004	JW	V	>60 fa	Brittle star uniden.	<i>Ophiuroidae</i>	unsexed	0.00	100	3014	100
2004	JW	V	>60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	0.85	100	2646	100
2004	JW	V	>60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	0.96	74.62	9325	74.05
2004	JW	V	>60 fa	Cloud Sponge	<i>Aphrocallistes vastus</i>	unsexed	0.06	100	3179	100
2004	JW	V	>60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	534.75	15.98	2356075	13.58
2004	JW	V	>60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	41.92	81.85	112940	76.15
2004	JW	V	>60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	2.20	76.07	7863	72.8
2004	JW	V	>60 fa	Fragile Sea Urchin	<i>Strongylocentrotus fragilis</i>	unsexed	21.85	33.51	175415	38.24
2004	JW	V	>60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.01	100	2952	100
2004	JW	V	>60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	84.89	25.54	779690	22.3
2004	JW	V	>60 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	4.55	54.05	26406	46.53
2004	JW	V	>60 fa	Lampshell Brachiopod	<i>Terebratalia transversa</i>	unsexed	0.06	100	9537	100
2004	JW	V	>60 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	5.94	68.96	5922	69.03
2004	JW	V	>60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	381.93	27.81	168622	26.7
2004	JW	V	>60 fa	Marine vegetation	Marine vegetation	unsexed	10.60	39.12	20687	31.36
2004	JW	V	>60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	3.39	63.04	8959	54.72
2004	JW	V	>60 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	0.05	100	2743	100
2004	JW	V	>60 fa	Northern Ronquil	<i>Ronquilus jordani</i>	unsexed	1.44	94.45	34573	92.37
2004	JW	V	>60 fa	Nudibranch uniden.	Order Nudibranchia	unsexed	0.03	100	3179	100
2004	JW	V	>60 fa	Other man-made debris	Other man-made debris	unsexed	10.97	100	2669	100
2004	JW	V	>60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	907.71	31.44	699223	37.57
2004	JW	V	>60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	4.31	46.97	277336	47.6
2004	JW	V	>60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	131.77	30.13	128072	28.7
2004	JW	V	>60 fa	Pacific Halibut	<i>Hippoglossus stenolepis</i>	unsexed	23.30	73.12	5981	68.83
2004	JW	V	>60 fa	Pacific Herring	<i>Clupea pallasi</i>	unsexed	1.35	73.53	21910	60.75
2004	JW	V	>60 fa	Pacific Ocean Perch	<i>Sebastes alutus</i>	unsexed	3.50	100	3014	100
2004	JW	V	>60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	3.48	79.55	13596	79.8
2004	JW	V	>60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	0.13	100	2646	100
2004	JW	V	>60 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	0.55	100	2906	100
2004	JW	V	>60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	11.38	70.89	17392	72.91
2004	JW	V	>60 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	11.86	83.95	57589	59.08
2004	JW	V	>60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	20.95	50.04	42571	42.76
2004	JW	V	>60 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	0.26	100	2906	100
2004	JW	V	>60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	38.91	37.23	291180	33.63
2004	JW	V	>60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.08	100	2669	100
2004	JW	V	>60 fa	Sablefish	<i>Anoplopoma fimbria</i>	unsexed	7.40	64.31	10235	57.95
2004	JW	V	>60 fa	Sand Rose Anemone	<i>Urticina columbiana</i>	unsexed	0.52	100	2609	100
2004	JW	V	>60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	1.50	55.32	8283	54.99
2004	JW	V	>60 fa	Sandpaper Skate	<i>Bathyraja kincaidi</i>	unsexed	86.96	41.38	124683	44.85
2004	JW	V	>60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	4.35	17.99	310342	17.05
2004	JW	V	>60 fa	Sixgill Shark	<i>Hexanchus griseus</i>	unsexed	7.87	100	2713	100
2004	JW	V	>60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	3.22	53.33	71660	44.83
2004	JW	V	>60 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	0.78	98.05	5542	68.92

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								Estimate Coefficient of Variation		
2004	JW	V	>60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	1.37	29.09	79485	32.78
2004	JW	V	>60 fa	Snailfish uniden.	<i>Liparis</i>	unsexed	0.03	100	2673	100
2004	JW	V	>60 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	2.24	100	3860	100
2004	JW	V	>60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	51.78	54.84	27823	42.55
2004	JW	V	>60 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	3.95	35.46	55492	31.94
2004	JW	V	>60 fa	Splitnose Rockfish	<i>Sebastes diploproa</i>	unsexed	0.05	100	2743	100
2004	JW	V	>60 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	6.08	91.52	11684	46.01
2004	JW	V	>60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	0.63	87.91	15440	77.8
2004	JW	V	>60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	8059.84	16.12	21347736	13.84
2004	JW	V	>60 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei</i> egg case	unsexed	0.40	58.56	26166	61.29
2004	JW	V	>60 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.16	68.83	5254	68.83
2004	JW	V	>60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	1.06	94.41	24071	88.12
2004	JW	V	>60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	18.54	69.22	8308	73.28
2004	JW	V	>60 fa	Swifts Star	<i>Gephyreaster swifti</i>	unsexed	0.03	100	3210	100
2004	JW	V	>60 fa	Swimming Anemone	<i>Stomphia coccinea</i>	unsexed	0.91	57.04	14902	48.7
2004	JW	V	>60 fa	Thorny Sea Star	<i>Poraniopsis inflata</i>	unsexed	0.21	100	3014	100
2004	JW	V	>60 fa	Top snail uniden.	<i>Calliostoma</i> sp.	unsexed	0.05	100	8229	100
2004	JW	V	>60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.53	30.48	47067	34.33
2004	JW	V	>60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	474.16	34.81	3025870	35.12
2004	JW	V	>60 fa	White Sea Urchin	<i>Strongylocentrotus pallidus</i>	unsexed	1.24	100	15895	100
2004	JW	V	>60 fa	Wrinkled Dogwinkle	<i>Nucella lamellosa</i>	unsexed	0.05	100	2673	100
2004	JW	V	>60 fa	Yellow-lined Nudibranch	<i>Cadlina luteomarginata</i>	unsexed	0.05	100	2609	100
2004	JW	V	>60 fa	Yellowtail Rockfish	<i>Sebastes flavidus</i>	unsexed	4.36	100	2673	100
2004	SJ	S	5-20 fa	Alabaster (frosted) Nudibranch	<i>Dirona albolineata</i>	unsexed	0.23	100	11270	100
2004	SJ	S	5-20 fa	Aluminum	<i>Aluminum</i>	unsexed	0.11	100	3762	100
2004	SJ	S	5-20 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.43	100	17069	100
2004	SJ	S	5-20 fa	Barnacle-eating Onchidoris	<i>Onchidoris bilamellata</i>	unsexed	0.01	100	3762	100
2004	SJ	S	5-20 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	2.09	100	10285	100
2004	SJ	S	5-20 fa	Big Skate	<i>Raja binoculata</i>	unsexed	0.11	100	3762	100
2004	SJ	S	5-20 fa	Big Skate egg case	<i>Raja binoculata</i> egg case	unsexed	5.68	100	15049	100
2004	SJ	S	5-20 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	0.10	52.32	11707	48.9
2004	SJ	S	5-20 fa	Brown Spiny Doris	<i>Acanthodoris brunnea</i>	unsexed	0.02	100	7525	100
2004	SJ	S	5-20 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	1.97	63.18	17608	58.99
2004	SJ	S	5-20 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	1.84	100	26336	100
2004	SJ	S	5-20 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	17.65	95.22	188584	91.22
2004	SJ	S	5-20 fa	Cabezon	<i>Scorpaenichthys marmoratus</i>	unsexed	17.96	100	10285	100
2004	SJ	S	5-20 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.90	86.52	37283	78.94
2004	SJ	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	268.98	65.28	370445	57.87
2004	SJ	S	5-20 fa	Clown Nudibranch	<i>Triopha catalinae</i>	unsexed	2.10	94.02	60111	93.05
2004	SJ	S	5-20 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	10.74	98.44	1457830	96.38
2004	SJ	S	5-20 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	1.89	52.32	1124256	51.27
2004	SJ	S	5-20 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.03	100	6685	100
2004	SJ	S	5-20 fa	Danas Blade Shrimp	<i>Spirontocaris lamellicornis</i>	unsexed	0.02	65.59	7945	65.59
2004	SJ	S	5-20 fa	Divaricate Nut Clam	<i>Acila castrensis</i>	unsexed	0.19	100	375657	100
2004	SJ	S	5-20 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	47.97	80.95	14560917	79.54
2004	SJ	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	male	403.06	43.98	1025757	49.81

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								Estimate		
2004	SJ	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	female	329.28	41.97	1301512	41.63
2004	SJ	S	5-20 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	98.49	60.23	1692798	62.39
2004	SJ	S	5-20 fa	False Ochre Star	<i>Evasterias troschelii</i>	unsexed	33.97	61.24	48110	56.83
2004	SJ	S	5-20 fa	Fishing gear	Fishing gear	unsexed	14.26	95.85	7519	65.47
2004	SJ	S	5-20 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	2.73	61.55	136129	63.22
2004	SJ	S	5-20 fa	Fourhorn Poacher	<i>Hypsagonus quadricornis</i>	unsexed	0.07	66.36	7323	66.36
2004	SJ	S	5-20 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	19.72	70.39	170390	76.72
2004	SJ	S	5-20 fa	Glass	Glass	unsexed	12.28	64.49	36683	59.69
2004	SJ	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	female	0.42	53.73	19220	59
2004	SJ	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	male	1.91	38.87	42451	43.91
2004	SJ	S	5-20 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.73	53.37	160117	58.5
2004	SJ	S	5-20 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	71.52	45.37	209594	51.02
2004	SJ	S	5-20 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	16.67	77.62	117942	81.91
2004	SJ	S	5-20 fa	Grunt Sculpin	<i>Rhamphocottus richardsoni</i>	unsexed	0.05	66.44	10907	66.44
2004	SJ	S	5-20 fa	Helmet Crab	<i>Telmessus cheiragonus</i>	unsexed	0.17	100	3428	100
2004	SJ	S	5-20 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.36	62.71	109246	61.97
2004	SJ	S	5-20 fa	Horseshoe Tunicate	<i>Chelyosoma productum</i>	unsexed	0.23	82.6	67624	93.8
2004	SJ	S	5-20 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	60.38	65.86	22850394	65.73
2004	SJ	S	5-20 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	1.95	100	9274	100
2004	SJ	S	5-20 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	3.42	87.07	16799	79.29
2004	SJ	S	5-20 fa	Marbled Snailfish	<i>Liparis dennysi</i>	unsexed	0.13	100	4188	100
2004	SJ	S	5-20 fa	Marine vegetation	Marine vegetation	unsexed	164.57	49.02	54384	38.88
2004	SJ	S	5-20 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	1.20	100	7525	100
2004	SJ	S	5-20 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	0.21	100	13714	100
2004	SJ	S	5-20 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	59.00	47.16	225205	36.85
2004	SJ	S	5-20 fa	Northern Ronquil	<i>Ronquilus jordanii</i>	unsexed	0.23	100	4637	100
2004	SJ	S	5-20 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	0.09	100	9274	100
2004	SJ	S	5-20 fa	Nudibranch uniden.	Order Nudibranchia	unsexed	0.30	100	11270	100
2004	SJ	S	5-20 fa	Nuttall Cockle	<i>Clinocardium nuttallii</i>	unsexed	0.49	100	3762	100
2004	SJ	S	5-20 fa	Orange Sea Pen	<i>Ptilosarcus gurneyi</i>	unsexed	1.01	70.28	15475	74.08
2004	SJ	S	5-20 fa	Orangepeel Nudibranch	<i>Tochuina tetrica</i>	unsexed	1.37	100	3428	100
2004	SJ	S	5-20 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	2.04	70.96	24195	66.44
2004	SJ	S	5-20 fa	Other man-made debris	Other man-made debris	unsexed	0.90	100	7525	100
2004	SJ	S	5-20 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	14.70	79.45	903885	88.07
2004	SJ	S	5-20 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.23	68.34	22160	54.63
2004	SJ	S	5-20 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	43.16	55.85	362269	49.14
2004	SJ	S	5-20 fa	Pacific Spiny Lumpsucker	<i>Eumicrotremus orbis</i>	unsexed	0.59	69.12	41604	65.68
2004	SJ	S	5-20 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	2.27	77.85	30524	85.41
2004	SJ	S	5-20 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	2.96	63.7	41411	61.94
2004	SJ	S	5-20 fa	Padded Sculpin	<i>Artedius fenestratus</i>	unsexed	0.11	100	7513	100
2004	SJ	S	5-20 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	21.12	75.31	11713	68.92
2004	SJ	S	5-20 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	3.71	77.95	84285	78.11
2004	SJ	S	5-20 fa	Plastic	Plastic	unsexed	1.90	80.5	33947	59.2
2004	SJ	S	5-20 fa	Puget Sound Rockfish	<i>Sebastodes emphaeus</i>	unsexed	0.20	100	13371	100
2004	SJ	S	5-20 fa	Red Irish Lord	<i>Hemilepidotus hemilepidotus</i>	unsexed	3.41	75.48	8065	66.44
2004	SJ	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	male	38.68	21.58	128490	19.77

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2004	SJ	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	female	16.51	35.67	96995	33.52
2004	SJ	S	5-20 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	27.99	76.6	36701	75.39
2004	SJ	S	5-20 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	0.47	61.15	14636	51.45
2004	SJ	S	5-20 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	28.48	47.54	1462440	50.66
2004	SJ	S	5-20 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.52	68.98	13462	71.42
2004	SJ	S	5-20 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.90	100	37623	100
2004	SJ	S	5-20 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	17.49	64.47	167175	59.3
2004	SJ	S	5-20 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	5.37	83.8	27581	73.93
2004	SJ	S	5-20 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	31.22	76.58	2669338	81.33
2004	SJ	S	5-20 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.06	100	6271	100
2004	SJ	S	5-20 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	2.74	100	20056	100
2004	SJ	S	5-20 fa	Slipskin Snailfish	<i>Liparis fucensis</i>	unsexed	0.09	100	4637	100
2004	SJ	S	5-20 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	0.88	84.87	29706	66.49
2004	SJ	S	5-20 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.06	68.9	11701	68.9
2004	SJ	S	5-20 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	245.73	44.29	1245867	41.08
2004	SJ	S	5-20 fa	Speckled Sanddab	<i>Citharichthys stigmatus</i>	unsexed	0.47	100	13371	100
2004	SJ	S	5-20 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	220.36	38.26	155014	35.51
2004	SJ	S	5-20 fa	Spiny Lebeheid	<i>Lebbeus groenlandicus</i>	unsexed	0.05	100	13910	100
2004	SJ	S	5-20 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	0.07	100	3428	100
2004	SJ	S	5-20 fa	Spinyhead Sculpin	<i>Dasyctonus setiger</i>	unsexed	2.41	74.16	17201	74.16
2004	SJ	S	5-20 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	1.01	100	3757	100
2004	SJ	S	5-20 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	0.24	100	26296	100
2004	SJ	S	5-20 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	102.08	92.79	144154	91.85
2004	SJ	S	5-20 fa	Steven's Hermit Crab	<i>Pagurus stevensae</i>	unsexed	0.21	100	6857	100
2004	SJ	S	5-20 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.30	100	3757	100
2004	SJ	S	5-20 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	1.02	100	33861	100
2004	SJ	S	5-20 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.54	50.45	18847	50.23
2004	SJ	S	5-20 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.86	95.1	24333	83.74
2004	SJ	S	5-20 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	165.83	64.23	174468	69.17
2004	SJ	S	5-20 fa	Tadpole Sculpin	<i>Psychrolutes paradoxus</i>	unsexed	0.03	100	6685	100
2004	SJ	S	5-20 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	11.81	59.11	232519	84.42
2004	SJ	S	5-20 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	32.47	63.78	347109	70.21
2004	SJ	S	5-20 fa	Tubesnout	<i>Aulorhynchus flavidus</i>	unsexed	0.04	100	3757	100
2004	SJ	S	5-20 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	74.11	72.17	3733103	74.67
2004	SJ	S	5-20 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	0.96	100	51426	100
2004	SJ	S	5-20 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	0.09	100	3757	100
2004	SJ	S	5-20 fa	Weathervane Scallop	<i>Patinopecten caurinus</i>	unsexed	4.33	100	7525	100
2004	SJ	S	5-20 fa	White Sea Cucumber	<i>Eupentacta quinquesemita</i>	unsexed	0.08	100	3757	100
2004	SJ	S	5-20 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	7.00	32.24	99666	36.92
2004	SJ	S	5-20 fa	Wrinkled Dogwinkle	<i>Nucella lamellosa</i>	unsexed	0.66	73.13	36415	71.49
2004	SJ	T	21-40 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	104.08	99.36	24631085	99.32
2004	SJ	T	21-40 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	1.00	67.53	13018	70.2
2004	SJ	T	21-40 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	0.66	64.05	16555	50.51
2004	SJ	T	21-40 fa	Barnacle uniden.	<i>Order Thoracica</i>	unsexed	0.55	100	13316	100
2004	SJ	T	21-40 fa	Big Skate	<i>Raja binoculata</i>	unsexed	61.77	91.25	138143	76.8
2004	SJ	T	21-40 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.09	73.64	11757	66.23

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2004	SJ	T	21-40 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	1.29	66.29	16467	78.66	
2004	SJ	T	21-40 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	1.04	100	4345	100	
2004	SJ	T	21-40 fa	Cabezon	<i>Scorpaenichthys marmoratus</i>	unsexed	17.91	100	4478	100	
2004	SJ	T	21-40 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	92.49	80.28	169137	58.95	
2004	SJ	T	21-40 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	12.47	66.52	9017	65.47	
2004	SJ	T	21-40 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	1.50	94.52	1165940	97.59	
2004	SJ	T	21-40 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.03	100	5099	100	
2004	SJ	T	21-40 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	98.97	24.21	17579572	27.55	
2004	SJ	T	21-40 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	6.80	45.83	225427	61.38	
2004	SJ	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	male	39.21	68.23	46328	68.22	
2004	SJ	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	female	54.55	51.33	110147	51.2	
2004	SJ	T	21-40 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	159.29	92.88	1888062	94.6	
2004	SJ	T	21-40 fa	False Ochre Star	<i>Evasterias troschelii</i>	unsexed	21.07	56.36	19532	56.19	
2004	SJ	T	21-40 fa	Fishing gear	<i>Fishing gear</i>	unsexed	5.17	66.14	12285	74.06	
2004	SJ	T	21-40 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	2.72	68.27	10594	70.39	
2004	SJ	T	21-40 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	17.49	82.01	213960	82.97	
2004	SJ	T	21-40 fa	Glass	<i>Glass</i>	unsexed	2.23	65.55	6884	65.51	
2004	SJ	T	21-40 fa	Glassy Tunicate	<i>Ascidia paratropa</i>	unsexed	0.13	100	4328	100	
2004	SJ	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	male	3.76	66.86	33123	55.78	
2004	SJ	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	female	5.30	100	46217	100	
2004	SJ	T	21-40 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.87	100	60586	100	
2004	SJ	T	21-40 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.26	81.81	50755	90.22	
2004	SJ	T	21-40 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	463.64	48.16	1003405	41.79	
2004	SJ	T	21-40 fa	Green False Jingle	<i>Pododesmus macrochisma</i>	unsexed	0.68	100	13316	100	
2004	SJ	T	21-40 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	15.17	59.52	125301	42.05	
2004	SJ	T	21-40 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	0.11	67.37	11003	67.37	
2004	SJ	T	21-40 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.64	56.21	18522	53.03	
2004	SJ	T	21-40 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.88	64.13	274562	68.82	
2004	SJ	T	21-40 fa	Horseshoe Tunicate	<i>Chelyosoma productum</i>	unsexed	1.22	100	130349	100	
2004	SJ	T	21-40 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	26.21	65.32	9991577	66.63	
2004	SJ	T	21-40 fa	Leafy Hornmouth	<i>Ceratostoma foliatum</i>	unsexed	2.18	67.78	32147	62.87	
2004	SJ	T	21-40 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	16.17	85.8	12346	49.5	
2004	SJ	T	21-40 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	39.62	56.35	23500	32.42	
2004	SJ	T	21-40 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.04	100	4345	100	
2004	SJ	T	21-40 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	30.24	100	13035	100	
2004	SJ	T	21-40 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	169.50	71.86	68708	50.82	
2004	SJ	T	21-40 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	8.60	100	47795	100	
2004	SJ	T	21-40 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	1.56	100	8655	100	
2004	SJ	T	21-40 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	397.14	99.62	8206633	99.35	
2004	SJ	T	21-40 fa	Northern Rock Sole	<i>Lepidotsetta polyxystra</i>	unsexed	10.04	77.12	113289	75.38	
2004	SJ	T	21-40 fa	Northern Ronquil	<i>Ronquilus jordanii</i>	unsexed	3.17	90.17	140705	83.92	
2004	SJ	T	21-40 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	1.65	62.44	172683	61.79	
2004	SJ	T	21-40 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	2.38	61.75	88764	58.38	
2004	SJ	T	21-40 fa	Orange Sea Pen	<i>Ptilosarcus gurneyi</i>	unsexed	0.30	100	4328	100	
2004	SJ	T	21-40 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	3.22	100	8956	100	
2004	SJ	T	21-40 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	0.53	53.86	23776	51.38	

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								Estimate Coefficient of Variation		
2004	SJ	T	21-40 fa	Pacific Herring	<i>Clupea pallasi</i>	unsexed	0.95	74.25	18134	73.35
2004	SJ	T	21-40 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	3.61	71.07	128740	61.22
2004	SJ	T	21-40 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	148.02	51.87	942489	53.62
2004	SJ	T	21-40 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	12.53	56.09	77349	71.29
2004	SJ	T	21-40 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	4.70	55.18	146502	81.01
2004	SJ	T	21-40 fa	Padded Sculpin	<i>Artedius fenestralis</i>	unsexed	0.43	100	12983	100
2004	SJ	T	21-40 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	0.83	100	21725	100
2004	SJ	T	21-40 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	1.72	42.77	66980	40.8
2004	SJ	T	21-40 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.07	100	13316	100
2004	SJ	T	21-40 fa	Red Irish Lord	<i>Hemilepidotus hemilepidotus</i>	unsexed	243.26	65.1	478324	65.44
2004	SJ	T	21-40 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.36	100	4539	100
2004	SJ	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	female	2.72	73.35	19320	74.56
2004	SJ	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	male	15.31	75.58	42138	74.33
2004	SJ	T	21-40 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	4.18	100	9077	100
2004	SJ	T	21-40 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	1.02	57.27	43516	67.88
2004	SJ	T	21-40 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	22.27	81.37	761409	83.85
2004	SJ	T	21-40 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	15.98	41.71	468124	34.16
2004	SJ	T	21-40 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.17	100	4328	100
2004	SJ	T	21-40 fa	Saddleback Gunnel	<i>Pholis ornata</i>	unsexed	0.03	100	3329	100
2004	SJ	T	21-40 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	1.01	92.37	16918	79.14
2004	SJ	T	21-40 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	1.58	65.47	7674	66.23
2004	SJ	T	21-40 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	29.44	97.55	1691713	96.97
2004	SJ	T	21-40 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.28	72.28	106511	75.8
2004	SJ	T	21-40 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	0.41	100	81768	100
2004	SJ	T	21-40 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.11	100	10665	100
2004	SJ	T	21-40 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	9.66	75.19	25635	57.46
2004	SJ	T	21-40 fa	Slipskin Snailfish	<i>Liparis fucensis</i>	unsexed	1.90	81.46	96473	73.28
2004	SJ	T	21-40 fa	Smooth Alligatorfish	<i>Anoplagonus inermis</i>	unsexed	0.05	100	15298	100
2004	SJ	T	21-40 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	4.34	70.2	171353	77.83
2004	SJ	T	21-40 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.09	100	8690	100
2004	SJ	T	21-40 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	128.49	41.58	471750	36.35
2004	SJ	T	21-40 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	511.89	45.82	389063	44.83
2004	SJ	T	21-40 fa	Spiny Lebtheid	<i>Lebbeus groenlandicus</i>	unsexed	5.03	51.62	890445	47.49
2004	SJ	T	21-40 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	8.48	76.68	246299	72.63
2004	SJ	T	21-40 fa	Spinyhead Sculpin	<i>Dasy cottus setiger</i>	unsexed	11.23	55.11	151771	56.7
2004	SJ	T	21-40 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	3.93	66.73	16799	79.01
2004	SJ	T	21-40 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	26.65	97.07	1205832	96.49
2004	SJ	T	21-40 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	628.81	58.58	1364312	59.47
2004	SJ	T	21-40 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	0.26	100	25966	100
2004	SJ	T	21-40 fa	Stalked Trumpet Sponge	<i>Stylissa stipitata</i>	unsexed	0.15	84.91	8673	65.47
2004	SJ	T	21-40 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	4.69	100	4345	100
2004	SJ	T	21-40 fa	Steven's Hermit Crab	<i>Pagurus stevensae</i>	unsexed	0.17	100	3329	100
2004	SJ	T	21-40 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.60	100	7110	100
2004	SJ	T	21-40 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	3.45	67.43	49856	58.37
2004	SJ	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	2.14	56.43	74003	56.12
2004	SJ	T	21-40 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	73.23	70.67	35739	57.13

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass Estimate Coefficient of Variation		Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Coefficient of Variation	Abundance Estimate (number of individuals)		
2004	SJ	T	21-40 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	0.53	100	3555	100	
2004	SJ	T	21-40 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	9.99	100	39106	100	
2004	SJ	T	21-40 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	150.50	70.29	6018039	82.07	
2004	SJ	T	21-40 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	23.82	96.35	621494	91.75	
2004	SJ	T	21-40 fa	White Sea Cucumber	<i>Eupentacta quinquesemita</i>	unsexed	0.05	100	5099	100	
2004	SJ	T	21-40 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	3.18	57.37	24729	56.58	
2004	SJ	T	21-40 fa	White-spotted Rose Anemone	<i>Urticina lofotensis</i>	unsexed	0.33	100	9987	100	
2004	SJ	T	21-40 fa	Wrinkled Dogwinkle	<i>Nucella lamellosa</i>	unsexed	0.26	100	8655	100	
2004	SJ	U	41-60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	96.72	48.57	19263883	51.43	
2004	SJ	U	41-60 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	2.14	100	33564	100	
2004	SJ	U	41-60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	2.50	45.15	28096	48.23	
2004	SJ	U	41-60 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	7.59	73.05	49011	77.4	
2004	SJ	U	41-60 fa	Bent-nose Macoma	<i>Macoma nasuta</i>	unsexed	0.31	100	9154	100	
2004	SJ	U	41-60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	123.51	51.25	57420	58.78	
2004	SJ	U	41-60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.09	67.49	6120	64.85	
2004	SJ	U	41-60 fa	Brown Box Crab	<i>Lopholithodes foraminatus</i>	unsexed	1.86	100	2414	100	
2004	SJ	U	41-60 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	1.76	100	13247	100	
2004	SJ	U	41-60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	0.63	100	2605	100	
2004	SJ	U	41-60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	27.43	92.82	84798	96.72	
2004	SJ	U	41-60 fa	Cloud Sponge	<i>Aphrocallistes vastus</i>	unsexed	8.31	100	3312	100	
2004	SJ	U	41-60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	1.21	27.69	718029	27.09	
2004	SJ	U	41-60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	85.50	32.93	12418994	29.03	
2004	SJ	U	41-60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	15.51	37.64	281673	41.17	
2004	SJ	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	female	65.94	100	125101	100	
2004	SJ	U	41-60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	79.66	62.55	461912	65.95	
2004	SJ	U	41-60 fa	Fishing gear	Fishing gear	unsexed	0.17	100	2808	100	
2004	SJ	U	41-60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	8.20	85.55	32757	77.34	
2004	SJ	U	41-60 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	10.02	75.1	240422	58.8	
2004	SJ	U	41-60 fa	Graceful Crab	<i>Cancer gracilis</i>	female	0.06	100	3051	100	
2004	SJ	U	41-60 fa	Graceful Crab	<i>Cancer gracilis</i>	male	0.46	100	6103	100	
2004	SJ	U	41-60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.16	73.78	11259	54.63	
2004	SJ	U	41-60 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.16	40.03	21712	49.72	
2004	SJ	U	41-60 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	151.17	49	249717	49.41	
2004	SJ	U	41-60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	79.74	33.38	815359	21.35	
2004	SJ	U	41-60 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.65	78.21	19585	61.41	
2004	SJ	U	41-60 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.32	47.72	85232	48.75	
2004	SJ	U	41-60 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	0.03	100	52106	100	
2004	SJ	U	41-60 fa	Lacy Bryozoan	<i>Phidolopora pacifica</i>	unsexed	0.01	100	2717	100	
2004	SJ	U	41-60 fa	Lewis's Moon Snail	<i>Euspira lewisii</i>	unsexed	0.69	79.31	5768	64.7	
2004	SJ	U	41-60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	10.08	44.66	10995	35.99	
2004	SJ	U	41-60 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.06	100	6103	100	
2004	SJ	U	41-60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	18.72	67.02	24618	32.85	
2004	SJ	U	41-60 fa	Marbled Snailfish	<i>Liparis dennyi</i>	unsexed	0.30	100	9935	100	
2004	SJ	U	41-60 fa	Marine vegetation	Marine vegetation	unsexed	58.26	36.73	33946	41.47	
2004	SJ	U	41-60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	172.06	99.82	756377	99.58	
2004	SJ	U	41-60 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	0.12	100	3051	100	

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								Estimate		
2004	SJ	U	41-60 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	980.57	98.37	34819328	98.78
2004	SJ	U	41-60 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	1.39	100	6623	100
2004	SJ	U	41-60 fa	Northern Ronquil	<i>Ronquilus jordani</i>	unsexed	0.17	65.15	7380	68.72
2004	SJ	U	41-60 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	0.30	32.18	28300	29.65
2004	SJ	U	41-60 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	2.49	50.23	92883	50.89
2004	SJ	U	41-60 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	2.60	91.64	14619	82.36
2004	SJ	U	41-60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	3.40	97.42	102772	94.23
2004	SJ	U	41-60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	1.64	60.53	48061	59.81
2004	SJ	U	41-60 fa	Pacific Halibut	<i>Hippoglossus stenolepis</i>	unsexed	25.76	100	2414	100
2004	SJ	U	41-60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	1.01	35.42	39516	45.33
2004	SJ	U	41-60 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.60	44.2	37182	45.38
2004	SJ	U	41-60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	75.15	62.69	369793	61.64
2004	SJ	U	41-60 fa	Pacific Spiny Lumpsucker	<i>Eumicrotremus orbis</i>	unsexed	0.07	100	3312	100
2004	SJ	U	41-60 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	1.67	56.23	11259	54.63
2004	SJ	U	41-60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	10.96	48.1	216375	58.17
2004	SJ	U	41-60 fa	Plastic	Plastic	unsexed	0.03	100	3312	100
2004	SJ	U	41-60 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	0.30	100	9935	100
2004	SJ	U	41-60 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.02	100	3312	100
2004	SJ	U	41-60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	0.16	100	2605	100
2004	SJ	U	41-60 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.23	100	2551	100
2004	SJ	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	male	2.15	64.83	5917	65.19
2004	SJ	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	female	0.98	71.96	5917	65.19
2004	SJ	U	41-60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	34.39	58.9	51763	68.03
2004	SJ	U	41-60 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	1.18	55.11	20922	42.73
2004	SJ	U	41-60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	29.22	29.28	778231	29.1
2004	SJ	U	41-60 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	1.34	90.2	61763	89.85
2004	SJ	U	41-60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.65	65.16	5020	64.62
2004	SJ	U	41-60 fa	Rough Patch Shrimp	<i>Pandalus stenolepis</i>	unsexed	0.16	65.54	30148	65.21
2004	SJ	U	41-60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	2.14	100	15256	100
2004	SJ	U	41-60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.45	79.37	23590	63.48
2004	SJ	U	41-60 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.66	57.7	251377	61.02
2004	SJ	U	41-60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	8.85	56.96	1124543	60.49
2004	SJ	U	41-60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.35	59.75	19892	60.13
2004	SJ	U	41-60 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	4.62	43.58	16225	41.19
2004	SJ	U	41-60 fa	Slimy Snailfish	<i>Liparis mucosus</i>	unsexed	0.15	100	3051	100
2004	SJ	U	41-60 fa	Smooth Alligatorfish	<i>Anoplagonus inermis</i>	unsexed	0.07	100	6623	100
2004	SJ	U	41-60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	14.57	46.64	560971	46.97
2004	SJ	U	41-60 fa	Snailfish uniden.	<i>Liparis</i>	unsexed	0.01	100	2808	100
2004	SJ	U	41-60 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	6.49	69.88	19643	71.28
2004	SJ	U	41-60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	165.39	39.59	101757	42.02
2004	SJ	U	41-60 fa	Spiny Lebbeid	<i>Lebbeus groenlandicus</i>	unsexed	1.00	44.55	250092	31.69
2004	SJ	U	41-60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	5.14	40.35	153041	41.77
2004	SJ	U	41-60 fa	Spinyhead Sculpin	<i>Dasyctonus setiger</i>	unsexed	4.80	46.65	48752	43.19
2004	SJ	U	41-60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	79.98	42.33	2850725	43.61
2004	SJ	U	41-60 fa	Spotted Ratfish	<i>Hydrologus collicei</i>	unsexed	925.98	58.13	1505030	49.16
2004	SJ	U	41-60 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	1.16	66.88	100217	79.06

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								Estimate Coefficient of Variation		
2004	SJ	U	41-60 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.07	100	2414	100
2004	SJ	U	41-60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	3.57	89.45	112232	92.19
2004	SJ	U	41-60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	49.33	75.94	13257	76.59
2004	SJ	U	41-60 fa	Tadpole Sculpin	<i>Psychrolutes paradoxus</i>	unsexed	0.03	100	2808	100
2004	SJ	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	1.95	100	5211	100
2004	SJ	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	0.90	72.14	8708	71.47
2004	SJ	U	41-60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	55.62	34.44	1151889	48.71
2004	SJ	U	41-60 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	0.08	100	2605	100
2004	SJ	U	41-60 fa	Yellow-leg Pandalid	<i>Pandalus tridens</i>	unsexed	0.11	100	16901	100
2004	SJ	V	>60 fa	Alaskan Pink Shrimp	<i>Pandalus eos</i>	unsexed	3.79	85.06	694871	85.72
2004	SJ	V	>60 fa	Aluminum	<i>Aluminum</i>	unsexed	155.44	100	1554	100
2004	SJ	V	>60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	4.16	51.2	15918	46.22
2004	SJ	V	>60 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	16.39	46.86	82140	48.38
2004	SJ	V	>60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	116.45	54.9	26734	36.64
2004	SJ	V	>60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	0.08	100	1659	100
2004	SJ	V	>60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.05	53.14	5088	53.14
2004	SJ	V	>60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	0.42	73.47	5984	68.66
2004	SJ	V	>60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	27.49	61.84	99013	67.88
2004	SJ	V	>60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.50	84.37	246627	86.81
2004	SJ	V	>60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	10.09	61.2	1284335	60.98
2004	SJ	V	>60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	34.77	26.31	359186	35.34
2004	SJ	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	male	1.44	100	1655	100
2004	SJ	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	female	5.30	100	9929	100
2004	SJ	V	>60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	141.82	33.23	668422	35.94
2004	SJ	V	>60 fa	Fishing gear	<i>Fishing gear</i>	unsexed	3.42	100	1881	100
2004	SJ	V	>60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	1.16	77.83	6729	78.57
2004	SJ	V	>60 fa	Ghost Sand Shrimp	<i>Neotrypaea californiensis</i>	unsexed	0.01	100	1698	100
2004	SJ	V	>60 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	6.70	100	1170916	100
2004	SJ	V	>60 fa	Giant Pacific Octopus	<i>Enteroctopus dofleini</i>	unsexed	7.73	100	1652	100
2004	SJ	V	>60 fa	Glassy Tunicate	<i>Ascidia paratropa</i>	unsexed	0.15	100	3310	100
2004	SJ	V	>60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.15	80.79	11401	75.69
2004	SJ	V	>60 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.23	79.76	30053	81.77
2004	SJ	V	>60 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	16.48	88.62	28183	88.15
2004	SJ	V	>60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	104.46	51.33	1008886	41.41
2004	SJ	V	>60 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.69	58.41	15525	59.67
2004	SJ	V	>60 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.03	100	5091	100
2004	SJ	V	>60 fa	Krill uniden.	<i>Order Euphausiacea</i>	unsexed	0.00	100	4964	100
2004	SJ	V	>60 fa	Lampshell Brachiopod	<i>Terebratalia transversa</i>	unsexed	0.02	100	1652	100
2004	SJ	V	>60 fa	Leafy Hornmouth	<i>Ceratostoma foliatum</i>	unsexed	0.04	100	1881	100
2004	SJ	V	>60 fa	Limpet uniden.	<i>Patellogastropoda</i>	unsexed	0.01	100	1602	100
2004	SJ	V	>60 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	4.40	100	1018	100
2004	SJ	V	>60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	14.10	46.8	27805	44.22
2004	SJ	V	>60 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.91	98.02	29892	94.06
2004	SJ	V	>60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	24.53	62.23	21802	43.37
2004	SJ	V	>60 fa	Marbled Snailfish	<i>Liparis dennyi</i>	unsexed	0.26	47.76	12112	50.9
2004	SJ	V	>60 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	207.99	45.62	28279	10.23

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								Estimate Coefficient of Variation		
2004	SJ	V	>60 fa	Metridium uniden.	Metridium sp.	unsexed	1.07	51.02	11602	49.72
2004	SJ	V	>60 fa	Mottled Anemone	Urticina crassicornis	unsexed	0.32	68.12	6322	76.37
2004	SJ	V	>60 fa	Northern Horse Mussel	Modiolus modiolus	unsexed	839.24	91.87	30269389	94.72
2004	SJ	V	>60 fa	Northern Sculpin	Icelinus borealis	unsexed	0.03	100	1659	100
2004	SJ	V	>60 fa	Northern Spearnose Poacher	Agonopsis vulsa	unsexed	0.33	100	9951	100
2004	SJ	V	>60 fa	Orangepeel Nudibranch	Tochuina tetrica	unsexed	0.02	100	1652	100
2004	SJ	V	>60 fa	Oregon Hairy Triton	Fusitriton oregonensis	unsexed	0.73	86.76	9894	84.13
2004	SJ	V	>60 fa	Other man-made debris	Other man-made debris	unsexed	16.39	100	1018	100
2004	SJ	V	>60 fa	Pacific Cod	Gadus macrocephalus	unsexed	4.52	77.69	7311	67.97
2004	SJ	V	>60 fa	Pacific Eulachon	Thaleichthys pacificus	unsexed	0.08	100	1881	100
2004	SJ	V	>60 fa	Pacific Hake	Merluccius productus	unsexed	16.80	92.68	31491	53.93
2004	SJ	V	>60 fa	Pacific Halibut	Hippoglossus stenolepis	unsexed	54.33	68.01	4240	69.84
2004	SJ	V	>60 fa	Pacific Herring	Clupea pallasi	unsexed	0.71	44.91	16656	42.07
2004	SJ	V	>60 fa	Pacific Lyre Crab	Hyas lyratus	unsexed	1.94	97.16	20790	87.48
2004	SJ	V	>60 fa	Pacific Sanddab	Citharichthys sordidus	unsexed	0.97	65.65	5962	54.63
2004	SJ	V	>60 fa	Pacific Staghorn Sculpin	Leptocottus armatus	unsexed	0.27	100	1698	100
2004	SJ	V	>60 fa	Pacific Tomcod	Microgadus proximus	unsexed	2.68	71.88	16592	89.56
2004	SJ	V	>60 fa	Pink Short-Spined Star	Pisaster brevispinus	unsexed	2.14	99.57	3494	67.95
2004	SJ	V	>60 fa	Plastic	Plastic	unsexed	0.02	100	1652	100
2004	SJ	V	>60 fa	Purple-ring Topsnail	Callistoma annulatum	unsexed	0.01	100	3317	100
2004	SJ	V	>60 fa	Pygmy Rock Crab	Cancer oregonensis	unsexed	0.06	100	16585	100
2004	SJ	V	>60 fa	Rainbow Star	Orthasterias koehleri	unsexed	3.26	100	3109	100
2004	SJ	V	>60 fa	Red Octopus	Octopus rubescens	unsexed	0.48	86.62	3260	67.95
2004	SJ	V	>60 fa	Red Sea Urchin	Strongylocentrotus franciscanus	unsexed	13.57	63.68	22256	53.34
2004	SJ	V	>60 fa	Redstripe Rockfish	Sebastodes proriger	unsexed	0.82	34.28	12470	34.03
2004	SJ	V	>60 fa	Rex Sole	Glyptocephalus zachirus	unsexed	59.85	31.25	2098629	47.17
2004	SJ	V	>60 fa	Rose Star	Crossaster papposus	unsexed	1.21	51.02	9727	46.89
2004	SJ	V	>60 fa	Sand Rose Anemone	Urticina columbiana	unsexed	0.12	100	1655	100
2004	SJ	V	>60 fa	Sandpaper Skate	Bathyraja kincaidi	unsexed	2.70	100	5095	100
2004	SJ	V	>60 fa	Sea anemone uniden.	Order Actiniaria	unsexed	0.21	100	1652	100
2004	SJ	V	>60 fa	Sea mouse uniden.	Family Aphroditidae	unsexed	0.85	100	2587	100
2004	SJ	V	>60 fa	Shiner Perch	Cymatogaster aggregata	unsexed	0.02	100	1774	100
2004	SJ	V	>60 fa	Shortscale Eualid	Eualus suckleyi	unsexed	0.00	100	3394	100
2004	SJ	V	>60 fa	Sidestriped Shrimp	Pandalus dispar	unsexed	13.13	59.56	1310851	61.33
2004	SJ	V	>60 fa	Sixgill Shark	Hexanchus griseus	unsexed	30.15	100	1659	100
2004	SJ	V	>60 fa	Slender Sole	Lyopsetta exilis	unsexed	3.61	69.74	88057	64.15
2004	SJ	V	>60 fa	Slime Star	Pteraster tesselatus	unsexed	44.14	37.02	97697	31.63
2004	SJ	V	>60 fa	Smooth Alligatorfish	Anoplagonus inermis	unsexed	0.01	100	1652	100
2004	SJ	V	>60 fa	Smooth Pink Scallop	Chlamys rubida	unsexed	100.94	76.03	4702256	75.47
2004	SJ	V	>60 fa	Southern Rock Sole	Lepidopsetta bilineata	unsexed	0.38	100	1652	100
2004	SJ	V	>60 fa	Spiny Dogfish	Squalus suckleyi	unsexed	581.41	36.06	310102	38.05
2004	SJ	V	>60 fa	Spiny Lebtheid	Lebbeus groenlandicus	unsexed	0.62	72.78	90293	85.45
2004	SJ	V	>60 fa	Spiny Pink Scallop	Chlamys hastata	unsexed	16.03	67.94	725564	69.26
2004	SJ	V	>60 fa	Spinyhead Sculpin	Dasyctonus setiger	unsexed	4.80	51.9	42105	51.98
2004	SJ	V	>60 fa	Sponge uniden.	Phylum Porifera	unsexed	0.04	100	1018	100
2004	SJ	V	>60 fa	Spot Prawn	Pandalus platyceros	unsexed	102.54	58.86	3158148	64.88

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass Estimate Coefficient of Variation		Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
2004	SJ	V	>60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	1752.40	20.44	4241544	24.51	
2004	SJ	V	>60 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	1.12	98.38	169208	98.92	
2004	SJ	V	>60 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.58	71.72	6623	77.18	
2004	SJ	V	>60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	54.95	40.5	18146	38.98	
2004	SJ	V	>60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	0.20	100	1655	100	
2004	SJ	V	>60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.16	100	3945	100	
2004	SJ	V	>60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	176.68	33.7	3075375	26	
2004	SJ	V	>60 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	0.05	100	4663	100	
2004	SJ	V	>60 fa	Widehand Hermit Crab	<i>Elassochirus tenuimanus</i>	unsexed	0.05	100	1602	100	
2005	CS	S	5-20 fa	Aluminum	<i>Aluminum</i>	unsexed	1.11	87.89	18422	70.37	
2005	CS	S	5-20 fa	Bay Pipefish	<i>Syngnathus leptorhynchus</i>	unsexed	0.01	100	3249	100	
2005	CS	S	5-20 fa	Big Skate	<i>Raja binoculata</i>	unsexed	4.78	80.66	34285	52.91	
2005	CS	S	5-20 fa	Big Skate egg case	<i>Raja binoculata egg case</i>	unsexed	3.29	73.25	9678	71.02	
2005	CS	S	5-20 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	1.96	89.62	62708	64.03	
2005	CS	S	5-20 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	1.19	50.45	54502	50.29	
2005	CS	S	5-20 fa	Brown Rockfish	<i>Sebastes auriculatus</i>	unsexed	7.18	51.63	81043	71.09	
2005	CS	S	5-20 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	11.73	78.17	68718	69.38	
2005	CS	S	5-20 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	7.50	65.44	88400	64.49	
2005	CS	S	5-20 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	3.39	76.04	302486	84.42	
2005	CS	S	5-20 fa	Cabezon	<i>Scorpaenichthys marmoratus</i>	unsexed	29.12	72.49	10321	72.16	
2005	CS	S	5-20 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	19.62	87.29	1081184	89.41	
2005	CS	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	943.04	68.02	831894	63.34	
2005	CS	S	5-20 fa	Clown Nudibranch	<i>Triopha catalinae</i>	unsexed	0.72	100	14405	100	
2005	CS	S	5-20 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	88.89	72.39	386650	69.27	
2005	CS	S	5-20 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	5.05	98.02	1470912	98.29	
2005	CS	S	5-20 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	22.95	74.85	35239	81.77	
2005	CS	S	5-20 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	6.09	74.15	2078001	69.18	
2005	CS	S	5-20 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.21	92.04	104988	84.9	
2005	CS	S	5-20 fa	Danas Blade Shrimp	<i>Spirontocaris lamellicornis</i>	unsexed	0.01	100	2992	100	
2005	CS	S	5-20 fa	Divaricate Nut Clam	<i>Aciella castrensis</i>	unsexed	19.09	100	19905987	100	
2005	CS	S	5-20 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	43.06	97.22	10383506	96.71	
2005	CS	S	5-20 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	0.45	92.88	12740	77.5	
2005	CS	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	male	633.70	41.86	1176942	46.12	
2005	CS	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	female	597.45	50.06	1516305	54.84	
2005	CS	S	5-20 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	482.02	44.48	2060657	35.61	
2005	CS	S	5-20 fa	False Ochre Star	<i>Evasterias troschelii</i>	unsexed	8.00	93.15	17397	82.68	
2005	CS	S	5-20 fa	Fishing gear	<i>Fishing gear</i>	unsexed	18.31	100	3241	100	
2005	CS	S	5-20 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	8.20	55.57	149472	64.6	
2005	CS	S	5-20 fa	Fried Egg Jellyfish	<i>Phacellophora camtschatica</i>	unsexed	2.09	100	15301	100	
2005	CS	S	5-20 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	49.87	77.09	53416	81.03	
2005	CS	S	5-20 fa	Glass	<i>Glass</i>	unsexed	42.90	62.13	112731	59.33	
2005	CS	S	5-20 fa	Glassy Tunicate	<i>Ascidia paratropa</i>	unsexed	1.04	70.83	6813	66.73	
2005	CS	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	female	3.83	53.67	52750	53.42	
2005	CS	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	male	20.54	66.71	184771	43.7	
2005	CS	S	5-20 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.07	100	14405	100	
2005	CS	S	5-20 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	146.00	62.54	236645	54.85	

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								Estimate		
2005	CS	S	5-20 fa	Green False Jingle	<i>Pododesmus macrochisma</i>	unsexed	0.29	100	14405	100
2005	CS	S	5-20 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	0.92	100	5100	100
2005	CS	S	5-20 fa	Hairy Crab	<i>Hapalogaster mertensii</i>	unsexed	0.19	100	19286	100
2005	CS	S	5-20 fa	Helmet Crab	<i>Telmessus cheiragonus</i>	unsexed	3.23	97.96	46207	93.03
2005	CS	S	5-20 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.26	94.64	9965	70.09
2005	CS	S	5-20 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.03	100	9748	100
2005	CS	S	5-20 fa	Idotea uniden.	<i>Idotea sp.</i>	unsexed	0.25	100	11993	100
2005	CS	S	5-20 fa	Jointed Tube Worm	<i>Spiochaetopterus costarum</i>	unsexed	13.52	100	3249	100
2005	CS	S	5-20 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	8.07	100	14405	100
2005	CS	S	5-20 fa	Leafy Hornmouth	<i>Ceratostoma foliatum</i>	unsexed	0.31	100	10201	100
2005	CS	S	5-20 fa	Lewis's Moon Snail	<i>Euspira lewisi</i>	unsexed	1.46	100	3941	100
2005	CS	S	5-20 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	8.33	74.95	32424	80.42
2005	CS	S	5-20 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	11.06	100	12857	100
2005	CS	S	5-20 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.48	55.05	62472	53.75
2005	CS	S	5-20 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	9.41	80.64	51406	77.62
2005	CS	S	5-20 fa	Longnose Skate egg case	<i>Raja rhina</i> egg case	unsexed	0.99	86.39	15243	79.2
2005	CS	S	5-20 fa	Marine vegetation	Marine vegetation	unsexed	10377.80	88.69	145258	49.39
2005	CS	S	5-20 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	1178.61	71.06	1672784	66.57
2005	CS	S	5-20 fa	Miscellaneous material		unsexed	222.08	69.3	24958	66.73
2005	CS	S	5-20 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	1.54	100	3277	100
2005	CS	S	5-20 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	3.67	82.25	73868	78.66
2005	CS	S	5-20 fa	Northern Kelp Crab	<i>Pugettia producta</i>	unsexed	0.32	100	12857	100
2005	CS	S	5-20 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	21.65	90.14	70954	85.83
2005	CS	S	5-20 fa	Nuttall Cockle	<i>Clinocardium nuttallii</i>	unsexed	0.99	100	11824	100
2005	CS	S	5-20 fa	Orange Burrowing Sea Cucumber	<i>Cucumaria miniata</i>	unsexed	1.14	100	28810	100
2005	CS	S	5-20 fa	Orange Sea Pen	<i>Ptilosarcus gurneyi</i>	unsexed	0.23	100	3249	100
2005	CS	S	5-20 fa	Other man-made debris	Other man-made debris	unsexed	77.34	94.11	28435	48.35
2005	CS	S	5-20 fa	Pacific Herring	<i>Clupea pallasi</i>	unsexed	8.16	65.04	752344	64.01
2005	CS	S	5-20 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.15	79.17	18209	82.11
2005	CS	S	5-20 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	48.81	65.57	386573	77.19
2005	CS	S	5-20 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	3.42	51.01	25395	41.67
2005	CS	S	5-20 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	8.87	56.39	465105	56.96
2005	CS	S	5-20 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	0.10	100	6499	100
2005	CS	S	5-20 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	37.68	49.68	16173	43.59
2005	CS	S	5-20 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	33.45	74.16	751943	59.22
2005	CS	S	5-20 fa	Plastic	Plastic	unsexed	26.95	61.85	59738	40.56
2005	CS	S	5-20 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.02	73.43	23381	68.88
2005	CS	S	5-20 fa	Red Brotula	<i>Brosmophycis marginata</i>	unsexed	1.02	100	3941	100
2005	CS	S	5-20 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	1.17	54.2	19509	56.79
2005	CS	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	male	74.69	39.77	210126	35.88
2005	CS	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	female	48.11	47.5	186663	41.01
2005	CS	S	5-20 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	0.06	100	6499	100
2005	CS	S	5-20 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.18	100	3536	100
2005	CS	S	5-20 fa	Rosy Tritonia	<i>Tritonia diomedea</i>	unsexed	5.07	94.44	43836	69.4
2005	CS	S	5-20 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	11.93	55.97	629497	59.46
2005	CS	S	5-20 fa	Saddleback Gunnel	<i>Pholis ornata</i>	unsexed	0.06	100	6429	100

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								Coefficient of Variation		
2005	CS	S	5-20 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.44	57.05	29785	53.02
2005	CS	S	5-20 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	102.29	76.06	513031	63.39
2005	CS	S	5-20 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	34.16	80.18	126560	80.93
2005	CS	S	5-20 fa	Sea Lemon	<i>Anisodoris nobilis</i>	unsexed	0.32	100	3249	100
2005	CS	S	5-20 fa	Sharpnose Crab	<i>Scyra acutifrons</i>	unsexed	0.29	100	14405	100
2005	CS	S	5-20 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	76.53	53.86	7195993	48.43
2005	CS	S	5-20 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.57	55.73	104595	62.56
2005	CS	S	5-20 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	414.92	44.23	1327369	40.86
2005	CS	S	5-20 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	19.06	55.21	816480	52.17
2005	CS	S	5-20 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	43.59	51.23	21788	47.92
2005	CS	S	5-20 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	4.54	100	91809	100
2005	CS	S	5-20 fa	Spinyhead Sculpin	<i>Dasyctonus setiger</i>	unsexed	0.58	100	12965	100
2005	CS	S	5-20 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	0.72	100	14405	100
2005	CS	S	5-20 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	0.03	100	3249	100
2005	CS	S	5-20 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	712.47	71.94	1673766	76.54
2005	CS	S	5-20 fa	Squid egg case	<i>Squid egg case</i>	unsexed	10.76	100	2541078	100
2005	CS	S	5-20 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	390.96	63.06	354021	57.75
2005	CS	S	5-20 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.43	81.78	11013	69.95
2005	CS	S	5-20 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	1.31	83.25	53920	54.49
2005	CS	S	5-20 fa	Striped Seaperch	<i>Embiotoca lateralis</i>	unsexed	0.46	100	10201	100
2005	CS	S	5-20 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.03	100	3249	100
2005	CS	S	5-20 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	1.01	100	29245	100
2005	CS	S	5-20 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	497.08	32.28	669822	32.39
2005	CS	S	5-20 fa	Sweet Potato Sea Cucumber	<i>Molpadia intermedia</i>	unsexed	1.06	100	7883	100
2005	CS	S	5-20 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	0.24	66.67	20969	67.52
2005	CS	S	5-20 fa	Three-section Tubeworm uniden.	<i>Phyllochaetopterus sp.</i>	unsexed	4.58	100	74959	100
2005	CS	S	5-20 fa	Tubesnout	<i>Aelorhynchus flavidus</i>	unsexed	0.03	100	3277	100
2005	CS	S	5-20 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.46	100	9831	100
2005	CS	S	5-20 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	7.16	60.12	465938	80.88
2005	CS	S	5-20 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	7.25	62.42	60821	70.6
2005	CS	T	21-40 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	0.75	100	131338	100
2005	CS	T	21-40 fa	Aluminum	Aluminum	unsexed	1.68	92.05	21972	81.16
2005	CS	T	21-40 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	0.20	100	1968	100
2005	CS	T	21-40 fa	Barnacle uniden.	<i>Order Thoracica</i>	unsexed	0.31	100	48722	100
2005	CS	T	21-40 fa	Big Skate egg case	<i>Raja binoculata egg case</i>	unsexed	4.49	100	13775	100
2005	CS	T	21-40 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	4.47	55.95	119873	57.18
2005	CS	T	21-40 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	0.35	52.37	20795	51.27
2005	CS	T	21-40 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.61	59.99	18310	72.29
2005	CS	T	21-40 fa	Bluebarred Prickleback	<i>Plectobranchus evides</i>	unsexed	0.06	100	3936	100
2005	CS	T	21-40 fa	Brown Rockfish	<i>Sebastes auriculatus</i>	unsexed	6.31	73.62	51771	70.08
2005	CS	T	21-40 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	44.38	72.73	292017	77.58
2005	CS	T	21-40 fa	Burrowing Anemone	<i>Pachycerianthus fimbriatus</i>	unsexed	0.04	100	3690	100
2005	CS	T	21-40 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	0.57	100	9839	100
2005	CS	T	21-40 fa	Cabezon	<i>Scorpaenichthys marmoratus</i>	unsexed	24.98	56.87	11419	57.35
2005	CS	T	21-40 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	1.03	62.14	30646	59.14
2005	CS	T	21-40 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	41.01	89.02	77541	88.96

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass Estimate Coefficient of Variation		Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Coefficient of Variation	Abundance Estimate		
2005	CS	T	21-40 fa	Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	unsexed	2.12	100	4076	100	
2005	CS	T	21-40 fa	Chiton uniden.	<i>Polyplacophora</i>	unsexed	0.04	100	3555	100	
2005	CS	T	21-40 fa	Clam uniden.	<i>Class Bivalvia</i>	unsexed	0.03	100	3480	100	
2005	CS	T	21-40 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	2.40	100	11071	100	
2005	CS	T	21-40 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	0.04	100	5903	100	
2005	CS	T	21-40 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.00	100	3480	100	
2005	CS	T	21-40 fa	Decorated Warbonnet	<i>Chiroliphis decoratus</i>	unsexed	0.06	100	5641	100	
2005	CS	T	21-40 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	4.87	85.63	610475	85.18	
2005	CS	T	21-40 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	18.56	61.24	464446	63.79	
2005	CS	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	male	25.53	55.59	31741	57.25	
2005	CS	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	female	131.07	57	278316	54.93	
2005	CS	T	21-40 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	238.03	38.03	2383232	48.17	
2005	CS	T	21-40 fa	False Ochre Star	<i>Evasterias troschelii</i>	unsexed	2.82	100	3480	100	
2005	CS	T	21-40 fa	Fat Blood Star	<i>Henricia sanguinolenta</i>	unsexed	0.11	100	5641	100	
2005	CS	T	21-40 fa	Fishing gear	<i>Fishing gear</i>	unsexed	17.77	97.34	13512	59.12	
2005	CS	T	21-40 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	11.90	94.91	121462	96.86	
2005	CS	T	21-40 fa	Fried Egg Jellyfish	<i>Phacellophora camtschatica</i>	unsexed	3.39	75.23	34699	66.69	
2005	CS	T	21-40 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	107.06	55.39	854805	67.35	
2005	CS	T	21-40 fa	Glass	<i>Glass</i>	unsexed	47.05	59.77	135189	55.54	
2005	CS	T	21-40 fa	Glassy Tunicate	<i>Ascidia paratropa</i>	unsexed	0.11	100	5641	100	
2005	CS	T	21-40 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	294.74	63.89	345252	51.98	
2005	CS	T	21-40 fa	Green False Jingle	<i>Pododesmus macrochisma</i>	unsexed	0.22	66.85	9451	69.5	
2005	CS	T	21-40 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	6.35	80.64	92304	77.92	
2005	CS	T	21-40 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	0.25	100	3555	100	
2005	CS	T	21-40 fa	Grunt Sculpin	<i>Rhamphocottus richardsoni</i>	unsexed	1.20	66.63	69291	63.2	
2005	CS	T	21-40 fa	Heart Crab	<i>Phylloolithodes papillosus</i>	unsexed	0.02	100	4076	100	
2005	CS	T	21-40 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.74	66.37	17326	55.03	
2005	CS	T	21-40 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.05	68.85	11561	71.91	
2005	CS	T	21-40 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	6.25	51.09	36720	60.43	
2005	CS	T	21-40 fa	Lampshell Brachiopod	<i>Terebratalia transversa</i>	unsexed	0.18	54.91	14872	59.12	
2005	CS	T	21-40 fa	Leafy Hornmouth	<i>Ceratostoma foliatum</i>	unsexed	0.01	100	5641	100	
2005	CS	T	21-40 fa	Leather Star	<i>Dermasterias imbricata</i>	unsexed	1.90	80.45	14444	53.61	
2005	CS	T	21-40 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	5.00	85.28	19797	84.58	
2005	CS	T	21-40 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	3.69	68.04	18905	70.16	
2005	CS	T	21-40 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	28.57	77.58	58885	69.42	
2005	CS	T	21-40 fa	Longspine Combfish	<i>Zanolepis latipinnis</i>	unsexed	0.42	75.54	7854	66.82	
2005	CS	T	21-40 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	56.72	37.07	34156	17.42	
2005	CS	T	21-40 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	369.75	47.87	548545	44.91	
2005	CS	T	21-40 fa	Miscellaneous material		unsexed	24.18	100	6678	100	
2005	CS	T	21-40 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	1.20	100	1968	100	
2005	CS	T	21-40 fa	Mosshead Sculpin	<i>Clinocottus globiceps</i>	unsexed	0.11	100	5641	100	
2005	CS	T	21-40 fa	Mottled Anemone	<i>Urticina crassicornis</i>	unsexed	0.03	100	3480	100	
2005	CS	T	21-40 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	39.33	83.62	500090	76.28	
2005	CS	T	21-40 fa	Northern Kelp Crab	<i>Pugettia producta</i>	unsexed	0.07	100	3555	100	
2005	CS	T	21-40 fa	Northern Rock Sole	<i>Lepidotretta polynyxstra</i>	unsexed	1.55	100	7381	100	
2005	CS	T	21-40 fa	Northern Ronquil	<i>Ronquilus jordani</i>	unsexed	1.03	47.17	27266	47.2	

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2005	CS	T	21-40 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	22.24	79.86	238332	81.35
2005	CS	T	21-40 fa	Other man-made debris	Other man-made debris	unsexed	5.01	55.91	19696	47.04
2005	CS	T	21-40 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	4.26	55.63	13118	58.05
2005	CS	T	21-40 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	1.49	57.99	23852	74.05
2005	CS	T	21-40 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	9.81	40.98	347780	51.51
2005	CS	T	21-40 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	144.81	57.01	1064307	58.98
2005	CS	T	21-40 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	1.62	56.93	11789	51.01
2005	CS	T	21-40 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	7.05	42.57	213304	42.52
2005	CS	T	21-40 fa	Padded Sculpin	<i>Artedius fenestralis</i>	unsexed	0.90	100	40755	100
2005	CS	T	21-40 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	6.44	79.89	246133	85.87
2005	CS	T	21-40 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	33.37	52.8	602417	56.84
2005	CS	T	21-40 fa	Plastic	Plastic	unsexed	0.48	78	17749	69.17
2005	CS	T	21-40 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	31.06	99.85	891788	99.74
2005	CS	T	21-40 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.15	64.44	17527	55.08
2005	CS	T	21-40 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	11.77	69.88	47529	73.08
2005	CS	T	21-40 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	1.52	100	5641	100
2005	CS	T	21-40 fa	Red anemone uniden.	<i>Urticina sp.</i>	unsexed	0.09	100	2986	100
2005	CS	T	21-40 fa	Red Irish Lord	<i>Hemilepidotus hemilepidotus</i>	unsexed	38.26	71.15	151032	78.86
2005	CS	T	21-40 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.45	85.71	5067	67.98
2005	CS	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	male	4.32	100	11071	100
2005	CS	T	21-40 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	214.09	88.98	2084747	89.1
2005	CS	T	21-40 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	9.52	44.59	160861	49.02
2005	CS	T	21-40 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	4.94	53.5	134451	53.81
2005	CS	T	21-40 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	2.55	50.02	123912	52.99
2005	CS	T	21-40 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.87	74.56	15917	67.32
2005	CS	T	21-40 fa	Salt and Pepper Sea Cucumber	<i>Cucumaria piperata</i>	unsexed	0.04	100	3690	100
2005	CS	T	21-40 fa	Sand Rose Anemone	<i>Urticina columbiana</i>	unsexed	2.80	100	6678	100
2005	CS	T	21-40 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	2.93	100	17710	100
2005	CS	T	21-40 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	18.38	100	48974	100
2005	CS	T	21-40 fa	Sharpnose Crab	<i>Scyra acutifrons</i>	unsexed	0.12	73.47	11886	73.47
2005	CS	T	21-40 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	30.46	81.19	2365475	77.69
2005	CS	T	21-40 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.01	100	6960	100
2005	CS	T	21-40 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	43.43	61.32	1139749	59.14
2005	CS	T	21-40 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.61	75.37	64157	72.21
2005	CS	T	21-40 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	1.03	78.66	30002	81.29
2005	CS	T	21-40 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.10	100	1968	100
2005	CS	T	21-40 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	165.60	45.75	1182483	55.46
2005	CS	T	21-40 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	1.64	86.62	55774	83.34
2005	CS	T	21-40 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	214.68	34.84	146314	51.78
2005	CS	T	21-40 fa	Spiny Lebtheid	<i>Lebbeus groenlandicus</i>	unsexed	0.03	100	10440	100
2005	CS	T	21-40 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	12.83	65.74	352458	64.5
2005	CS	T	21-40 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	0.94	79.57	7491	66.77
2005	CS	T	21-40 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	2.38	76.65	19000	49.36
2005	CS	T	21-40 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	109.01	79.84	5008818	72.19
2005	CS	T	21-40 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	4474.14	44.21	11582956	48.18
2005	CS	T	21-40 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	2.36	66.71	69865	69.59

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								Estimate Coefficient of Variation		
2005	CS	T	21-40 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.38	53.92	14322	53.85
2005	CS	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	1.61	87.39	40947	76.47
2005	CS	T	21-40 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	18.42	65.96	28851	46.81
2005	CS	T	21-40 fa	Sweet Potato Sea Cucumber	<i>Molpadiida intermedia</i>	unsexed	0.08	100	4076	100
2005	CS	T	21-40 fa	Threadfin Sculpin	<i>Icelinus filamentosus</i>	unsexed	0.24	100	3480	100
2005	CS	T	21-40 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	1.31	44.72	60986	59.15
2005	CS	T	21-40 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	15.46	42.1	279921	31.95
2005	CS	T	21-40 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	4.73	90.61	185948	93.08
2005	CS	T	21-40 fa	White Sea Cucumber	<i>Eupentacta quinquesemita</i>	unsexed	0.07	100	6960	100
2005	CS	U	41-60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	0.90	85.5	182235	80.96
2005	CS	U	41-60 fa	Aluminum	<i>Aluminum</i>	unsexed	0.78	100	11484	100
2005	CS	U	41-60 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.34	71.68	17494	72.4
2005	CS	U	41-60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	0.52	100	4812	100
2005	CS	U	41-60 fa	Barnacle uniden.	<i>Order Thoracica</i>	unsexed	2.53	100	217375	100
2005	CS	U	41-60 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	0.87	61.9	6595	61.5
2005	CS	U	41-60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	2.21	100	15639	100
2005	CS	U	41-60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	9.33	65.33	232717	64.74
2005	CS	U	41-60 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	0.03	100	4594	100
2005	CS	U	41-60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	3.45	87.46	116098	82.92
2005	CS	U	41-60 fa	Brown Rockfish	<i>Sebastodes auriculatus</i>	unsexed	2.30	45.74	14344	48.81
2005	CS	U	41-60 fa	Buffalo Sculpin	<i>Enophrysbison</i>	unsexed	7.36	76.28	41397	82.36
2005	CS	U	41-60 fa	Cabezon	<i>Scorpaenichthys marmoratus</i>	unsexed	26.24	68.42	6895	68.53
2005	CS	U	41-60 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.01	100	1424	100
2005	CS	U	41-60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	23.96	49.61	46437	46.72
2005	CS	U	41-60 fa	Cloud Sponge	<i>Aphrocallistes vastus</i>	unsexed	2.73	67.27	4146	52.8
2005	CS	U	41-60 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	0.46	100	1315	100
2005	CS	U	41-60 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	4.24	100	2986	100
2005	CS	U	41-60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.03	100	6393	100
2005	CS	U	41-60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	30.65	35.6	4073269	36.42
2005	CS	U	41-60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	7.59	36.37	72517	28.97
2005	CS	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	male	25.98	46.71	28947	46.01
2005	CS	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	female	45.59	52.19	84935	53.21
2005	CS	U	41-60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	149.53	58.92	1002229	65.12
2005	CS	U	41-60 fa	False Ochre Star	<i>Evasterias troschelii</i>	unsexed	2.38	100	1315	100
2005	CS	U	41-60 fa	Fishing gear	<i>Fishing gear</i>	unsexed	8.33	99.62	3771	69.58
2005	CS	U	41-60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	1.90	60.18	12676	54.39
2005	CS	U	41-60 fa	Fried Egg Jellyfish	<i>Phacellophora camtschatica</i>	unsexed	4.95	68.15	10720	68.84
2005	CS	U	41-60 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	3.13	91.85	27230	94.4
2005	CS	U	41-60 fa	Giant Pacific Octopus	<i>Enteroctopus dofleini</i>	unsexed	0.46	100	1444	100
2005	CS	U	41-60 fa	Glass	<i>Glass</i>	unsexed	16.81	83.9	26609	79.02
2005	CS	U	41-60 fa	Glassy Tunicate	<i>Ascidia paratropa</i>	unsexed	0.73	43.38	13302	44.29
2005	CS	U	41-60 fa	Graceful Crab	<i>Cancer gracilis</i>	male	0.09	100	1424	100
2005	CS	U	41-60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.01	100	1317	100
2005	CS	U	41-60 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	57.84	39.52	100792	41.5
2005	CS	U	41-60 fa	Green False Jingle	<i>Pododesmus macrochisma</i>	unsexed	0.28	48.98	7916	46.36
2005	CS	U	41-60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	71.82	36.23	764061	29.06

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								Estimate		
2005	CS	U	41-60 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	0.21	70.42	3908	72.33
2005	CS	U	41-60 fa	Hermit crabs uniden.	Paguridae	unsexed	0.85	84.59	11579	78.69
2005	CS	U	41-60 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.03	56.94	3922	52.71
2005	CS	U	41-60 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	0.00	100	1493	100
2005	CS	U	41-60 fa	Jellyfish uniden.	Class Scyphozoa	unsexed	0.06	100	1289	100
2005	CS	U	41-60 fa	Lampshell Brachiopod	<i>Terebratula transversa</i>	unsexed	0.03	100	1317	100
2005	CS	U	41-60 fa	Leafy Hornmouth	<i>Ceratostoma foliatum</i>	unsexed	2.15	36.02	47419	36.47
2005	CS	U	41-60 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	7.02	87.19	4039	52.8
2005	CS	U	41-60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	5.27	67.7	12205	67.73
2005	CS	U	41-60 fa	Lobed Tunicate	<i>Cystodytes lobatus</i>	unsexed	0.37	73.22	6390	80.82
2005	CS	U	41-60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	14.43	44.5	122849	73.17
2005	CS	U	41-60 fa	Marbled Snailfish	<i>Liparis dennyi</i>	unsexed	0.06	100	2887	100
2005	CS	U	41-60 fa	Marine vegetation	Marine vegetation	unsexed	597.35	86.17	19489	28.09
2005	CS	U	41-60 fa	Metridium uniden.	Metridium sp.	unsexed	101.26	53.97	336982	40.77
2005	CS	U	41-60 fa	Milky Venus	<i>Compsomyax subdiaphana</i>	unsexed	0.07	100	1444	100
2005	CS	U	41-60 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	0.07	69.29	2633	67.7
2005	CS	U	41-60 fa	Mottled Anemone	<i>Urticina crassicornis</i>	unsexed	1.22	69.33	13951	71.59
2005	CS	U	41-60 fa	Northern Anchovy	<i>Engraulis mordax</i>	unsexed	0.06	57.9	7138	64.14
2005	CS	U	41-60 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	440.70	44.29	6673347	41.37
2005	CS	U	41-60 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	1.22	70	4166	72.9
2005	CS	U	41-60 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	0.15	44.52	9560	40.11
2005	CS	U	41-60 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	6.08	43.06	173608	42.77
2005	CS	U	41-60 fa	Odhner's Dorid	<i>Archidoris odhneri</i>	unsexed	0.20	68.75	2741	67.76
2005	CS	U	41-60 fa	Orange Burrowing Sea Cucumber	<i>Cucumaria miniata</i>	unsexed	0.20	100	1444	100
2005	CS	U	41-60 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	10.90	51.79	110800	52.39
2005	CS	U	41-60 fa	Other man-made debris	Other man-made debris	unsexed	1.07	100	3445	100
2005	CS	U	41-60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	16.14	45.04	40060	48.03
2005	CS	U	41-60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	0.04	100	2848	100
2005	CS	U	41-60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	24.75	76.72	288333	85.53
2005	CS	U	41-60 fa	Pacific Herring	<i>Clupea pallasi</i>	unsexed	0.80	75.02	17931	68.6
2005	CS	U	41-60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	12.08	73.79	53320	73.36
2005	CS	U	41-60 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	1.03	100	4812	100
2005	CS	U	41-60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	6.78	43.6	169965	44.54
2005	CS	U	41-60 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	8.17	69.11	2739	67.76
2005	CS	U	41-60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	25.65	66.79	216145	58.94
2005	CS	U	41-60 fa	Plastic	Plastic	unsexed	0.58	94.8	27837	94.59
2005	CS	U	41-60 fa	Polychaete worm uniden.	Class Polychaeta	unsexed	2.78	100	1424	100
2005	CS	U	41-60 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	15.70	97.32	370597	96.86
2005	CS	U	41-60 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.03	55.77	6695	55.77
2005	CS	U	41-60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	25.23	41.22	38309	40.07
2005	CS	U	41-60 fa	Red Brotula	<i>Brosmophycis marginata</i>	unsexed	0.57	100	2297	100
2005	CS	U	41-60 fa	Red Irish Lord	<i>Hemilepidotus hemilepidotus</i>	unsexed	59.88	51.38	148237	60.63
2005	CS	U	41-60 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.31	70.33	2426	67.81
2005	CS	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	female	5.50	43.98	34062	41.66
2005	CS	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	male	13.42	41.56	34160	41.73
2005	CS	U	41-60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	24.20	43.67	19753	34.65

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2005	CS	U	41-60 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	17.09	56.33	127560	61.64
2005	CS	U	41-60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	15.25	65.11	242808	68.6
2005	CS	U	41-60 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	0.35	89.29	10228	88.04
2005	CS	U	41-60 fa	Ringed Lucine	<i>Lucinoma annulata</i>	unsexed	0.11	100	1317	100
2005	CS	U	41-60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.16	54.02	3797	52.75
2005	CS	U	41-60 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.60	68.35	11943	67.99
2005	CS	U	41-60 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.46	61.45	9567	63.13
2005	CS	U	41-60 fa	Salt and Pepper Sea Cucumber	<i>Cucumaria piperata</i>	unsexed	0.03	100	1444	100
2005	CS	U	41-60 fa	Sand Rose Anemone	<i>Urticina columbiana</i>	unsexed	0.37	62.04	3888	52.97
2005	CS	U	41-60 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	0.82	100	2406	100
2005	CS	U	41-60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	3.74	67.74	29718	85.09
2005	CS	U	41-60 fa	Sea anemone uniden.	Order Actiniaria	unsexed	0.14	100	1424	100
2005	CS	U	41-60 fa	Sea cucumber uniden.	Class Holothuroidea	unsexed	0.01	100	5697	100
2005	CS	U	41-60 fa	Sea mouse uniden.	Family Aphroditidae	unsexed	0.16	100	1148	100
2005	CS	U	41-60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.09	58.7	4872	56.6
2005	CS	U	41-60 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.03	82.19	21477	89.05
2005	CS	U	41-60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	0.10	100	13781	100
2005	CS	U	41-60 fa	Sixgill Shark	<i>Hexanchus griseus</i>	unsexed	221.20	100	1475	100
2005	CS	U	41-60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	10.59	70.84	190475	61.95
2005	CS	U	41-60 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	2.88	93.03	10020	85.33
2005	CS	U	41-60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	15.67	44.11	486612	46.48
2005	CS	U	41-60 fa	Snailfish uniden.	<i>Liparis</i>	unsexed	0.09	74.42	5185	76.77
2005	CS	U	41-60 fa	Southern Rock Sole	<i>Lepidotetta bilineata</i>	unsexed	5.51	32.86	12946	28.62
2005	CS	U	41-60 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	0.03	67.7	2968	67.7
2005	CS	U	41-60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	317.01	51.77	591590	76.24
2005	CS	U	41-60 fa	Spiny Lebtheid	<i>Lebbeus groenlandicus</i>	unsexed	0.83	36.4	189929	37.23
2005	CS	U	41-60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	81.62	43.59	1900408	42.13
2005	CS	U	41-60 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	0.38	71	7752	81.52
2005	CS	U	41-60 fa	Spinyhead Sculpin	<i>Dasyctonus setiger</i>	unsexed	0.28	100	1315	100
2005	CS	U	41-60 fa	Sponge uniden.	Phylum Porifera	unsexed	0.08	100	1279	100
2005	CS	U	41-60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	1.97	63.37	110375	64.58
2005	CS	U	41-60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	10273.35	14.33	24310581	14.79
2005	CS	U	41-60 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei egg case</i>	unsexed	0.12	41.15	9814	47.17
2005	CS	U	41-60 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	87.88	100	66167	100
2005	CS	U	41-60 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	1.03	45.75	17213	46.65
2005	CS	U	41-60 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.33	72.58	2790	67.83
2005	CS	U	41-60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.06	100	1203	100
2005	CS	U	41-60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	15.43	55.64	22707	69.6
2005	CS	U	41-60 fa	Sweet Potato Sea Cucumber	<i>Molpadija intermedia</i>	unsexed	0.01	100	1148	100
2005	CS	U	41-60 fa	Threadfin Sculpin	<i>Icelinus filamentosus</i>	unsexed	0.39	68.4	2633	67.7
2005	CS	U	41-60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.92	43.19	15041	34.65
2005	CS	U	41-60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	66.59	17.95	1438710	23.65
2005	CS	U	41-60 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	0.09	68.09	2518	67.78
2005	CS	U	41-60 fa	White Sea Cucumber	<i>Eupentacta quinquesemita</i>	unsexed	0.20	93.39	31988	91.62
2005	CS	V	>60 fa	Alaskan Pink Shrimp	<i>Pandalus eos</i>	unsexed	0.16	49.34	35014	47.4
2005	CS	V	>60 fa	Aluminum	<i>Aluminum</i>	unsexed	0.58	45.72	27259	44.85

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								Estimate		
2005	CS	V	>60 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	1.34	100	7716	100
2005	CS	V	>60 fa	Axe Yoldia	<i>Megayoldia thraciaeformis</i>	unsexed	0.05	100	5447	100
2005	CS	V	>60 fa	Bering Eelpout	<i>Lycodes beringi</i>	unsexed	1.31	62.77	29323	62.72
2005	CS	V	>60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	406.25	53.42	38987	58.09
2005	CS	V	>60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	1.56	100	20311	100
2005	CS	V	>60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.18	76.88	12771	70.76
2005	CS	V	>60 fa	Blue Mud Shrimp	<i>Upogebia pugettensis</i>	unsexed	0.01	100	2572	100
2005	CS	V	>60 fa	Brown Cat Shark	<i>Apristurus brunneus</i>	unsexed	1.88	68.9	5257	67.72
2005	CS	V	>60 fa	Brown Rockfish	<i>Sebastes auriculatus</i>	unsexed	10.58	67.79	32046	72.87
2005	CS	V	>60 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	3.94	44.69	57359	39.36
2005	CS	V	>60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	3.81	70.71	15798	69.41
2005	CS	V	>60 fa	Clam uniden.	<i>Class Bivalvia</i>	unsexed	0.25	100	13696	100
2005	CS	V	>60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.00	100	2572	100
2005	CS	V	>60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	1.47	100	230057	100
2005	CS	V	>60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	215.90	18.23	1061594	21.22
2005	CS	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	male	36.89	52.31	51832	49.92
2005	CS	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	female	127.02	41.55	230308	42.36
2005	CS	V	>60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	3374.35	25.52	15521917	21.72
2005	CS	V	>60 fa	False Ochre Star	<i>Easterias troschelii</i>	unsexed	0.09	100	3127	100
2005	CS	V	>60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	0.59	67.7	8093	71.85
2005	CS	V	>60 fa	Fried Egg Jellyfish	<i>Phacellophora camtschatica</i>	unsexed	14.73	100	54466	100
2005	CS	V	>60 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	68.33	100	432507	100
2005	CS	V	>60 fa	Glass	<i>Glass</i>	unsexed	45.21	52.15	96303	51.07
2005	CS	V	>60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	176.75	51.81	1365733	51.06
2005	CS	V	>60 fa	Heart Urchin	<i>Briaster latifrons</i>	unsexed	54.90	79.58	420806	81.55
2005	CS	V	>60 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	1.65	55.59	42165	55.37
2005	CS	V	>60 fa	Lampshell Brachiopod	<i>Terebratula transversa</i>	unsexed	0.19	67.73	18746	67.71
2005	CS	V	>60 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	40.23	72.07	20101	72.77
2005	CS	V	>60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	0.16	100	5370	100
2005	CS	V	>60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	253.80	31.89	312622	19.84
2005	CS	V	>60 fa	Marbled Snailfish	<i>Liparis dennyi</i>	unsexed	0.06	100	3102	100
2005	CS	V	>60 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	1046.40	78.92	47722	24.84
2005	CS	V	>60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	278.66	32.29	1308131	35.39
2005	CS	V	>60 fa	Miscellaneous material		unsexed	192.22	82.1	52888	40.77
2005	CS	V	>60 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	3.32	66.51	28256	55.21
2005	CS	V	>60 fa	Mottled Anemone	<i>Urticina crassicornis</i>	unsexed	0.48	69.72	14145	72.42
2005	CS	V	>60 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	2598.80	69.26	50068821	68.2
2005	CS	V	>60 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	6.18	90.58	58520	79.74
2005	CS	V	>60 fa	Other man-made debris	<i>Other man-made debris</i>	unsexed	216.28	94.45	36541	60.66
2005	CS	V	>60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	46.90	50.87	102299	47.39
2005	CS	V	>60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	173.73	23.82	977360	22.9
2005	CS	V	>60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	0.62	100	2809	100
2005	CS	V	>60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	0.96	67.73	23078	69.08
2005	CS	V	>60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	2.92	56.93	45323	56.64
2005	CS	V	>60 fa	Plastic	<i>Plastic</i>	unsexed	7.75	84.13	32528	63.12
2005	CS	V	>60 fa	Polychaete worm uniden.	<i>Class Polychaeta</i>	unsexed	0.25	79.54	12841	80.11

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								Coefficient of Variation	Abundance Estimate (number of individuals)		
2005	CS	V	>60 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.02	100	4601	100	
2005	CS	V	>60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	28.23	41.55	40461	42.63	
2005	CS	V	>60 fa	Red Brotula	<i>Brosmophycis marginata</i>	unsexed	0.63	100	3127	100	
2005	CS	V	>60 fa	Red Irish Lord	<i>Hemilepidotus hemilepidotus</i>	unsexed	5.80	100	18405	100	
2005	CS	V	>60 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.14	100	2723	100	
2005	CS	V	>60 fa	Red Rock Crab	<i>Cancer productus</i>	male	0.98	100	2809	100	
2005	CS	V	>60 fa	Red Rock Crab	<i>Cancer productus</i>	female	1.96	100	5447	100	
2005	CS	V	>60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	5.38	100	4601	100	
2005	CS	V	>60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	92.69	21.83	866065	24.34	
2005	CS	V	>60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.22	100	6204	100	
2005	CS	V	>60 fa	Roughback Sculpin	<i>Chitonotus pugensis</i>	unsexed	0.14	100	4601	100	
2005	CS	V	>60 fa	Sablefish	<i>Anoplopoma fimbria</i>	unsexed	1.24	100	3102	100	
2005	CS	V	>60 fa	Sand Rose Anemone	<i>Urticina columbiana</i>	unsexed	0.68	100	10156	100	
2005	CS	V	>60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	244.12	48.85	613826	50.84	
2005	CS	V	>60 fa	Scale Worm uniden.	Family Polynoidae	unsexed	0.02	100	3127	100	
2005	CS	V	>60 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.05	67.72	28856	67.89	
2005	CS	V	>60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	0.66	51.39	83775	49.14	
2005	CS	V	>60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	28.11	47.45	619252	49.77	
2005	CS	V	>60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	2.43	95.89	60387	94.53	
2005	CS	V	>60 fa	Snailfish uniden.	<i>Liparis</i>	unsexed	0.32	100	18405	100	
2005	CS	V	>60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	175.80	44.06	197022	38.59	
2005	CS	V	>60 fa	Spiny Lebtheid	<i>Lebbeus groenlandicus</i>	unsexed	0.18	100	32208	100	
2005	CS	V	>60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	0.28	100	23006	100	
2005	CS	V	>60 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	4.01	69.47	21951	68.38	
2005	CS	V	>60 fa	Sponge uniden.	Phylum Porifera	unsexed	1.29	100	4601	100	
2005	CS	V	>60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	0.25	100	13696	100	
2005	CS	V	>60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	21523.38	16.29	59127816	17.66	
2005	CS	V	>60 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei egg case</i>	unsexed	0.34	100	43781	100	
2005	CS	V	>60 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	6.67	50.13	99743	43.64	
2005	CS	V	>60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	58.69	51.44	35873	44.96	
2005	CS	V	>60 fa	Sweet Potato Sea Cucumber	<i>Molpadija intermedia</i>	unsexed	19.18	93.44	146743	84.84	
2005	CS	V	>60 fa	Three-section Tubeworm uniden.	<i>Phyllochaetopterus sp.</i>	unsexed	0.28	100	3127	100	
2005	CS	V	>60 fa	Tunicate uniden.	Subphylum Tunicata	unsexed	0.74	100	36809	100	
2005	CS	V	>60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	13.87	46.34	330822	41.93	
2005	CS	V	>60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	86.47	34.7	526539	41.07	
2005	CS	V	>60 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	0.89	100	6404	100	
2005	CS	V	>60 fa	Weathervane Scallop	<i>Patinopecten caurinus</i>	unsexed	1.73	100	24653	100	
2005	HC	S	5-20 fa	Aluminum	Aluminum	unsexed	1.10	79.2	20392	59.4	
2005	HC	S	5-20 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.09	100	3429	100	
2005	HC	S	5-20 fa	Bay Goby	<i>Lepidogobius lepidus</i>	unsexed	0.03	100	6859	100	
2005	HC	S	5-20 fa	Big Skate	<i>Raja binoculata</i>	unsexed	45.17	70.81	29442	66.8	
2005	HC	S	5-20 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	15.28	91.6	476755	91.48	
2005	HC	S	5-20 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.05	100	2746	100	
2005	HC	S	5-20 fa	Brown Rockfish	<i>Sebastes auriculatus</i>	unsexed	1.20	100	3429	100	
2005	HC	S	5-20 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	0.51	100	1412	100	
2005	HC	S	5-20 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	38.37	98.47	615656	98.47	

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass Estimate Coefficient of Variation		Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
2005	HC	S	5-20 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	0.10	100	5144	100	
2005	HC	S	5-20 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.18	68.07	8387	67.67	
2005	HC	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	3.48	100	3429	100	
2005	HC	S	5-20 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	1.74	68.17	10204	51.3	
2005	HC	S	5-20 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.88	99.48	305556	98.6	
2005	HC	S	5-20 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.01	100	1715	100	
2005	HC	S	5-20 fa	Divaricate Nut Clam	<i>Acila castrensis</i>	unsexed	0.04	100	7863	100	
2005	HC	S	5-20 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.02	100	1621	100	
2005	HC	S	5-20 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	4.30	55.52	63566	57.47	
2005	HC	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	male	170.76	28.26	263594	29.14	
2005	HC	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	female	134.46	30.52	320971	32.79	
2005	HC	S	5-20 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	910.90	27.36	10074037	24.36	
2005	HC	S	5-20 fa	Fishing gear	<i>Fishing gear</i>	unsexed	13.15	78.85	6028	55.67	
2005	HC	S	5-20 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	5.96	98.92	40851	96.11	
2005	HC	S	5-20 fa	Fried Egg Jellyfish	<i>Phacellophora camtschatica</i>	unsexed	140.18	91.82	509276	91.5	
2005	HC	S	5-20 fa	Ghost Sand Shrimp	<i>Neotrypaea californiensis</i>	unsexed	0.60	100	32580	100	
2005	HC	S	5-20 fa	Glass	Glass	unsexed	17.65	63.87	43141	72.71	
2005	HC	S	5-20 fa	Glassy Tunicate	<i>Ascidia paratropa</i>	unsexed	0.04	100	3764	100	
2005	HC	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	female	0.36	66.24	3680	65.67	
2005	HC	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	male	3.71	59.57	31909	56.43	
2005	HC	S	5-20 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.03	100	1715	100	
2005	HC	S	5-20 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	9.14	71.16	17761	64.3	
2005	HC	S	5-20 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.35	100	1412	100	
2005	HC	S	5-20 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	2.62	100	6859	100	
2005	HC	S	5-20 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	11.27	51.79	19226	52.28	
2005	HC	S	5-20 fa	Longfin Smelt	<i>Spirinchus thaleichthys</i>	unsexed	0.02	100	1715	100	
2005	HC	S	5-20 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	15.50	64.01	13346	54.85	
2005	HC	S	5-20 fa	Longspine Combfish	<i>Zanolepis latipinnis</i>	unsexed	1.06	53.24	15137	54.35	
2005	HC	S	5-20 fa	Marine vegetation	Marine vegetation	unsexed	429.78	67.99	12163	33.06	
2005	HC	S	5-20 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	247.64	59.08	411467	62.02	
2005	HC	S	5-20 fa	Miscellaneous material		unsexed	12.64	79.01	6509	66.52	
2005	HC	S	5-20 fa	Northern Anchovy	<i>Engraulis mordax</i>	unsexed	0.05	100	1621	100	
2005	HC	S	5-20 fa	Northern Rock Sole	<i>Lepidotsetta polyxystra</i>	unsexed	1.33	77.03	4032	66.43	
2005	HC	S	5-20 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	0.05	100	5491	100	
2005	HC	S	5-20 fa	Orange Sea Pen	<i>Ptilosarcus gurneyi</i>	unsexed	0.05	100	1715	100	
2005	HC	S	5-20 fa	Other man-made debris	Other man-made debris	unsexed	1.27	70.74	9519	84.33	
2005	HC	S	5-20 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	0.51	100	5897	100	
2005	HC	S	5-20 fa	Pacific Herring	<i>Clupea pallasi</i>	unsexed	19.86	56.25	1122797	57.96	
2005	HC	S	5-20 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	90.65	30.42	700051	34.57	
2005	HC	S	5-20 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	22.89	85.61	263767	76.49	
2005	HC	S	5-20 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	1.87	95.89	52044	95.01	
2005	HC	S	5-20 fa	Pile Perch	<i>Rhacocheilus vacca</i>	unsexed	0.08	100	2824	100	
2005	HC	S	5-20 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	6.45	68.06	15751	91.88	
2005	HC	S	5-20 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	154.89	51.11	3389437	52.19	
2005	HC	S	5-20 fa	Plastic	Plastic	unsexed	1.71	93.67	7141	55.3	
2005	HC	S	5-20 fa	Polychaete worm uniden.	<i>Class Polychaeta</i>	unsexed	0.05	68.6	3680	65.67	

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Coefficient of Variation		
2005	HC	S	5-20 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.62	65.84	9100	65.67
2005	HC	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	male	5.92	42.92	12712	44.33
2005	HC	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	female	8.17	62.99	47087	62.99
2005	HC	S	5-20 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	14.34	57.56	223128	60.26
2005	HC	S	5-20 fa	Rosy Tritonia	<i>Tritonia diomedea</i>	unsexed	3.71	96.61	55779	66.17
2005	HC	S	5-20 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	6.54	46.49	220384	43.45
2005	HC	S	5-20 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.03	100	1621	100
2005	HC	S	5-20 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	34.47	40.82	118383	38.44
2005	HC	S	5-20 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	0.42	100	1621	100
2005	HC	S	5-20 fa	Sea whip uniden.	<i>Virgulariidae</i>	unsexed	1.67	58.63	72034	57.76
2005	HC	S	5-20 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	3.34	54.44	215160	60.63
2005	HC	S	5-20 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	12.98	42.72	350118	40.12
2005	HC	S	5-20 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.18	48.06	29595	49.4
2005	HC	S	5-20 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.26	100	8237	100
2005	HC	S	5-20 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	103.41	38.97	938376	35.54
2005	HC	S	5-20 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	12.09	42.67	459962	45.52
2005	HC	S	5-20 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	58.64	65.55	31003	76.65
2005	HC	S	5-20 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	0.87	100	2746	100
2005	HC	S	5-20 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	23.93	73.77	1157675	84.35
2005	HC	S	5-20 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	132.00	65.76	293926	66.37
2005	HC	S	5-20 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	0.12	100	56455	100
2005	HC	S	5-20 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	110.01	71.78	163008	63.06
2005	HC	S	5-20 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	0.39	48.96	36319	46.58
2005	HC	S	5-20 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.90	65.47	26449	65.58
2005	HC	S	5-20 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	14.21	42.75	67394	61.47
2005	HC	S	5-20 fa	Surf Smelt	<i>Hypomesus pretiosus</i>	unsexed	0.17	100	18862	100
2005	HC	S	5-20 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	0.03	100	1412	100
2005	HC	S	5-20 fa	Three-section Tubeworm uniden.	<i>Phyllochaetopterus sp.</i>	unsexed	20.73	100	2746	100
2005	HC	S	5-20 fa	Tunicate uniden.	<i>Subphylum Tunicata</i>	unsexed	0.48	100	23173	100
2005	HC	S	5-20 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.16	100	2317	100
2005	HC	S	5-20 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	0.02	100	5144	100
2005	HC	T	21-40 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	5.23	98.74	1261800	97.56
2005	HC	T	21-40 fa	Aluminum	Aluminum	unsexed	0.03	100	1121	100
2005	HC	T	21-40 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	1.03	100	11653	100
2005	HC	T	21-40 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	0.11	100	2181	100
2005	HC	T	21-40 fa	Big Skate	<i>Raja binoculata</i>	unsexed	49.40	53.99	19101	28.68
2005	HC	T	21-40 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	43.61	42.55	1550579	41.95
2005	HC	T	21-40 fa	Blackfin Sculpin	<i>Malacocottus kincaidi</i>	unsexed	0.04	100	3396	100
2005	HC	T	21-40 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	0.23	46.51	29548	72.79
2005	HC	T	21-40 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	0.39	66.14	7091	66.53
2005	HC	T	21-40 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	0.65	100	73007	100
2005	HC	T	21-40 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.02	100	1942	100
2005	HC	T	21-40 fa	Decorated Warbonnet	<i>Chiroliphs decoratus</i>	unsexed	0.01	100	1108	100
2005	HC	T	21-40 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.16	96.16	25103	95.14
2005	HC	T	21-40 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	14.34	38.12	166910	41.71
2005	HC	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	male	117.20	28.73	138111	36.07

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								Estimate		
2005	HC	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	female	239.23	11.05	500912	10.11
2005	HC	T	21-40 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	1214.47	32.77	6172697	24.46
2005	HC	T	21-40 fa	Eudistylia uniden.	<i>Eudistylia sp.</i>	unsexed	33.11	74.24	828659	80.29
2005	HC	T	21-40 fa	Fish-eating Star	<i>Styelaasterias forreri</i>	unsexed	1.19	100	3396	100
2005	HC	T	21-40 fa	Fishing gear	<i>Fishing gear</i>	unsexed	0.58	100	10187	100
2005	HC	T	21-40 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	10.96	55.03	84848	45.88
2005	HC	T	21-40 fa	Fried Egg Jellyfish	<i>Phacellophora camtschatica</i>	unsexed	7.00	82.64	24953	71.75
2005	HC	T	21-40 fa	Glass	<i>Glass</i>	unsexed	3.78	58.97	9833	61.28
2005	HC	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	female	0.16	100	4276	100
2005	HC	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	male	1.11	45.17	15246	41.82
2005	HC	T	21-40 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.02	66.61	3114	73.36
2005	HC	T	21-40 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	4.19	100	6544	100
2005	HC	T	21-40 fa	Greenstriped Rockfish	<i>Sebastodes elongatus</i>	unsexed	0.68	100	3396	100
2005	HC	T	21-40 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.18	100	3396	100
2005	HC	T	21-40 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.09	100	13088	100
2005	HC	T	21-40 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	9.64	71.62	15678	71.31
2005	HC	T	21-40 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	32.60	28.77	47046	28.55
2005	HC	T	21-40 fa	Longspine Combfish	<i>Zanolepis latipinnis</i>	unsexed	1.74	69.29	31942	69.04
2005	HC	T	21-40 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	28.89	50.41	12480	26.74
2005	HC	T	21-40 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	86.48	59.49	176622	56.23
2005	HC	T	21-40 fa	Miscellaneous material		unsexed	11.26	75.44	9608	41.55
2005	HC	T	21-40 fa	Northern Anchovy	<i>Engraulis mordax</i>	unsexed	0.03	100	1069	100
2005	HC	T	21-40 fa	Northern Ronquil	<i>Ronquilus jordani</i>	unsexed	0.13	100	2181	100
2005	HC	T	21-40 fa	Orange Burrowing Sea Cucumber	<i>Cucumaria miniata</i>	unsexed	0.25	100	3592	100
2005	HC	T	21-40 fa	Other man-made debris	<i>Other man-made debris</i>	unsexed	3.43	100	6791	100
2005	HC	T	21-40 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	62.00	32.87	1132479	36.56
2005	HC	T	21-40 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	72.04	55.39	1420876	58.77
2005	HC	T	21-40 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	80.00	29.65	473007	29.85
2005	HC	T	21-40 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	2.46	44.55	85150	53.74
2005	HC	T	21-40 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	5.04	81.41	86715	85.83
2005	HC	T	21-40 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	150.37	85.9	94229	77.65
2005	HC	T	21-40 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	148.75	28.22	2153690	32.28
2005	HC	T	21-40 fa	Plastic	<i>Plastic</i>	unsexed	0.18	86.96	2229	66.15
2005	HC	T	21-40 fa	Quillback Rockfish	<i>Sebastodes maliger</i>	unsexed	0.13	100	4363	100
2005	HC	T	21-40 fa	Rainbow Nudibranch	<i>Dendronotus iris</i>	unsexed	0.02	100	1121	100
2005	HC	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	male	7.78	67.25	20435	61.35
2005	HC	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	female	9.66	76.51	39687	71
2005	HC	T	21-40 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	14.28	31.9	237179	34.66
2005	HC	T	21-40 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.49	100	10907	100
2005	HC	T	21-40 fa	Rosy Tritonia	<i>Tritonia diomedea</i>	unsexed	4.72	90.3	35328	96.48
2005	HC	T	21-40 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.84	88.63	23810	82.13
2005	HC	T	21-40 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.07	100	2181	100
2005	HC	T	21-40 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	5.48	34.55	16405	44.7
2005	HC	T	21-40 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	6.32	63.27	22591	72.75
2005	HC	T	21-40 fa	Sea whip uniden.	<i>Virgulariidae</i>	unsexed	1.69	73.73	82246	51.03
2005	HC	T	21-40 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	1.61	29.96	70557	29.33

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								Estimate		
2005	HC	T	21-40 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	0.42	90.99	28533	87.17
2005	HC	T	21-40 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	45.99	21.68	1242391	24.9
2005	HC	T	21-40 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.04	100	6791	100
2005	HC	T	21-40 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.18	100	3396	100
2005	HC	T	21-40 fa	Southern Rock Sole	<i>Lepidotsetta bilineata</i>	unsexed	3.89	66.71	11154	68.13
2005	HC	T	21-40 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	0.18	51.29	10273	54.4
2005	HC	T	21-40 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	80.99	63.52	145738	59.34
2005	HC	T	21-40 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	2.99	57.12	7252	53.56
2005	HC	T	21-40 fa	Spinyhead Sculpin	<i>Dasycottus setiger</i>	unsexed	0.64	100	6544	100
2005	HC	T	21-40 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	97.85	97.34	3781125	98.04
2005	HC	T	21-40 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	1323.42	28.11	3522682	30.55
2005	HC	T	21-40 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	3.20	77.72	7535	84.56
2005	HC	T	21-40 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.04	100	898	100
2005	HC	T	21-40 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	0.07	100	3396	100
2005	HC	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.22	100	4363	100
2005	HC	T	21-40 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	38.76	31.52	58700	29.77
2005	HC	T	21-40 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	0.02	100	2089	100
2005	HC	T	21-40 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	0.72	100	10187	100
2005	HC	T	21-40 fa	Three-section Tubeworm uniden.	<i>Phyllochaetopterus sp.</i>	unsexed	0.34	100	2089	100
2005	HC	T	21-40 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.13	100	2181	100
2005	HC	T	21-40 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	14.85	64.72	358192	64.94
2005	HC	T	21-40 fa	Yoldia uniden.	<i>Yoldiidae sp</i>	unsexed	0.01	100	1121	100
2005	HC	U	41-60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	8.49	48.54	1417558	50.95
2005	HC	U	41-60 fa	Aluminum	<i>Aluminum</i>	unsexed	0.03	100	560	100
2005	HC	U	41-60 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.02	100	556	100
2005	HC	U	41-60 fa	Axe Yoldia	<i>Megayoldia thraciaeformis</i>	unsexed	0.04	100	6201	100
2005	HC	U	41-60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	15.75	57.56	9173	38.15
2005	HC	U	41-60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	15.01	38.11	503289	39.22
2005	HC	U	41-60 fa	Blackfin Poacher	<i>Bathyagonus nigripinnis</i>	unsexed	0.02	100	1991	100
2005	HC	U	41-60 fa	Blackfin Sculpin	<i>Malacocottus kincaidi</i>	unsexed	4.30	56.67	211813	56.65
2005	HC	U	41-60 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	0.17	96.89	11526	95.37
2005	HC	U	41-60 fa	Blue Mud Shrimp	<i>Upogebia pugettensis</i>	unsexed	0.01	100	1240	100
2005	HC	U	41-60 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	0.01	100	620	100
2005	HC	U	41-60 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	0.49	100	556	100
2005	HC	U	41-60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.02	35.32	8152	39.86
2005	HC	U	41-60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.04	100	5508	100
2005	HC	U	41-60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	5.92	39.22	47221	65.29
2005	HC	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	male	46.39	24.81	51788	21.82
2005	HC	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	female	177.37	32.71	332411	30.56
2005	HC	U	41-60 fa	Dwarf Wrymouth	<i>Cryptacanthodes aleutensis</i>	unsexed	0.01	100	465	100
2005	HC	U	41-60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	351.77	27.75	1457189	27.46
2005	HC	U	41-60 fa	Fishing gear	<i>Fishing gear</i>	unsexed	29.81	99.98	3278	85.09
2005	HC	U	41-60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	5.55	51.9	39226	51.41
2005	HC	U	41-60 fa	Fried Egg Jellyfish	<i>Phacellophora camtschatica</i>	unsexed	0.57	100	4977	100
2005	HC	U	41-60 fa	Glass	<i>Glass</i>	unsexed	3.72	90.91	6638	82.59
2005	HC	U	41-60 fa	Graceful Crab	<i>Cancer gracilis</i>	male	0.06	68.22	1434	70.09

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								Coefficient of Variation	Abundance Estimate (number of individuals)		
2005	HC	U	41-60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.00	100	473	100	
2005	HC	U	41-60 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.00	100	509	100	
2005	HC	U	41-60 fa	Krill uniden.	Order Euphausiacea	unsexed	0.00	100	930	100	
2005	HC	U	41-60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	7.05	45.37	10757	60.96	
2005	HC	U	41-60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	56.85	22.45	94522	23.64	
2005	HC	U	41-60 fa	Longnose Skate egg case	<i>Raja rhina</i> egg case	unsexed	0.02	100	556	100	
2005	HC	U	41-60 fa	Marine vegetation	Marine vegetation	unsexed	151.79	45.47	9654	18.74	
2005	HC	U	41-60 fa	Metridium uniden.	<i>Metridium</i> sp.	unsexed	86.54	63.39	234059	64.68	
2005	HC	U	41-60 fa	Miscellaneous material		unsexed	7.81	79.88	3811	58.75	
2005	HC	U	41-60 fa	Northern Anchovy	<i>Engraulis mordax</i>	unsexed	0.05	76.48	2439	70.09	
2005	HC	U	41-60 fa	Northern Feather Duster Worm	<i>Eudistyla vancouveri</i>	unsexed	10.95	70.71	198883	71.07	
2005	HC	U	41-60 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	0.11	76.75	3614	69.93	
2005	HC	U	41-60 fa	Northern Kelp Crab	<i>Pugettia producta</i>	unsexed	0.01	100	620	100	
2005	HC	U	41-60 fa	Other man-made debris	Other man-made debris	unsexed	2.18	98.06	971	68.16	
2005	HC	U	41-60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	196.62	41.88	2726499	38.45	
2005	HC	U	41-60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	3.78	63.92	61386	58.02	
2005	HC	U	41-60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	0.32	68.24	1524	72.47	
2005	HC	U	41-60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	1.61	60.63	64349	58.96	
2005	HC	U	41-60 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	3.27	97.4	3978	88.06	
2005	HC	U	41-60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	28.46	39.62	514738	39.99	
2005	HC	U	41-60 fa	Plastic	Plastic	unsexed	0.25	100	620	100	
2005	HC	U	41-60 fa	Polychaete worm uniden.	Class Polychaeta	unsexed	0.13	57.71	7256	60.86	
2005	HC	U	41-60 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.02	100	2003	100	
2005	HC	U	41-60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	10.42	52.09	14760	50.77	
2005	HC	U	41-60 fa	Red Brotula	<i>Brosmophycis marginata</i>	unsexed	0.36	81.04	2122	68.73	
2005	HC	U	41-60 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.04	100	417	100	
2005	HC	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	female	3.24	42.88	14037	43.85	
2005	HC	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	male	5.47	57.82	13316	55.86	
2005	HC	U	41-60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	9.47	48.34	137313	50.8	
2005	HC	U	41-60 fa	Ribbon worm uniden.	Phylum Nemertea	unsexed	0.01	100	620	100	
2005	HC	U	41-60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.03	100	878	100	
2005	HC	U	41-60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	13.93	70.16	29627	59.77	
2005	HC	U	41-60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.16	84.37	6608	78.82	
2005	HC	U	41-60 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.02	58.19	10828	59.66	
2005	HC	U	41-60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	4.16	53.08	408280	52.27	
2005	HC	U	41-60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	41.73	32.08	1251903	34.25	
2005	HC	U	41-60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	0.01	100	509	100	
2005	HC	U	41-60 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	0.01	100	505	100	
2005	HC	U	41-60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	53.44	25.38	48595	26.22	
2005	HC	U	41-60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	0.07	100	2195	100	
2005	HC	U	41-60 fa	Spinycheek Starsnout Poacher	<i>Bathyagonus infraspinatus</i>	unsexed	0.02	100	2003	100	
2005	HC	U	41-60 fa	Splitnose Rockfish	<i>Sebastes diploproa</i>	unsexed	2.01	45.99	5212	45.17	
2005	HC	U	41-60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	13.75	47.5	541700	48.38	
2005	HC	U	41-60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	1125.28	36.12	3687036	32.67	
2005	HC	U	41-60 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	0.01	56.4	2832	62.81	
2005	HC	U	41-60 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	1.56	77.24	1014	68.14	

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2005	HC	U	41-60 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.04	100	473	100	
2005	HC	U	41-60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	24.00	81.44	49658	71.34	
2005	HC	U	41-60 fa	Sweet Potato Sea Cucumber	<i>Molpadia intermedia</i>	unsexed	0.45	100	3101	100	
2005	HC	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	0.09	68.26	1069	68.66	
2005	HC	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	0.58	59.12	3017	47.34	
2005	HC	U	41-60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.15	100	2003	100	
2005	HC	U	41-60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	5.67	55.55	127839	63.99	
2005	HC	U	41-60 fa	Yelloweye Rockfish	<i>Sebastodes ruberrimus</i>	unsexed	0.44	100	596	100	
2005	HC	V	>60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	0.06	73.63	8297	65.93	
2005	HC	V	>60 fa	Aluminum	<i>Aluminum</i>	unsexed	0.03	100	1419	100	
2005	HC	V	>60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	0.88	63.84	25174	63.72	
2005	HC	V	>60 fa	Blackfin Poacher	<i>Bathyagonus nigripinnis</i>	unsexed	0.29	62.08	30266	61.73	
2005	HC	V	>60 fa	Blackfin Sculpin	<i>Malacocottus kincaidi</i>	unsexed	1.35	63.44	77335	62.79	
2005	HC	V	>60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.02	100	1501	100	
2005	HC	V	>60 fa	Blue Mud Shrimp	<i>Upogebia pugettensis</i>	unsexed	0.03	65.49	2860	65.49	
2005	HC	V	>60 fa	Brown Cat Shark	<i>Apristurus brunneus</i>	unsexed	1.14	50.37	4274	48.93	
2005	HC	V	>60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.04	66.33	11190	59.55	
2005	HC	V	>60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	9.54	53.09	27446	52.74	
2005	HC	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	male	8.81	46.3	13525	43.61	
2005	HC	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	female	31.12	35.2	74252	34.85	
2005	HC	V	>60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	16.31	47.43	92640	45.88	
2005	HC	V	>60 fa	Fishing gear	Fishing gear	unsexed	4.81	93.65	4239	71.61	
2005	HC	V	>60 fa	Fried Egg Jellyfish	<i>Phacellophora camtschatica</i>	unsexed	19.65	66.36	79708	72.13	
2005	HC	V	>60 fa	Heart Urchin	<i>Briaster latifrons</i>	unsexed	678.93	57.66	27548243	59.95	
2005	HC	V	>60 fa	Krill uniden.	<i>Order Euphausiacea</i>	unsexed	0.04	48.7	27126	47.19	
2005	HC	V	>60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	53.68	29.27	77994	26.01	
2005	HC	V	>60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	86.55	10.76	159915	13.62	
2005	HC	V	>60 fa	Marine vegetation	Marine vegetation	unsexed	15.73	44.01	9807	14.41	
2005	HC	V	>60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	0.06	100	1467	100	
2005	HC	V	>60 fa	Other man-made debris	Other man-made debris	unsexed	0.49	90.17	2762	65.6	
2005	HC	V	>60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	134.00	33.16	168018	25.03	
2005	HC	V	>60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	0.61	100	1394	100	
2005	HC	V	>60 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	0.12	100	2611	100	
2005	HC	V	>60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	8.89	11.99	150182	14.95	
2005	HC	V	>60 fa	Plastic	Plastic	unsexed	0.41	78.82	4335	70.48	
2005	HC	V	>60 fa	Polychaete worm uniden.	<i>Class Polychaeta</i>	unsexed	0.07	81.24	5704	77.27	
2005	HC	V	>60 fa	Quillback Rockfish	<i>Sebastodes maliger</i>	unsexed	11.87	39.5	17221	41.69	
2005	HC	V	>60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	0.55	45.44	7156	42.69	
2005	HC	V	>60 fa	Ribbon worm uniden.	<i>Phylum Nemertea</i>	unsexed	0.01	100	1419	100	
2005	HC	V	>60 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.19	84.1	7472	79.96	
2005	HC	V	>60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	4.77	100	19516	100	
2005	HC	V	>60 fa	Shortscale Eulaid	<i>Eualus suckleyi</i>	unsexed	0.09	43.88	80098	39	
2005	HC	V	>60 fa	Showy Snailfish	<i>Liparis pulchellus</i>	unsexed	0.01	100	1467	100	
2005	HC	V	>60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	0.77	31.13	85680	34.42	
2005	HC	V	>60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	42.52	23.92	1329272	26.43	
2005	HC	V	>60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	36.75	26.43	31924	29.81	

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								Coefficient of Variation		
2005	HC	V	>60 fa	Splitnose Rockfish	<i>Sebastes diploproa</i>	unsexed	6.74	39.08	26908	39.33
2005	HC	V	>60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	81.62	36.56	149253	40.07
2005	HC	V	>60 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	0.02	69.93	2812	65.47
2005	HC	V	>60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	0.96	86.92	5217	75.57
2005	HC	V	>60 fa	Sweet Potato Sea Cucumber	<i>Molpadia intermedia</i>	unsexed	2.19	63.19	11597	60.49
2005	HC	V	>60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	2.63	39.95	9950	45.54
2005	HC	V	>60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	1.66	76.18	10096	70.53
2005	SS	S	5-20 fa	Aluminum	<i>Aluminum</i>	unsexed	1.09	48.93	31224	36.77
2005	SS	S	5-20 fa	Axe Yoldia	<i>Megayoldia thraciaeformis</i>	unsexed	0.02	100	3617	100
2005	SS	S	5-20 fa	Bay Goby	<i>Lepidogobius lepidus</i>	unsexed	0.13	41.73	18389	40.9
2005	SS	S	5-20 fa	Bent-nose Macoma	<i>Macoma nasuta</i>	unsexed	0.36	53.27	11878	59.21
2005	SS	S	5-20 fa	Big Skate	<i>Raja binoculata</i>	unsexed	15.40	70.46	25446	43.3
2005	SS	S	5-20 fa	Big Skate egg case	<i>Raja binoculata egg case</i>	unsexed	0.31	100	1809	100
2005	SS	S	5-20 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	98.60	43.13	11848967	66.62
2005	SS	S	5-20 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	31.27	68.13	283952	77.37
2005	SS	S	5-20 fa	Burrowing Anemone	<i>Pachycerianthus fimbriatus</i>	unsexed	0.24	65.23	23005	71.92
2005	SS	S	5-20 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	4.84	44.14	54423	44.75
2005	SS	S	5-20 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	1.63	77.22	24109	74.3
2005	SS	S	5-20 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.34	55.53	19882	67.55
2005	SS	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	207.68	66.25	197198	55
2005	SS	S	5-20 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	15.68	44.54	160442	39.8
2005	SS	S	5-20 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.37	27.26	192992	27.23
2005	SS	S	5-20 fa	Curlfin Sole	<i>Pleuronichthys decurrens</i>	unsexed	0.83	100	1933	100
2005	SS	S	5-20 fa	Danas Blade Shrimp	<i>Spirontocaris lamellicornis</i>	unsexed	0.08	66.52	25056	77.91
2005	SS	S	5-20 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	1.63	72.7	207850	73.97
2005	SS	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	female	37.77	47.29	83671	42.59
2005	SS	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	male	73.77	52.87	96610	55.48
2005	SS	S	5-20 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	141.60	42.69	2733881	39.5
2005	SS	S	5-20 fa	Fishing gear	<i>Fishing gear</i>	unsexed	18.13	47.8	72644	53.55
2005	SS	S	5-20 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	0.26	85.5	3673	71.54
2005	SS	S	5-20 fa	Fried Egg Jellyfish	<i>Phacellophora camtschatica</i>	unsexed	1.10	62.73	10926	59.39
2005	SS	S	5-20 fa	Glass	<i>Glass</i>	unsexed	29.02	61.46	76058	52.65
2005	SS	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	female	45.60	35.15	594006	25.62
2005	SS	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	male	222.76	23.32	1684659	22.95
2005	SS	S	5-20 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.31	56.71	27345	53.63
2005	SS	S	5-20 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	0.74	76.39	3093	69.06
2005	SS	S	5-20 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.49	68.26	13773	47.29
2005	SS	S	5-20 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.03	100	2730	100
2005	SS	S	5-20 fa	Leather Star	<i>Dermasterias imbricata</i>	unsexed	2.58	61.55	11983	54.81
2005	SS	S	5-20 fa	Lewis's Moon Snail	<i>Euspira lewisi</i>	unsexed	9.10	75.37	36734	72.59
2005	SS	S	5-20 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	1.14	97.57	2590	67.94
2005	SS	S	5-20 fa	Longspine Combfish	<i>Zanclorhynchus latipinnis</i>	unsexed	4.71	53.91	121681	51.68
2005	SS	S	5-20 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	510.77	44.71	29392	17.32
2005	SS	S	5-20 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	1023.95	24.25	4008119	41.48
2005	SS	S	5-20 fa	Miscellaneous material		unsexed	1161.65	62.69	17320	40.43
2005	SS	S	5-20 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	0.87	100	3854	100

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Coefficient of Variation		
2005	SS	S	5-20 fa	Northern Anchovy	<i>Engraulis mordax</i>	unsexed	0.05	76.4	2694	67.98
2005	SS	S	5-20 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	18.87	46.86	138211	39.83
2005	SS	S	5-20 fa	Nuttall Cockle	<i>Clinocardium nuttallii</i>	unsexed	3.29	77.6	18544	82.92
2005	SS	S	5-20 fa	Orange Sea Pen	<i>Ptilosarcus gurneyi</i>	unsexed	5.75	76.66	89707	77.78
2005	SS	S	5-20 fa	Other man-made debris	Other man-made debris	unsexed	2.84	74.25	20763	63.56
2005	SS	S	5-20 fa	Pacific Geoduck	<i>Panopea abrupta</i>	unsexed	0.85	100	1643	100
2005	SS	S	5-20 fa	Pacific Herring	<i>Clupea pallasi</i>	unsexed	3.71	35.14	177703	33.81
2005	SS	S	5-20 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.03	100	2730	100
2005	SS	S	5-20 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	2.89	74.93	12773	80.87
2005	SS	S	5-20 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	15.91	38.8	312316	46.81
2005	SS	S	5-20 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	1.12	49.08	25919	46.17
2005	SS	S	5-20 fa	Padded Sculpin	<i>Artedius fenestralis</i>	unsexed	0.47	56.67	27303	53.95
2005	SS	S	5-20 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	171.45	50.14	624938	59.12
2005	SS	S	5-20 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	28.33	19.97	914192	19.51
2005	SS	S	5-20 fa	Plastic	Plastic	unsexed	14.36	83.6	31658	51.07
2005	SS	S	5-20 fa	Polychaete worm uniden.	Class Polychaeta	unsexed	0.00	100	1305	100
2005	SS	S	5-20 fa	Pygmy Poacher	<i>Odontopyxis trispinosa</i>	unsexed	0.04	58.18	8137	60.34
2005	SS	S	5-20 fa	Rainbow Nudibranch	<i>Dendronotus iris</i>	unsexed	0.65	87.83	25497	77.29
2005	SS	S	5-20 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	1.63	76.03	8715	85
2005	SS	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	female	38.24	39.74	197364	38.15
2005	SS	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	male	105.85	36.22	241794	35.63
2005	SS	S	5-20 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.30	100	10277	100
2005	SS	S	5-20 fa	Rosy Tritonia	<i>Tritonia diomedea</i>	unsexed	62.12	45.21	572804	48.06
2005	SS	S	5-20 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	17.21	35.11	1111319	40.53
2005	SS	S	5-20 fa	Salt and Pepper Sea Cucumber	<i>Cucumaria piperata</i>	unsexed	0.02	100	1809	100
2005	SS	S	5-20 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	21.38	31.29	160486	23.18
2005	SS	S	5-20 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	43.96	72.47	493128	49.19
2005	SS	S	5-20 fa	Sea whip uniden.	Virgulariidae	unsexed	0.19	76.7	111161	78.91
2005	SS	S	5-20 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	1.76	31	113521	31.62
2005	SS	S	5-20 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.28	44.05	10568	42
2005	SS	S	5-20 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	50.22	67.91	320809	64.54
2005	SS	S	5-20 fa	Speckled Sanddab	<i>Citharichthys stigmatus</i>	unsexed	63.20	46.65	3297595	45.13
2005	SS	S	5-20 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	15.82	76.66	32051	83.64
2005	SS	S	5-20 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	0.75	100	1389	100
2005	SS	S	5-20 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	389.90	23.77	809501	21.93
2005	SS	S	5-20 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.22	100	1809	100
2005	SS	S	5-20 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	1.39	63.29	85569	46.49
2005	SS	S	5-20 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.84	31.17	38782	33.26
2005	SS	S	5-20 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	146.63	30.84	395590	29.86
2005	SS	S	5-20 fa	Sweet Potato Sea Cucumber	<i>Molpadia intermedia</i>	unsexed	0.26	100	1305	100
2005	SS	S	5-20 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.05	100	1809	100
2005	SS	S	5-20 fa	Yoldia uniden.	<i>Yoldiidae sp</i>	unsexed	0.37	45.65	111949	44.85
2005	SS	T	21-40 fa	Aluminum	Aluminum	unsexed	0.01	100	1000	100
2005	SS	T	21-40 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	0.05	100	2311	100
2005	SS	T	21-40 fa	Bay Goby	<i>Lepidogobius lepidus</i>	unsexed	0.01	100	943	100
2005	SS	T	21-40 fa	Big Skate	<i>Raja binoculata</i>	unsexed	24.06	63.38	17459	45.37

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2005	SS	T	21-40 fa	Big Skate egg case	<i>Raja binoculata</i> egg case	unsexed	5.59	44.58	21052	44.02
2005	SS	T	21-40 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	167.09	37.21	7167720	34.91
2005	SS	T	21-40 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	0.53	42.75	37191	43
2005	SS	T	21-40 fa	Brown Rockfish	<i>Sebastes auriculatus</i>	unsexed	1.18	52.25	26909	63.58
2005	SS	T	21-40 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	97.62	54.18	751785	44.68
2005	SS	T	21-40 fa	Burrowing Anemone	<i>Pachycerianthus fimbriatus</i>	unsexed	0.98	68.11	30812	70.66
2005	SS	T	21-40 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	5.14	50.09	60698	48.22
2005	SS	T	21-40 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	10.69	55.73	207700	55.57
2005	SS	T	21-40 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	1.37	76.32	55466	65.81
2005	SS	T	21-40 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	77.43	53.5	87191	52.94
2005	SS	T	21-40 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	7.19	41.33	57323	45.99
2005	SS	T	21-40 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	1.48	100	975	100
2005	SS	T	21-40 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.27	70.12	173437	67.07
2005	SS	T	21-40 fa	Danas Blade Shrimp	<i>Spirontocaris lamellicornis</i>	unsexed	0.04	50.12	11206	54.81
2005	SS	T	21-40 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	11.50	63.02	1845506	70.51
2005	SS	T	21-40 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	0.11	82.22	4448	68.31
2005	SS	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	male	57.04	23.29	58252	23.08
2005	SS	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	female	36.49	38.64	68555	35.47
2005	SS	T	21-40 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	140.83	26.4	2324178	29.89
2005	SS	T	21-40 fa	Fishing gear	Fishing gear	unsexed	0.46	82.1	11640	53.54
2005	SS	T	21-40 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	7.54	48.84	84320	42.54
2005	SS	T	21-40 fa	Fried Egg Jellyfish	<i>Phacellophora camtschatica</i>	unsexed	4.85	66.13	11465	46.38
2005	SS	T	21-40 fa	Giant Pacific Octopus	<i>Enteroctopus dofleini</i>	unsexed	16.12	100	975	100
2005	SS	T	21-40 fa	Glass	Glass	unsexed	0.50	100	963	100
2005	SS	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	female	21.51	39.16	229853	34.54
2005	SS	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	male	70.84	25.52	522495	29.05
2005	SS	T	21-40 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.04	100	4164	100
2005	SS	T	21-40 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	1.39	77.49	8166	76.1
2005	SS	T	21-40 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.03	72.32	3344	74.51
2005	SS	T	21-40 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.24	79.44	49091	79.34
2005	SS	T	21-40 fa	Leather Star	<i>Dermasterias imbricata</i>	unsexed	6.46	95.71	12663	92.06
2005	SS	T	21-40 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	4.42	85.55	5902	53.03
2005	SS	T	21-40 fa	Longspine Combfish	<i>Zaniolepis latipinnis</i>	unsexed	0.47	60.03	10918	49.41
2005	SS	T	21-40 fa	Marine vegetation	Marine vegetation	unsexed	350.24	42.46	18414	17.51
2005	SS	T	21-40 fa	Metridium uniden.	Metridium sp.	unsexed	800.20	49.25	1735200	59.45
2005	SS	T	21-40 fa	Miscellaneous material		unsexed	157.21	49.31	13404	31.68
2005	SS	T	21-40 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	0.05	82	2748	71.15
2005	SS	T	21-40 fa	Northern Anchovy	<i>Engraulis mordax</i>	unsexed	2.90	98.4	147818	98.37
2005	SS	T	21-40 fa	Northern Kelp Crab	<i>Pugettia producta</i>	unsexed	0.07	100	5257	100
2005	SS	T	21-40 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	24.35	36.93	170064	42.03
2005	SS	T	21-40 fa	Northern Ronquil	<i>Ronquilus jordanii</i>	unsexed	0.06	100	1925	100
2005	SS	T	21-40 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	0.33	71.31	16393	68.93
2005	SS	T	21-40 fa	Nuttall Cockle	<i>Clinocardium nuttallii</i>	unsexed	0.57	100	2498	100
2005	SS	T	21-40 fa	Orange Sea Pen	<i>Ptilosarcus gurneyi</i>	unsexed	3.00	80.58	37353	83.62
2005	SS	T	21-40 fa	Other man-made debris	Other man-made debris	unsexed	11.97	98.84	3234	73.29
2005	SS	T	21-40 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	0.13	100	1925	100

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								Estimate		
2005	SS	T	21-40 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	6.95	52.9	272185	59.47
2005	SS	T	21-40 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	13.70	43.75	73277	44.57
2005	SS	T	21-40 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	22.12	20.12	331515	22.09
2005	SS	T	21-40 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	13.22	63.98	403084	72.03
2005	SS	T	21-40 fa	Padded Sculpin	<i>Artedius fenestralis</i>	unsexed	5.43	52.42	248302	47.92
2005	SS	T	21-40 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	0.18	67.89	6349	69.49
2005	SS	T	21-40 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	44.44	35.16	78333	55.47
2005	SS	T	21-40 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	32.89	25.02	1072736	27.07
2005	SS	T	21-40 fa	Plastic	Plastic	unsexed	0.35	87.8	4139	58.9
2005	SS	T	21-40 fa	Pygmy Poacher	<i>Odontopyxis trispinosa</i>	unsexed	0.02	100	2629	100
2005	SS	T	21-40 fa	Rainbow Nudibranch	<i>Dendronotus iris</i>	unsexed	0.17	38.65	11141	33.16
2005	SS	T	21-40 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.42	100	1783	100
2005	SS	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	female	18.02	25.72	97412	26.92
2005	SS	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	male	97.32	26.31	244335	27.09
2005	SS	T	21-40 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	0.97	88.28	13423	92.75
2005	SS	T	21-40 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	1.89	46.78	48599	49.36
2005	SS	T	21-40 fa	Rosy Tritonia	<i>Tritonia diomedea</i>	unsexed	184.00	52.78	4261602	73.48
2005	SS	T	21-40 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	37.75	21.14	1915011	23.95
2005	SS	T	21-40 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.30	60.44	11235	63.47
2005	SS	T	21-40 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	21.73	33.44	203358	38.32
2005	SS	T	21-40 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	5.76	53.11	113107	39.45
2005	SS	T	21-40 fa	Sea whip uniden.	<i>Virgulariidae</i>	unsexed	0.76	66.93	89513	54.96
2005	SS	T	21-40 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	4.21	41.14	325674	44.27
2005	SS	T	21-40 fa	Sixgill Shark	<i>Hexanchus griseus</i>	unsexed	116.98	100	975	100
2005	SS	T	21-40 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.82	54.42	33093	44.61
2005	SS	T	21-40 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.68	51.51	74879	52.44
2005	SS	T	21-40 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.52	73.1	17352	74.99
2005	SS	T	21-40 fa	Southern Rock Sole	<i>Lepidotretta bilineata</i>	unsexed	129.65	69.42	506707	64.45
2005	SS	T	21-40 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	22.40	24.59	1225359	25.88
2005	SS	T	21-40 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	23.88	36.78	49884	32.79
2005	SS	T	21-40 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	0.05	100	965	100
2005	SS	T	21-40 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	9.10	41.55	16118	41.75
2005	SS	T	21-40 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	209.73	18.3	293962	19.67
2005	SS	T	21-40 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	0.29	66.66	22743	52.31
2005	SS	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	4.08	46.73	160968	44.75
2005	SS	T	21-40 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	68.87	31.17	124311	28.86
2005	SS	T	21-40 fa	Surf Smelt	<i>Hypomesus pretiosus</i>	unsexed	0.03	100	943	100
2005	SS	T	21-40 fa	Sweet Potato Sea Cucumber	<i>Molpadia intermedia</i>	unsexed	0.27	100	1000	100
2005	SS	T	21-40 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	0.03	100	2311	100
2005	SS	T	21-40 fa	White Sea Cucumber	<i>Eupentacta quinquesemita</i>	unsexed	0.09	100	4468	100
2005	SS	T	21-40 fa	Yoldia uniden.	<i>Yoldiidae sp</i>	unsexed	0.20	57.6	50333	61.2
2005	SS	U	41-60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	2.95	70.1	613362	71.86
2005	SS	U	41-60 fa	Aluminum	Aluminum	unsexed	0.02	100	539	100
2005	SS	U	41-60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	0.04	100	557	100
2005	SS	U	41-60 fa	Axe Yoldia	<i>Megayoldia thraciaeformis</i>	unsexed	0.02	100	1786	100
2005	SS	U	41-60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	5.12	86.82	3554	64.85

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2005	SS	U	41-60 fa	Big Skate egg case	<i>Raja binoculata</i> egg case	unsexed	3.30	100	14333	100	
2005	SS	U	41-60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	60.55	39.67	2489288	41.86	
2005	SS	U	41-60 fa	Blackfin Poacher	<i>Bathyagonus nigripinnis</i>	unsexed	0.01	100	595	100	
2005	SS	U	41-60 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	5.24	89.61	359253	88.08	
2005	SS	U	41-60 fa	Blue Mud Shrimp	<i>Upogebia pugettensis</i>	unsexed	0.01	100	1786	100	
2005	SS	U	41-60 fa	Brown Rockfish	<i>Sebastes auriculatus</i>	unsexed	1.11	57.33	13081	75.89	
2005	SS	U	41-60 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	4.94	51.83	29765	50.1	
2005	SS	U	41-60 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	0.10	77.62	2920	80.56	
2005	SS	U	41-60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	2.90	100	55863	100	
2005	SS	U	41-60 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.06	100	2785	100	
2005	SS	U	41-60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	36.95	62.74	54622	63.77	
2005	SS	U	41-60 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	7.19	38.67	39091	42.74	
2005	SS	U	41-60 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	5.32	91.78	4793	87.59	
2005	SS	U	41-60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.01	53.14	9595	52.17	
2005	SS	U	41-60 fa	Danas Blade Shrimp	<i>Spirontocaris lamellicornis</i>	unsexed	0.01	100	1233	100	
2005	SS	U	41-60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	3.24	54.33	368213	56.04	
2005	SS	U	41-60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	0.09	100	539	100	
2005	SS	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	male	16.93	31.13	16595	27.48	
2005	SS	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	female	14.12	36.09	28136	32.84	
2005	SS	U	41-60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	52.67	29.25	764916	32.25	
2005	SS	U	41-60 fa	Fishing gear	Fishing gear	unsexed	2.55	100	614	100	
2005	SS	U	41-60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	1.89	65.21	12041	65.1	
2005	SS	U	41-60 fa	Fried Egg Jellyfish	<i>Phacellophora camtschatica</i>	unsexed	0.62	100	1671	100	
2005	SS	U	41-60 fa	Glass	Glass	unsexed	3.19	43.02	9051	40.05	
2005	SS	U	41-60 fa	Graceful Crab	<i>Cancer gracilis</i>	female	3.60	47.03	34649	44.8	
2005	SS	U	41-60 fa	Graceful Crab	<i>Cancer gracilis</i>	male	14.46	30.17	81854	32.64	
2005	SS	U	41-60 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	0.16	100	1418	100	
2005	SS	U	41-60 fa	Horned Shrimp	<i>Paracragon echinata</i>	unsexed	0.06	67.58	8372	71.49	
2005	SS	U	41-60 fa	Leather Star	<i>Dermasterias imbricata</i>	unsexed	6.83	63.58	13972	58.16	
2005	SS	U	41-60 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.01	100	1418	100	
2005	SS	U	41-60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	0.69	44.37	4623	57.5	
2005	SS	U	41-60 fa	Longnose Skate egg case	<i>Raja rhina</i> egg case	unsexed	0.20	57.32	4079	54.28	
2005	SS	U	41-60 fa	Magister Armhook Squid	<i>Berryteuthis magister</i>	unsexed	0.03	100	616	100	
2005	SS	U	41-60 fa	Marine vegetation	Marine vegetation	unsexed	189.24	72.48	5830	30.72	
2005	SS	U	41-60 fa	Metridium uniden.	<i>Metridium</i> sp.	unsexed	1046.55	50.99	4018134	77.32	
2005	SS	U	41-60 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	3.99	99.37	36712	98.3	
2005	SS	U	41-60 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	2.97	62.99	10442	62.15	
2005	SS	U	41-60 fa	Orange Burrowing Sea Cucumber	<i>Cucumaria miniata</i>	unsexed	0.00	100	614	100	
2005	SS	U	41-60 fa	Orange Sea Pen	<i>Ptilosarcus gurneyi</i>	unsexed	0.15	59.54	3458	62.56	
2005	SS	U	41-60 fa	Other man-made debris	Other man-made debris	unsexed	4.54	100	1228	100	
2005	SS	U	41-60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	0.97	56.96	12232	57.82	
2005	SS	U	41-60 fa	Pacific Herring	<i>Clupea pallasi</i>	unsexed	1.53	84.23	52747	79.08	
2005	SS	U	41-60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	4.82	31.68	20220	30.74	
2005	SS	U	41-60 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	3.58	27.04	39196	23.46	
2005	SS	U	41-60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	6.82	42.68	184257	44.5	
2005	SS	U	41-60 fa	Padded Sculpin	<i>Artedius fenestralis</i>	unsexed	0.92	86.74	52344	83.58	

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2005	SS	U	41-60 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	0.05	65.28	1634	68.98
2005	SS	U	41-60 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	37.44	67.04	19380	61.77
2005	SS	U	41-60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	6.33	28.77	173329	28.98
2005	SS	U	41-60 fa	Plastic	Plastic	unsexed	1.32	71.65	4652	86.84
2005	SS	U	41-60 fa	Polychaete worm uniden.	Class Polychaeta	unsexed	1.30	68.53	51175	67.99
2005	SS	U	41-60 fa	Pubescent Porcelain Crab	<i>Pachycheles pubescens</i>	unsexed	0.00	100	1418	100
2005	SS	U	41-60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	0.28	77.53	4202	64.58
2005	SS	U	41-60 fa	Rainbow Nudibranch	<i>Dendronotus iris</i>	unsexed	0.43	62.26	12146	56.5
2005	SS	U	41-60 fa	Red Brotula	<i>Brosmophycis marginata</i>	unsexed	0.32	85.85	1673	68.2
2005	SS	U	41-60 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.63	44.98	4355	45.73
2005	SS	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	male	31.29	53.47	93204	63.14
2005	SS	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	female	15.08	65.61	104601	73.98
2005	SS	U	41-60 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	0.92	91.05	7077	90.29
2005	SS	U	41-60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	0.17	49.02	2266	51.64
2005	SS	U	41-60 fa	Ribbon worm uniden.	Phylum Nemertea	unsexed	0.01	100	557	100
2005	SS	U	41-60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	1.27	64.08	47514	78.1
2005	SS	U	41-60 fa	Rosy Tritonia	<i>Tritonia diomedea</i>	unsexed	27.30	98.16	150370	94.35
2005	SS	U	41-60 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	7.29	50.09	379701	47.2
2005	SS	U	41-60 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.06	67.15	3275	67.32
2005	SS	U	41-60 fa	Salt and Pepper Sea Cucumber	<i>Cucumaria piperata</i>	unsexed	0.09	69.18	15763	68.47
2005	SS	U	41-60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	38.84	35.72	164584	43.6
2005	SS	U	41-60 fa	Sea mouse uniden.	Family Aphroditidae	unsexed	0.06	100	1077	100
2005	SS	U	41-60 fa	Sea whip uniden.	Virgulariidae	unsexed	0.02	69.83	1212	64.56
2005	SS	U	41-60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	6.48	82.14	323003	83.85
2005	SS	U	41-60 fa	Shortscale Equalid	<i>Eualus suckleyi</i>	unsexed	0.00	100	616	100
2005	SS	U	41-60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	0.14	70.64	19184	68.58
2005	SS	U	41-60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	3.84	22.17	163499	14.59
2005	SS	U	41-60 fa	Slipskin Snailfish	<i>Liparis fuscensis</i>	unsexed	0.01	100	614	100
2005	SS	U	41-60 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.02	100	614	100
2005	SS	U	41-60 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	7.90	60.07	24365	62.73
2005	SS	U	41-60 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	0.35	67.08	20983	66.71
2005	SS	U	41-60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	2.55	59.12	5268	49.54
2005	SS	U	41-60 fa	Spinyhead Sculpin	<i>Dasycottus setiger</i>	unsexed	1.21	74.14	14659	55.26
2005	SS	U	41-60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	1.41	94.51	41353	94.32
2005	SS	U	41-60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	40.15	59.23	76072	58.5
2005	SS	U	41-60 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	0.22	37.08	13119	39.24
2005	SS	U	41-60 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	16.99	59.24	14901	48.63
2005	SS	U	41-60 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	7.89	98.19	70095	96.95
2005	SS	U	41-60 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	0.01	100	557	100
2005	SS	U	41-60 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.08	69.81	1653	69.81
2005	SS	U	41-60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.79	82.03	35533	79.85
2005	SS	U	41-60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	42.23	38.75	104103	36.38
2005	SS	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	0.11	100	557	100
2005	SS	U	41-60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.14	100	2836	100
2005	SS	U	41-60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	0.48	68.29	7109	64.85
2005	SS	V	>60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	0.21	96.55	58042	97.42

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								Coefficient of Variation		
2005	SS	V	>60 fa	Aluminum	Aluminum	unsexed	0.04	89.74	1853	78.12
2005	SS	V	>60 fa	Axe Yoldia	<i>Megayoldia thraciaeformis</i>	unsexed	0.02	100	1127	100
2005	SS	V	>60 fa	Bent-nose Macoma	<i>Macoma nasuta</i>	unsexed	0.03	100	429	100
2005	SS	V	>60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	0.33	100	673	100
2005	SS	V	>60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	39.68	29.43	1350457	29.3
2005	SS	V	>60 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	2.52	53.13	204887	55.3
2005	SS	V	>60 fa	Brown Rockfish	<i>Sebastes auriculatus</i>	unsexed	1.59	64.53	7264	61.26
2005	SS	V	>60 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	3.65	65.56	17687	66.29
2005	SS	V	>60 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	1.02	97.91	18525	95.45
2005	SS	V	>60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	0.11	62.61	2648	59.99
2005	SS	V	>60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	79.30	50.29	107416	46.65
2005	SS	V	>60 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	1.86	100	7547	100
2005	SS	V	>60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.00	100	2254	100
2005	SS	V	>60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.68	87.83	75459	86.02
2005	SS	V	>60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	1.61	24.21	18484	32.48
2005	SS	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	male	11.55	38.25	10311	42.4
2005	SS	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	female	17.12	47.32	35709	45.89
2005	SS	V	>60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	61.92	22.52	408856	20.77
2005	SS	V	>60 fa	Fishing gear	Fishing gear	unsexed	0.39	83.09	1128	68.9
2005	SS	V	>60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	0.14	100	376	100
2005	SS	V	>60 fa	Fried Egg Jellyfish	<i>Phacellophora camtschatica</i>	unsexed	0.20	70.67	2395	83.53
2005	SS	V	>60 fa	Glass	Glass	unsexed	0.90	77.63	1292	71.33
2005	SS	V	>60 fa	Glassy Tunicate	<i>Ascidia paratropa</i>	unsexed	0.07	100	724	100
2005	SS	V	>60 fa	Graceful Crab	<i>Cancer gracilis</i>	male	8.57	35.25	54265	32.17
2005	SS	V	>60 fa	Graceful Crab	<i>Cancer gracilis</i>	female	5.18	77.37	57804	77.25
2005	SS	V	>60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.03	54.12	3745	57.86
2005	SS	V	>60 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	0.34	100	888	100
2005	SS	V	>60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	0.03	100	673	100
2005	SS	V	>60 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.35	98.32	4788	88.17
2005	SS	V	>60 fa	Lampshell Brachiopod	<i>Terebratalia transversa</i>	unsexed	0.02	100	808	100
2005	SS	V	>60 fa	Leather Star	<i>Dermasterias imbricata</i>	unsexed	5.36	47.28	14128	45.64
2005	SS	V	>60 fa	Lewis's Moon Snail	<i>Euspira lewisi</i>	unsexed	0.62	47.4	5680	43.89
2005	SS	V	>60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	3.71	69.31	11376	31.51
2005	SS	V	>60 fa	Marine vegetation	Marine vegetation	unsexed	137.81	37.7	6150	26.63
2005	SS	V	>60 fa	Metridium uniden.	Metridium sp.	unsexed	347.63	47.32	1801387	54.27
2005	SS	V	>60 fa	Miscellaneous material		unsexed	59.62	67.46	4417	47.63
2005	SS	V	>60 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	0.76	65.87	2744	74.56
2005	SS	V	>60 fa	Northern Kelp Crab	<i>Pugettia producta</i>	unsexed	0.00	100	429	100
2005	SS	V	>60 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	13.60	81.84	94749	91.38
2005	SS	V	>60 fa	Orange Burrowing Sea Cucumber	<i>Cucumaria miniata</i>	unsexed	0.02	100	888	100
2005	SS	V	>60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	0.22	100	426	100
2005	SS	V	>60 fa	Pacific Geoduck	<i>Panopea abrupta</i>	unsexed	0.18	67.6	2154	68.13
2005	SS	V	>60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	5.80	57.17	89584	57.47
2005	SS	V	>60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	0.54	100	11645	100
2005	SS	V	>60 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.00	100	404	100
2005	SS	V	>60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	2.15	45.4	10746	40.95

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								Estimate		
2005	SS	V	>60 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	1.72	38.48	16667	31.76
2005	SS	V	>60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	15.78	42.86	457229	42.79
2005	SS	V	>60 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	39.30	34.66	13619	32.07
2005	SS	V	>60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	6.94	32.77	174616	33.77
2005	SS	V	>60 fa	Plastic	Plastic	unsexed	0.68	79.37	3703	67.5
2005	SS	V	>60 fa	Polychaete worm uniden.	Class Polychaeta	unsexed	0.08	92.78	8037	92.78
2005	SS	V	>60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	0.75	68.58	1531	66.1
2005	SS	V	>60 fa	Rainbow Nudibranch	<i>Dendronotus iris</i>	unsexed	0.04	67.49	1100	69.71
2005	SS	V	>60 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.39	68.81	1292	71.33
2005	SS	V	>60 fa	Red Rock Crab	<i>Cancer productus</i>	male	7.69	29.42	18975	30.44
2005	SS	V	>60 fa	Red Rock Crab	<i>Cancer productus</i>	female	5.34	35.84	27069	36.56
2005	SS	V	>60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	3.50	38.64	46773	38.87
2005	SS	V	>60 fa	Rose Star	<i>Croaster papposus</i>	unsexed	1.09	51.44	24737	51.1
2005	SS	V	>60 fa	Rosy Tritonia	<i>Tritonia diomedea</i>	unsexed	45.28	53.46	773422	46.88
2005	SS	V	>60 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	1.14	46.63	57512	44.44
2005	SS	V	>60 fa	Salt and Pepper Sea Cucumber	<i>Cucumaria piperata</i>	unsexed	0.16	52.95	31206	54.75
2005	SS	V	>60 fa	Sand Rose Anemone	<i>Urticina columbiana</i>	unsexed	0.10	100	4264	100
2005	SS	V	>60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	18.42	57.26	62464	48.99
2005	SS	V	>60 fa	Sea mouse uniden.	Family Aphroditidae	unsexed	0.03	100	429	100
2005	SS	V	>60 fa	Sea whip uniden.	<i>Virgulariidae</i>	unsexed	0.01	100	2146	100
2005	SS	V	>60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.10	36.81	3145	32.54
2005	SS	V	>60 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.00	100	2254	100
2005	SS	V	>60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	0.03	60.23	4190	56.35
2005	SS	V	>60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	11.87	27.06	479590	26.39
2005	SS	V	>60 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	0.02	100	724	100
2005	SS	V	>60 fa	Slipskin Snailfish	<i>Liparis fucensis</i>	unsexed	0.02	100	724	100
2005	SS	V	>60 fa	Southern Rock Sole	<i>Lepidotetta bilineata</i>	unsexed	8.26	79.66	42877	89.26
2005	SS	V	>60 fa	Speckled Sanddab	<i>Citharichthys stigmatus</i>	unsexed	0.28	79.87	15221	76.91
2005	SS	V	>60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	17.10	67.11	18892	79.05
2005	SS	V	>60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	0.68	91.96	17900	89.38
2005	SS	V	>60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	237.59	53.31	494814	54.55
2005	SS	V	>60 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	4.68	48.2	3758	55.96
2005	SS	V	>60 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	3.60	74.7	33048	70.61
2005	SS	V	>60 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	0.04	48.22	4736	48.25
2005	SS	V	>60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.07	66.11	2459	68.75
2005	SS	V	>60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	44.46	39.03	58244	26.84
2005	SS	V	>60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	2.39	66.1	49946	64.34
2005	SS	V	>60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	1.86	41.36	28256	39.57
2005	SS	V	>60 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	0.01	100	524	100
2005	WI	S	5-20 fa	Aluminum	Aluminum	unsexed	0.40	38.14	11453	40.69
2005	WI	S	5-20 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.54	75.5	18183	85.16
2005	WI	S	5-20 fa	Big Skate	<i>Raja binoculata</i>	unsexed	2.08	71.41	11168	48.56
2005	WI	S	5-20 fa	Big Skate egg case	<i>Raja binoculata</i> egg case	unsexed	5.91	53.68	22900	57.51
2005	WI	S	5-20 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	0.43	75.02	56965	79.18
2005	WI	S	5-20 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	0.01	100	1135	100
2005	WI	S	5-20 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.01	100	1302	100

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate Coefficient of Variation		
2005	WI	S	5-20 fa	Brown Cat Shark egg case	<i>Apristurus brunneus</i> egg case	unsexed	0.01	100	1430	100
2005	WI	S	5-20 fa	Brown Rockfish	<i>Sebastes auriculatus</i>	unsexed	1.12	100	9077	100
2005	WI	S	5-20 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	11.08	58.06	88270	54.36
2005	WI	S	5-20 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	0.73	48.87	9341	47.52
2005	WI	S	5-20 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	13.83	44.85	162888	41.74
2005	WI	S	5-20 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	10.05	39.31	509786	46.61
2005	WI	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	14.42	97.13	20849	93.29
2005	WI	S	5-20 fa	Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	unsexed	1.19	100	1323	100
2005	WI	S	5-20 fa	Clam uniden.	<i>Class Bivalvia</i>	unsexed	0.59	100	2603	100
2005	WI	S	5-20 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	5.44	66.87	46687	60.65
2005	WI	S	5-20 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	0.04	100	9112	100
2005	WI	S	5-20 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	3.43	100	4539	100
2005	WI	S	5-20 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.80	63.28	382534	63.63
2005	WI	S	5-20 fa	Diamondback Nudibranch	<i>Tritonia festiva</i>	unsexed	0.29	67.82	16434	69.29
2005	WI	S	5-20 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	12.57	99.04	1336971	98.19
2005	WI	S	5-20 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	0.20	100	5207	100
2005	WI	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	male	1130.11	18.66	2214374	26.51
2005	WI	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	female	911.36	46.55	2685337	43.27
2005	WI	S	5-20 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	53.49	38.85	1143123	32.15
2005	WI	S	5-20 fa	False Ochre Star	<i>Easterias troschelii</i>	unsexed	8.35	78.72	49915	44.65
2005	WI	S	5-20 fa	Fishing gear	<i>Fishing gear</i>	unsexed	16.34	74.11	7202	46.65
2005	WI	S	5-20 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	5.58	60.22	63091	64.59
2005	WI	S	5-20 fa	Flatworm uniden.	<i>Phylum Platyhelminthes</i>	unsexed	0.01	100	8568	100
2005	WI	S	5-20 fa	Glass	<i>Glass</i>	unsexed	5.07	50.91	17930	56.29
2005	WI	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	female	2.48	69.14	77868	74.88
2005	WI	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	male	20.21	74.51	173723	67.01
2005	WI	S	5-20 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.04	100	5955	100
2005	WI	S	5-20 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	38.07	83.91	91572	69.83
2005	WI	S	5-20 fa	Green False Jingle	<i>Pododesmus macrochisma</i>	unsexed	0.22	100	1288	100
2005	WI	S	5-20 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	0.09	100	42956	100
2005	WI	S	5-20 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	0.45	100	1135	100
2005	WI	S	5-20 fa	Leather Star	<i>Dermasterias imbricata</i>	unsexed	0.85	100	1302	100
2005	WI	S	5-20 fa	Longfin Smelt	<i>Spirinchus thaleichthys</i>	unsexed	0.28	58.99	30406	74.07
2005	WI	S	5-20 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	6.18	55.57	5695	54.97
2005	WI	S	5-20 fa	Longspine Combfish	<i>Zanolepis latipinnis</i>	unsexed	0.09	100	2269	100
2005	WI	S	5-20 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	3.13	50.42	10731	29.65
2005	WI	S	5-20 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	204.35	46.04	1669516	58.09
2005	WI	S	5-20 fa	Miscellaneous material		unsexed	143.05	98.96	4894	67.58
2005	WI	S	5-20 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	0.12	100	1302	100
2005	WI	S	5-20 fa	Northern Rock Sole	<i>Lepidotestra polyxystra</i>	unsexed	2.55	88.44	29438	87.77
2005	WI	S	5-20 fa	Nuttall Cockle	<i>Clinocardium nuttallii</i>	unsexed	0.95	72.22	6999	82
2005	WI	S	5-20 fa	Orange Burrowing Sea Cucumber	<i>Cucumaria miniata</i>	unsexed	0.12	100	1288	100
2005	WI	S	5-20 fa	Orange Sea Pen	<i>Ptilosarcus gurneyi</i>	unsexed	4.15	73.61	48021	65.27
2005	WI	S	5-20 fa	Other man-made debris	<i>Other man-made debris</i>	unsexed	17.51	80.72	49242	97.51
2005	WI	S	5-20 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	0.54	54.73	5660	54.28
2005	WI	S	5-20 fa	Pacific Herring	<i>Clupea pallasi</i>	unsexed	12.87	39.98	914023	42.15

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2005	WI	S	5-20 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.07	61.49	9846	63.49
2005	WI	S	5-20 fa	Pacific Pompano	<i>Peprilus simillimus</i>	unsexed	0.48	55.74	4799	54.19
2005	WI	S	5-20 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	14.23	45.05	68781	45.74
2005	WI	S	5-20 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	3.86	22.29	49414	25.32
2005	WI	S	5-20 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	31.73	95.41	805222	94.44
2005	WI	S	5-20 fa	Padded Sculpin	<i>Artedius fenestralis</i>	unsexed	0.03	100	1323	100
2005	WI	S	5-20 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	3.93	33.27	140012	36.13
2005	WI	S	5-20 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	35.84	72.78	98642	81.39
2005	WI	S	5-20 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	3.67	26.61	84249	30.86
2005	WI	S	5-20 fa	Plastic	Plastic	unsexed	2.27	58.71	18347	71.51
2005	WI	S	5-20 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.01	100	1323	100
2005	WI	S	5-20 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	0.03	100	2603	100
2005	WI	S	5-20 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.07	100	1428	100
2005	WI	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	male	12.24	88.09	49007	86.93
2005	WI	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	female	8.50	91.09	59776	90.93
2005	WI	S	5-20 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	0.17	67.6	2269	67.42
2005	WI	S	5-20 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	0.05	100	5207	100
2005	WI	S	5-20 fa	Rosy Tritonia	<i>Tritonia diomedea</i>	unsexed	28.75	93.28	696903	96.43
2005	WI	S	5-20 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.86	71.98	41831	62.39
2005	WI	S	5-20 fa	Salt and Pepper Sea Cucumber	<i>Cucumaria piperata</i>	unsexed	0.05	100	4764	100
2005	WI	S	5-20 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	33.44	34.01	217331	26.45
2005	WI	S	5-20 fa	Shag-rug Aeolis	<i>Aeolidia papillosa</i>	unsexed	0.07	100	1428	100
2005	WI	S	5-20 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	189.36	40.49	12533589	35.1
2005	WI	S	5-20 fa	Shortfin Eelpout	<i>Lycodes brevipes</i>	unsexed	0.03	100	2603	100
2005	WI	S	5-20 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.31	88.55	12277	81.93
2005	WI	S	5-20 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.03	100	4289	100
2005	WI	S	5-20 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.09	49.08	8727	38.49
2005	WI	S	5-20 fa	Southern Rock Sole	<i>Lepidotetta bilineata</i>	unsexed	48.83	56.5	303795	62.54
2005	WI	S	5-20 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	32.10	31.22	1505212	30.53
2005	WI	S	5-20 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	13.84	36.72	20784	33.87
2005	WI	S	5-20 fa	Spinyhead Sculpin	<i>Dasycttus setiger</i>	unsexed	0.28	49.61	9295	38.83
2005	WI	S	5-20 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	0.07	100	2269	100
2005	WI	S	5-20 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	59.99	81.23	101537	82.61
2005	WI	S	5-20 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	181.03	21.94	768531	26.55
2005	WI	S	5-20 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	1.10	74.04	90390	82.63
2005	WI	S	5-20 fa	Striped Seaperch	<i>Embiotoca lateralis</i>	unsexed	0.38	71.13	13425	67.43
2005	WI	S	5-20 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.02	100	1041	100
2005	WI	S	5-20 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.12	86.14	5899	81.3
2005	WI	S	5-20 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	11.69	51.77	19358	51.95
2005	WI	S	5-20 fa	Surf Smelt	<i>Hypomesus pretiosus</i>	unsexed	0.03	100	1066	100
2005	WI	S	5-20 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	0.34	100	10414	100
2005	WI	S	5-20 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	0.61	100	20827	100
2005	WI	S	5-20 fa	Tubesnout	<i>Aulorhynchus flavidus</i>	unsexed	0.01	100	1041	100
2005	WI	S	5-20 fa	Vermilion Rockfish	<i>Sebastes miniatus</i>	unsexed	0.51	100	1135	100
2005	WI	S	5-20 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.47	100	24991	100
2005	WI	S	5-20 fa	Weathervane Scallop	<i>Patinopecten caurinus</i>	unsexed	1.42	100	2382	100

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2005	WI	S	5-20 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	2.41	59.67	28857	67.5
2005	WI	T	21-40 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	34.56	33.47	6117903	37.1
2005	WI	T	21-40 fa	Aluminum	<i>Aluminum</i>	unsexed	0.30	69.27	5947	57.87
2005	WI	T	21-40 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.42	100	3901	100
2005	WI	T	21-40 fa	Axe Yoldia	<i>Megayoldia thraciaeformis</i>	unsexed	0.01	100	1008	100
2005	WI	T	21-40 fa	Bering Eelpout	<i>Lycodes beringi</i>	unsexed	0.04	100	945	100
2005	WI	T	21-40 fa	Big Skate	<i>Raja binoculata</i>	unsexed	15.62	44.57	18974	50.68
2005	WI	T	21-40 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	51.95	38.26	3555179	41.85
2005	WI	T	21-40 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	1.93	88.54	131214	79.26
2005	WI	T	21-40 fa	Blue Mud Shrimp	<i>Upogebia pugettensis</i>	unsexed	0.00	100	913	100
2005	WI	T	21-40 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	0.14	100	1066	100
2005	WI	T	21-40 fa	Burrowing Anemone	<i>Pachycerianthus fimbriatus</i>	unsexed	0.82	100	7056	100
2005	WI	T	21-40 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	0.15	70.14	5270	80.74
2005	WI	T	21-40 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	9.01	79.73	66046	79.69
2005	WI	T	21-40 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	1.18	57.47	44342	61.71
2005	WI	T	21-40 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	4.93	100	32271	100
2005	WI	T	21-40 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	2.66	91.47	3847	76.99
2005	WI	T	21-40 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.43	33.74	247623	36.86
2005	WI	T	21-40 fa	Crisscross Yoldia	<i>Yoldia aeolica</i>	unsexed	0.01	100	1066	100
2005	WI	T	21-40 fa	Diamondback Nudibranch	<i>Tritonia festiva</i>	unsexed	0.50	50.44	7066	52.37
2005	WI	T	21-40 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.07	75.64	5440	70.32
2005	WI	T	21-40 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	0.44	100	4890	100
2005	WI	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	male	200.24	17.55	299671	22.82
2005	WI	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	female	187.26	22.12	490190	19.06
2005	WI	T	21-40 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	140.85	48.48	2912741	54.06
2005	WI	T	21-40 fa	Fishing gear	Fishing gear	unsexed	19.43	99.41	5952	49.49
2005	WI	T	21-40 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	9.48	40.37	100005	38.44
2005	WI	T	21-40 fa	Giant Pacific Octopus	<i>Enteroctopus dofleini</i>	unsexed	0.14	100	978	100
2005	WI	T	21-40 fa	Glass	Glass	unsexed	0.37	66.8	3109	71.76
2005	WI	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	female	0.04	100	1066	100
2005	WI	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	male	0.46	83.34	3985	66.35
2005	WI	T	21-40 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	0.33	100	1956	100
2005	WI	T	21-40 fa	Hybrid Sole	<i>Inopsetta ischyra</i>	unsexed	0.34	100	1008	100
2005	WI	T	21-40 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	0.74	100	1956	100
2005	WI	T	21-40 fa	Lewis's Moon Snail	<i>Euspira lewisi</i>	unsexed	0.14	100	1066	100
2005	WI	T	21-40 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	0.02	100	1066	100
2005	WI	T	21-40 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	8.01	62.9	15991	52.63
2005	WI	T	21-40 fa	Longnose Skate egg case	<i>Raja rhina</i> egg case	unsexed	0.15	68.82	3810	66.17
2005	WI	T	21-40 fa	Longspine Combfish	<i>Zanholepis latipinnis</i>	unsexed	2.07	90.59	28025	91.8
2005	WI	T	21-40 fa	Marine vegetation	Marine vegetation	unsexed	0.85	54.78	5643	48.34
2005	WI	T	21-40 fa	Metridium uniden.	Metridium sp.	unsexed	172.23	43.82	552289	41.23
2005	WI	T	21-40 fa	Miscellaneous material		unsexed	1.86	72.39	6439	51.22
2005	WI	T	21-40 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	0.04	100	1854	100
2005	WI	T	21-40 fa	Northern Anchovy	<i>Engraulis mordax</i>	unsexed	0.03	100	945	100
2005	WI	T	21-40 fa	Other man-made debris	Other man-made debris	unsexed	0.44	100	1066	100
2005	WI	T	21-40 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	0.04	100	1793	100

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2005	WI	T	21-40 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	73.96	44.97	2408454	53.51
2005	WI	T	21-40 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	11.39	42.2	209524	41.09
2005	WI	T	21-40 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	49.70	85.7	277729	89.01
2005	WI	T	21-40 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	10.31	26.35	114569	32.01
2005	WI	T	21-40 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	9.12	92.97	261127	92.98
2005	WI	T	21-40 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	15.75	38.82	247304	46.85
2005	WI	T	21-40 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	3.03	64.53	9442	77.58
2005	WI	T	21-40 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	10.95	20.86	187382	18.03
2005	WI	T	21-40 fa	Plastic	Plastic	unsexed	1.73	72.7	16851	46.23
2005	WI	T	21-40 fa	Polychaete worm uniden.	Class Polychaeta	unsexed	0.13	67.9	11873	84.35
2005	WI	T	21-40 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	0.12	100	6845	100
2005	WI	T	21-40 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.04	100	1066	100
2005	WI	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	female	0.22	100	897	100
2005	WI	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	male	0.89	100	1956	100
2005	WI	T	21-40 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	0.14	100	975	100
2005	WI	T	21-40 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	1.23	31.42	18334	50.24
2005	WI	T	21-40 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.11	100	3707	100
2005	WI	T	21-40 fa	Rosy Tritonia	<i>Tritonia diomedea</i>	unsexed	12.53	81.14	81960	76.34
2005	WI	T	21-40 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	2.42	72.33	86814	69.85
2005	WI	T	21-40 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	10.00	52.91	38981	52.89
2005	WI	T	21-40 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	79.04	40.16	5797917	53.16
2005	WI	T	21-40 fa	Shortscale Eulaid	<i>Eualus suckleyi</i>	unsexed	0.09	53.07	52611	53.3
2005	WI	T	21-40 fa	Showy Snailfish	<i>Liparis pulchellus</i>	unsexed	0.06	100	913	100
2005	WI	T	21-40 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	0.22	85.84	25371	88.7
2005	WI	T	21-40 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	10.00	80.04	576253	57.82
2005	WI	T	21-40 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.33	61	35820	66.17
2005	WI	T	21-40 fa	Southern Rock Sole	<i>Lepidotsetta bilineata</i>	unsexed	72.92	90.57	651810	94.39
2005	WI	T	21-40 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	7.36	54.21	308328	53.33
2005	WI	T	21-40 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	11.65	33.48	25926	36.35
2005	WI	T	21-40 fa	Spinyhead Sculpin	<i>Dasyctonus setiger</i>	unsexed	0.88	49.71	11267	37.27
2005	WI	T	21-40 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	0.49	79.1	12104	77.23
2005	WI	T	21-40 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	107.28	68.45	265045	75.7
2005	WI	T	21-40 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	0.01	100	945	100
2005	WI	T	21-40 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	72.85	75.6	220375	76.6
2005	WI	T	21-40 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.19	100	5561	100
2005	WI	T	21-40 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	0.05	100	5040	100
2005	WI	T	21-40 fa	Striped Seaperch	<i>Embiotoca lateralis</i>	unsexed	0.09	100	1956	100
2005	WI	T	21-40 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.22	80.54	12162	75.1
2005	WI	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.05	100	1066	100
2005	WI	T	21-40 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	0.47	100	4890	100
2005	WI	T	21-40 fa	Sweet Potato Sea Cucumber	<i>Molpadia intermedia</i>	unsexed	0.53	78.93	1920	66.15
2005	WI	T	21-40 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.42	87.45	19393	84.51
2005	WI	T	21-40 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	1.61	97.9	41790	97.32
2005	WI	T	21-40 fa	White Sea Cucumber	<i>Eupentacta quinquesemita</i>	unsexed	0.02	100	1008	100
2005	WI	T	21-40 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	0.21	100	1956	100
2005	WI	U	41-60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	2.79	55.09	342134	49.71

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass Estimate Coefficient of Variation		Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Coefficient of Variation	Abundance Estimate (number of individuals)		
2005	WI	U	41-60 fa	Aluminum	Aluminum	unsexed	1.47	100	2177	100	
2005	WI	U	41-60 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.21	100	1233	100	
2005	WI	U	41-60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	12.87	68.47	8163	57.83	
2005	WI	U	41-60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	8.06	45.03	314748	54.38	
2005	WI	U	41-60 fa	Blackfin Poacher	<i>Bathyagonus nigripinnis</i>	unsexed	0.74	66.68	40703	65.94	
2005	WI	U	41-60 fa	Blackfin Sculpin	<i>Malacocottus kincaidi</i>	unsexed	0.04	100	1233	100	
2005	WI	U	41-60 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	0.88	87.03	52142	78.93	
2005	WI	U	41-60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.05	100	3186	100	
2005	WI	U	41-60 fa	Blue Mud Shrimp	<i>Upogebia pugettensis</i>	unsexed	0.01	100	1089	100	
2005	WI	U	41-60 fa	Brown Cat Shark	<i>Apristurus brunneus</i>	unsexed	0.44	100	1197	100	
2005	WI	U	41-60 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	0.01	100	1138	100	
2005	WI	U	41-60 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	12.57	61.87	12524	56.81	
2005	WI	U	41-60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.88	40.56	309892	37.93	
2005	WI	U	41-60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.01	100	1598	100	
2005	WI	U	41-60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	10.93	66.94	69152	69.09	
2005	WI	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	male	185.36	21.52	281677	22.34	
2005	WI	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	female	210.88	36.9	604490	37.91	
2005	WI	U	41-60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	302.65	52.8	1818595	54.34	
2005	WI	U	41-60 fa	Fishing gear	Fishing gear	unsexed	1.50	100	1197	100	
2005	WI	U	41-60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	3.57	53.54	29551	65.45	
2005	WI	U	41-60 fa	Giant Pacific Octopus	<i>Enteroctopus dofleini</i>	unsexed	15.12	96.77	3410	70.19	
2005	WI	U	41-60 fa	Glass	Glass	unsexed	3.02	83.27	12848	80.95	
2005	WI	U	41-60 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	0.19	100	1062	100	
2005	WI	U	41-60 fa	Heart Urchin	<i>Briaster latifrons</i>	unsexed	0.12	65.47	2430	65.47	
2005	WI	U	41-60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	19.15	38.44	65442	36.7	
2005	WI	U	41-60 fa	Marine vegetation	Marine vegetation	unsexed	1.45	99.03	2322	65.63	
2005	WI	U	41-60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	95.58	18.55	267828	18.42	
2005	WI	U	41-60 fa	Miscellaneous material		unsexed	6.15	100	3186	100	
2005	WI	U	41-60 fa	Northern Anchovy	<i>Engraulis mordax</i>	unsexed	0.03	100	1146	100	
2005	WI	U	41-60 fa	Other man-made debris	Other man-made debris	unsexed	45.26	98.72	3920	49.84	
2005	WI	U	41-60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	86.13	23.8	853328	34.8	
2005	WI	U	41-60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	1.94	62.7	5923	55.98	
2005	WI	U	41-60 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	0.04	100	1089	100	
2005	WI	U	41-60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	0.40	100	8497	100	
2005	WI	U	41-60 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	0.24	100	1197	100	
2005	WI	U	41-60 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	2.94	100	10621	100	
2005	WI	U	41-60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	17.61	37.24	205157	34.37	
2005	WI	U	41-60 fa	Plastic	Plastic	unsexed	1.84	55.07	12203	57.43	
2005	WI	U	41-60 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	0.08	100	1138	100	
2005	WI	U	41-60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	3.39	33.14	9987	34.81	
2005	WI	U	41-60 fa	Red Brotula	<i>Brosmophycis marginata</i>	unsexed	0.58	100	1598	100	
2005	WI	U	41-60 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.08	100	1146	100	
2005	WI	U	41-60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	13.72	64.37	161250	61.56	
2005	WI	U	41-60 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	0.66	100	1598	100	
2005	WI	U	41-60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.12	80.64	8544	85.71	
2005	WI	U	41-60 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.20	36.49	152130	36.11	

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2005	WI	U	41-60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	5.78	33.84	617952	33.46	
2005	WI	U	41-60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	67.67	21.24	1871785	22.17	
2005	WI	U	41-60 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	1.47	40.33	6610	47.44	
2005	WI	U	41-60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	28.32	37.23	30188	35.34	
2005	WI	U	41-60 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	0.35	100	3186	100	
2005	WI	U	41-60 fa	Spinyhead Sculpin	<i>Dasyctonus setiger</i>	unsexed	0.34	52.17	9113	53.43	
2005	WI	U	41-60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	0.48	59.12	9246	53.24	
2005	WI	U	41-60 fa	Spotted Ratfish	<i>Hydrolagus collei</i>	unsexed	888.18	37.98	3022732	48.98	
2005	WI	U	41-60 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	0.35	100	1598	100	
2005	WI	U	41-60 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.03	100	1138	100	
2005	WI	U	41-60 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.07	83.18	3365	70.69	
2005	WI	U	41-60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	1.89	52.71	5558	58.05	
2005	WI	U	41-60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	2.32	40.91	14173	69.58	
2005	WI	V	>60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	0.13	100	16728	100	
2005	WI	V	>60 fa	Aluminum	<i>Aluminum</i>	unsexed	0.05	100	1033	100	
2005	WI	V	>60 fa	Bering Eelpout	<i>Lycodes beringi</i>	unsexed	0.15	100	2719	100	
2005	WI	V	>60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	0.58	100	1046	100	
2005	WI	V	>60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	1.73	76.76	56222	81.46	
2005	WI	V	>60 fa	Blackfin Poacher	<i>Bathyagonus nigripinnis</i>	unsexed	0.13	100	10455	100	
2005	WI	V	>60 fa	Blacktip Poacher	<i>Xeneretmus latifrons</i>	unsexed	0.02	100	2039	100	
2005	WI	V	>60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.03	100	2149	100	
2005	WI	V	>60 fa	Brown Cat Shark	<i>Apristurus brunneus</i>	unsexed	1.46	89.98	4033	78.02	
2005	WI	V	>60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	1.27	100	3100	100	
2005	WI	V	>60 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	0.20	100	1075	100	
2005	WI	V	>60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.15	100	55413	100	
2005	WI	V	>60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	25.25	27.73	87381	28.72	
2005	WI	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	male	72.30	62.26	108276	61.92	
2005	WI	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	female	167.46	32.21	404859	32.56	
2005	WI	V	>60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	222.69	40.77	998004	49.87	
2005	WI	V	>60 fa	Fishing gear	Fishing gear	unsexed	49.99	99.96	5925	58.84	
2005	WI	V	>60 fa	Giant Pacific Octopus	<i>Enteroctopus dofleini</i>	unsexed	0.24	100	1075	100	
2005	WI	V	>60 fa	Glass	Glass	unsexed	0.33	100	933	100	
2005	WI	V	>60 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.01	100	933	100	
2005	WI	V	>60 fa	Heart Urchin	<i>Briaster latifrons</i>	unsexed	0.82	100	16728	100	
2005	WI	V	>60 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	13.20	100	1667	100	
2005	WI	V	>60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	76.23	21.93	164258	18.57	
2005	WI	V	>60 fa	Longnose Skate egg case	<i>Raja rhina egg case</i>	unsexed	0.14	73.24	4269	77.02	
2005	WI	V	>60 fa	Longspine Combfish	<i>Zanolepis latipinnis</i>	unsexed	0.01	100	1075	100	
2005	WI	V	>60 fa	Marine vegetation	Marine vegetation	unsexed	4.88	63.64	6747	30.38	
2005	WI	V	>60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	49.36	56.14	170847	52.23	
2005	WI	V	>60 fa	Mottled Anemone	<i>Urticina crassicornis</i>	unsexed	0.18	100	1812	100	
2005	WI	V	>60 fa	Other man-made debris	Other man-made debris	unsexed	6.03	90.38	2096	67.09	
2005	WI	V	>60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	1.71	100	3224	100	
2005	WI	V	>60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	90.73	25	204919	20.75	
2005	WI	V	>60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	0.33	70.3	1879	67.6	
2005	WI	V	>60 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	0.20	100	906	100	

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								Estimate		
2005	WI	V	>60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	0.03	100	1046	100
2005	WI	V	>60 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	0.31	100	1075	100
2005	WI	V	>60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	0.85	79.77	9306	67.7
2005	WI	V	>60 fa	Plastic	Plastic	unsexed	15.70	97.02	4795	45.14
2005	WI	V	>60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	13.51	48.5	38062	53.99
2005	WI	V	>60 fa	Red Brotula	<i>Brosmophycis marginata</i>	unsexed	0.85	55.45	4074	56.32
2005	WI	V	>60 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.03	100	1046	100
2005	WI	V	>60 fa	Red Rock Crab	<i>Cancer productus</i>	female	0.16	100	1075	100
2005	WI	V	>60 fa	Red Rock Crab	<i>Cancer productus</i>	male	0.56	71.77	2094	67.11
2005	WI	V	>60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	0.68	59.53	8590	62.46
2005	WI	V	>60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.02	100	1020	100
2005	WI	V	>60 fa	Roughback Sculpin	<i>Chitonotus pugensis</i>	unsexed	0.01	100	1075	100
2005	WI	V	>60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	7.66	61.55	23745	54.36
2005	WI	V	>60 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.02	68.18	15319	81.12
2005	WI	V	>60 fa	Shrimp uniden.	<i>Decapoda-Natantia</i>	unsexed	0.01	100	1003	100
2005	WI	V	>60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	2.05	59.32	245136	56
2005	WI	V	>60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	35.67	31.06	823562	37.32
2005	WI	V	>60 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.01	100	1075	100
2005	WI	V	>60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	9.08	77.41	12312	76.31
2005	WI	V	>60 fa	Spinyhead Sculpin	<i>Dasycottus setiger</i>	unsexed	0.15	100	2091	100
2005	WI	V	>60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	0.58	100	14637	100
2005	WI	V	>60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	1515.97	20.81	3517984	22.59
2005	WI	V	>60 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	0.01	100	1046	100
2005	WI	V	>60 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	0.01	70.27	1767	67.21
2005	WI	V	>60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	0.62	62.41	3704	53.79
2005	WI	V	>60 fa	Sweet Potato Sea Cucumber	<i>Molpadia intermedia</i>	unsexed	0.33	48.28	5055	46.1
2005	WI	V	>60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	0.20	100	1020	100
2005	WI	V	>60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.24	58.7	15644	61.59
2005	WI	V	>60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	5.14	55.81	15318	54.57
2006	GB	S	5-20 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	3.00	95.68	291123	75.45
2006	GB	S	5-20 fa	Aluminum	Aluminum	unsexed	1.39	67.8	46314	48.75
2006	GB	S	5-20 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	1.56	46.88	19013	46.71
2006	GB	S	5-20 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	0.30	100	2468	100
2006	GB	S	5-20 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	1.87	82.27	9297	76.36
2006	GB	S	5-20 fa	Bent-nose Macoma	<i>Macoma nasuta</i>	unsexed	0.12	100	8842	100
2006	GB	S	5-20 fa	Big Skate	<i>Raja binoculata</i>	unsexed	185.64	73.43	89169	27.21
2006	GB	S	5-20 fa	Big Skate egg case	<i>Raja binoculata egg case</i>	unsexed	3.94	57.97	10721	61.23
2006	GB	S	5-20 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	3.83	34.87	188041	36.57
2006	GB	S	5-20 fa	Buffalo Sculpin	<i>Enophrysbison</i>	unsexed	68.95	75.78	573322	69.53
2006	GB	S	5-20 fa	Burrowing Anemone	<i>Pachycerianthus fimbriatus</i>	unsexed	1.03	63.83	37701	66.69
2006	GB	S	5-20 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	2.60	46.5	29743	46.81
2006	GB	S	5-20 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	334.75	26.54	4037063	29.63
2006	GB	S	5-20 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.85	59.8	41175	55.8
2006	GB	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	30.00	80.28	32636	75.7
2006	GB	S	5-20 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	3.12	100	8128	100
2006	GB	S	5-20 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	2.43	52.42	267147	51.37

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								Coefficient of Variation	Abundance Estimate		
2006	GB	S	5-20 fa	Crangonid shrimp uniden.	Crangonidae	unsexed	89.88	90.93	70875606	95.54	
2006	GB	S	5-20 fa	Cryptic Kelp Crab	Pugettia richii	unsexed	0.06	68.77	5801	68.77	
2006	GB	S	5-20 fa	Danas Blade Shrimp	Spirontocaris lamellicornis	unsexed	0.43	71.9	145511	77.02	
2006	GB	S	5-20 fa	Divaricate Nut Clam	Acila castrensis	unsexed	0.03	100	27424	100	
2006	GB	S	5-20 fa	Dock Shrimp	Pandalus danae	unsexed	98.64	82.36	27448211	78.83	
2006	GB	S	5-20 fa	Dover Sole	Microstomus pacificus	unsexed	7.23	45.36	114902	41.25	
2006	GB	S	5-20 fa	Dungeness Crab	Cancer magister	male	2176.27	16.34	4495288	13.35	
2006	GB	S	5-20 fa	Dungeness Crab	Cancer magister	female	1362.88	22.5	4576215	25.22	
2006	GB	S	5-20 fa	English Sole	Parophrys vetulus	unsexed	924.24	26.51	7954968	20.13	
2006	GB	S	5-20 fa	False Ochre Star	Easterias troschelii	unsexed	19.57	72.78	21408	64.31	
2006	GB	S	5-20 fa	Fishing gear	Fishing gear	unsexed	58.52	96.72	16805	47.17	
2006	GB	S	5-20 fa	Flathead Sole	Hippoglossoides elassodon	unsexed	414.63	42.45	3655043	55.38	
2006	GB	S	5-20 fa	Giant Wrymouth	Cryptacanthodes giganteus	unsexed	4.95	70.77	18317	74.55	
2006	GB	S	5-20 fa	Glass	Glass	unsexed	49.45	54.03	164956	54.25	
2006	GB	S	5-20 fa	Graceful Crab	Cancer gracilis	female	3.63	53.68	100464	41.28	
2006	GB	S	5-20 fa	Graceful Crab	Cancer gracilis	male	5.03	42.84	164235	39.13	
2006	GB	S	5-20 fa	Graceful Decorator Crab	Oregonia gracilis	unsexed	0.09	63.65	10662	58.86	
2006	GB	S	5-20 fa	Great Sculpin	Myoxocephalus polyacanthocephalus	unsexed	153.07	44.58	626497	49.95	
2006	GB	S	5-20 fa	Grunt Sculpin	Rhamphocottus richardsoni	unsexed	0.07	100	6791	100	
2006	GB	S	5-20 fa	Hairy Crab	Hapalogaster mertensii	unsexed	0.05	100	2742	100	
2006	GB	S	5-20 fa	Hermit crabs uniden.	Paguridae	unsexed	0.25	100	5485	100	
2006	GB	S	5-20 fa	Horned Shrimp	Paracrangon echinata	unsexed	0.10	75.39	19001	75.39	
2006	GB	S	5-20 fa	Humpy Shrimp	Pandalus goniurus	unsexed	101.91	89.58	37933009	87.77	
2006	GB	S	5-20 fa	Lion's Mane Jelly	Cyanea capillata	unsexed	0.13	100	2506	100	
2006	GB	S	5-20 fa	Lobed Tunicate	Cystodytes lobatus	unsexed	0.03	100	2947	100	
2006	GB	S	5-20 fa	Longfin Sculpin	Jordania zonope	unsexed	9.83	71.18	1221138	69.03	
2006	GB	S	5-20 fa	Longfin Smelt	Spirinchus thaleichthys	unsexed	87.61	47.5	15251759	53.11	
2006	GB	S	5-20 fa	Longnose Skate	Raja rhina	unsexed	10.79	59.77	16403	60.58	
2006	GB	S	5-20 fa	Marbled Snailfish	Liparis dennyi	unsexed	0.21	100	2994	100	
2006	GB	S	5-20 fa	Marine vegetation	Marine vegetation	unsexed	104.49	69.14	104631	51.71	
2006	GB	S	5-20 fa	Metridium uniden.	Metridium sp.	unsexed	112.20	44.48	251769	56.1	
2006	GB	S	5-20 fa	Miscellaneous material		unsexed	69.59	56.56	55977	42.63	
2006	GB	S	5-20 fa	Mixed catch		unsexed	162.84	100	2331	100	
2006	GB	S	5-20 fa	Morning Sun Star	Solaster dawsoni	unsexed	1.84	100	2709	100	
2006	GB	S	5-20 fa	Northern Rock Sole	Lepidotsetta polyxystra	unsexed	72.70	55.88	719201	61.27	
2006	GB	S	5-20 fa	Northern Spearnose Poacher	Agonopsis vulsa	unsexed	0.65	75.01	32725	68.11	
2006	GB	S	5-20 fa	Nudibranch uniden.	Order Nudibranchia	unsexed	0.05	100	6791	100	
2006	GB	S	5-20 fa	Orange Sea Pen	Ptilosarcus gurneyi	unsexed	1.28	69.18	20074	61.87	
2006	GB	S	5-20 fa	Oregon Hairy Triton	Fusitriton oregonensis	unsexed	0.23	100	2264	100	
2006	GB	S	5-20 fa	Other man-made debris	Other man-made debris	unsexed	32.98	98.49	12411	57.13	
2006	GB	S	5-20 fa	Pacific Herring	Clupea pallasii	unsexed	69.30	37.41	2175760	44.72	
2006	GB	S	5-20 fa	Pacific Lyre Crab	Hyas lyratus	unsexed	0.08	100	2506	100	
2006	GB	S	5-20 fa	Pacific Sanddab	Citharichthys sordidus	unsexed	177.72	47.12	1286797	53.3	
2006	GB	S	5-20 fa	Pacific Sandfish	Trichodon trichodon	unsexed	0.15	100	2468	100	
2006	GB	S	5-20 fa	Pacific Staghorn Sculpin	Leptocottus armatus	unsexed	76.48	24.21	415048	18.82	
2006	GB	S	5-20 fa	Pacific Tomcod	Microgadus proximus	unsexed	45.87	34.61	1155314	33.52	

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								Estimate		
2006	GB	S	5-20 fa	Padded Sculpin	<i>Artedius fenestralis</i>	unsexed	3.15	72.46	239571	69.64
2006	GB	S	5-20 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	0.09	100	2264	100
2006	GB	S	5-20 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	0.68	44.19	24917	44.09
2006	GB	S	5-20 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	286.52	52.08	398403	42.79
2006	GB	S	5-20 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	423.39	49.53	9160085	49.81
2006	GB	S	5-20 fa	Plastic	Plastic	unsexed	131.81	72.58	123878	38.33
2006	GB	S	5-20 fa	Rainbow Nudibranch	<i>Dendronotus iris</i>	unsexed	0.53	73.44	33853	63.34
2006	GB	S	5-20 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	8.53	100	11978	100
2006	GB	S	5-20 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	1.28	68.63	7475	70.3
2006	GB	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	female	21.63	57.84	154257	51.1
2006	GB	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	male	83.75	50.88	267627	45.27
2006	GB	S	5-20 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	20.10	100	18965	100
2006	GB	S	5-20 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	2.79	84.71	58144	76.62
2006	GB	S	5-20 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	7.73	58.97	324216	57.92
2006	GB	S	5-20 fa	Ringed Lucine	<i>Lucinoma annulata</i>	unsexed	0.08	100	2742	100
2006	GB	S	5-20 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	10.30	57.11	426983	55.77
2006	GB	S	5-20 fa	Saddleback Gunnel	<i>Pholis ornata</i>	unsexed	0.51	100	50906	100
2006	GB	S	5-20 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	235.28	29.02	1255996	19.62
2006	GB	S	5-20 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	138.08	34.28	1098233	33.21
2006	GB	S	5-20 fa	Sea Nymph uniden.	Family Nereididae	unsexed	0.09	100	4278	100
2006	GB	S	5-20 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	115.25	47.82	9687268	46.26
2006	GB	S	5-20 fa	Shortfin Eelpout	<i>Lycodes brevipes</i>	unsexed	1.95	59.44	91813	61.16
2006	GB	S	5-20 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.03	100	10024	100
2006	GB	S	5-20 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	0.01	100	2742	100
2006	GB	S	5-20 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	1.87	59.17	92917	62.02
2006	GB	S	5-20 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.08	54.43	12040	61.55
2006	GB	S	5-20 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	0.20	100	11318	100
2006	GB	S	5-20 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	4.92	51.61	395387	50.12
2006	GB	S	5-20 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	320.74	47.49	1676509	51.23
2006	GB	S	5-20 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	20.49	23.83	586902	24.2
2006	GB	S	5-20 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	107.03	34.62	85857	28.05
2006	GB	S	5-20 fa	Spinyhead Sculpin	<i>Dasycottus setiger</i>	unsexed	1.54	53.81	22981	53.38
2006	GB	S	5-20 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	0.03	100	2742	100
2006	GB	S	5-20 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	1.86	79.87	4770	68.7
2006	GB	S	5-20 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	1651.82	49.93	4409133	54.31
2006	GB	S	5-20 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	1.85	83.97	16673	82.47
2006	GB	S	5-20 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	3.39	51.2	150325	53.95
2006	GB	S	5-20 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.14	100	2264	100
2006	GB	S	5-20 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	14.87	47.71	616822	50.87
2006	GB	S	5-20 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	106.57	30.66	142936	27.3
2006	GB	S	5-20 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	33.06	53.61	304240	47.4
2006	GB	S	5-20 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	79.41	53.29	513533	47.11
2006	GB	S	5-20 fa	Tunicate uniden.	<i>Subphylum Tunicata</i>	unsexed	0.66	100	18109	100
2006	GB	S	5-20 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	0.20	76.74	5674	68.72
2006	GB	S	5-20 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	1.21	40.96	21209	36.61
2006	GB	S	5-20 fa	Weathervane Scallop	<i>Patinopecten caurinus</i>	unsexed	7.94	100	12531	100

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2006	GB	S	5-20 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	4.10	35.66	51258	33.42	
2006	GB	T	21-40 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	11.62	98.97	2636986	99.1	
2006	GB	T	21-40 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	1.73	64.67	23062	65.1	
2006	GB	T	21-40 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	3.85	35.86	34256	31.46	
2006	GB	T	21-40 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	1.37	65.94	12450	65.94	
2006	GB	T	21-40 fa	Big Skate	<i>Raja binoculata</i>	unsexed	41.65	52.79	154160	54.39	
2006	GB	T	21-40 fa	Big Skate egg case	<i>Raja binoculata</i> egg case	unsexed	57.89	100	186017	100	
2006	GB	T	21-40 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	2.62	61.89	99484	60.57	
2006	GB	T	21-40 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	3.68	71.52	41571	64.72	
2006	GB	T	21-40 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	7.16	59.39	53138	73.78	
2006	GB	T	21-40 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	50.70	62.75	123108	64.86	
2006	GB	T	21-40 fa	Clam uniden.	<i>Class Bivalvia</i>	unsexed	0.10	100	2564	100	
2006	GB	T	21-40 fa	Clown Nudibranch	<i>Triopha catalinae</i>	unsexed	0.10	100	4895	100	
2006	GB	T	21-40 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	3.34	100	6299	100	
2006	GB	T	21-40 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.47	50.28	244883	65.65	
2006	GB	T	21-40 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.03	100	2564	100	
2006	GB	T	21-40 fa	Danas Blade Shrimp	<i>Spirontocaris lamellicornis</i>	unsexed	0.21	100	22028	100	
2006	GB	T	21-40 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	13.58	58.27	2985130	63.04	
2006	GB	T	21-40 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	25.83	31.28	274418	21.92	
2006	GB	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	female	616.69	47.54	1537005	40.17	
2006	GB	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	male	2925.38	48.82	4721073	50.64	
2006	GB	T	21-40 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	891.15	33.09	9128802	36.88	
2006	GB	T	21-40 fa	False Ochre Star	<i>Easterias troschelii</i>	unsexed	1.20	100	4895	100	
2006	GB	T	21-40 fa	Fishing gear	Fishing gear	unsexed	107.63	100	4881	100	
2006	GB	T	21-40 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	125.90	55.99	912638	65.35	
2006	GB	T	21-40 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	0.69	100	3149	100	
2006	GB	T	21-40 fa	Glass	Glass	unsexed	14.72	85	16217	71.29	
2006	GB	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	female	0.42	100	4895	100	
2006	GB	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	male	1.88	100	26924	100	
2006	GB	T	21-40 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.34	67.07	56992	73.5	
2006	GB	T	21-40 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.92	65.08	124735	76.11	
2006	GB	T	21-40 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	47.92	71	113939	65.38	
2006	GB	T	21-40 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.30	84.81	69914	72.82	
2006	GB	T	21-40 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	9.78	48.29	5163974	55.35	
2006	GB	T	21-40 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	1.57	100	3149	100	
2006	GB	T	21-40 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	0.27	100	2441	100	
2006	GB	T	21-40 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	2.13	54.99	20626	46.19	
2006	GB	T	21-40 fa	Lobed Tunicate	<i>Cystodites lobatus</i>	unsexed	0.57	100	14686	100	
2006	GB	T	21-40 fa	Longfin Smelt	<i>Spirinchus thaleichthys</i>	unsexed	0.31	89.45	21760	85.51	
2006	GB	T	21-40 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	28.72	75	34149	53.59	
2006	GB	T	21-40 fa	Marbled Snailfish	<i>Liparis dennyi</i>	unsexed	0.16	100	4895	100	
2006	GB	T	21-40 fa	Marine vegetation	Marine vegetation	unsexed	19.07	59.05	19713	20.13	
2006	GB	T	21-40 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	282.64	49.15	695428	37.05	
2006	GB	T	21-40 fa	Miscellaneous material		unsexed	30.45	77.49	13792	47.81	
2006	GB	T	21-40 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	1.27	100	2441	100	
2006	GB	T	21-40 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	0.28	100	10255	100	

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								Coefficient of Variation		
2006	GB	T	21-40 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	26.81	71.91	299933	90.76
2006	GB	T	21-40 fa	Northern Ronquil	<i>Ronquilus jordani</i>	unsexed	0.92	91.09	24486	88.92
2006	GB	T	21-40 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	0.26	100	26924	100
2006	GB	T	21-40 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	0.49	74.54	25116	86.26
2006	GB	T	21-40 fa	Nudibranch uniden.	<i>Order Nudibranchia</i>	unsexed	0.05	100	2564	100
2006	GB	T	21-40 fa	Nuttall Cockle	<i>Clinocardium nuttallii</i>	unsexed	0.36	100	4895	100
2006	GB	T	21-40 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	0.66	53.4	19008	59.43
2006	GB	T	21-40 fa	Pacific Halibut	<i>Hippoglossus stenolepis</i>	unsexed	38.97	100	2564	100
2006	GB	T	21-40 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	50.23	74.16	1103233	76.69
2006	GB	T	21-40 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.05	100	2441	100
2006	GB	T	21-40 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	80.70	34.48	432136	33.08
2006	GB	T	21-40 fa	Pacific Spiny Lumpsucker	<i>Eumicrotremus orbis</i>	unsexed	0.10	100	4895	100
2006	GB	T	21-40 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	59.52	14.68	291956	15.23
2006	GB	T	21-40 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	16.77	48.1	471015	46.88
2006	GB	T	21-40 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	1.19	85.46	56603	87.48
2006	GB	T	21-40 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	35.56	64.34	28129	80.02
2006	GB	T	21-40 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	143.85	53.87	2626518	61.81
2006	GB	T	21-40 fa	Plastic	Plastic	unsexed	0.15	52.95	14781	53.17
2006	GB	T	21-40 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	0.14	68.99	5590	65.27
2006	GB	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	female	18.76	84.85	131208	81.77
2006	GB	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	male	93.31	64.74	251489	61.86
2006	GB	T	21-40 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	5.07	100	3149	100
2006	GB	T	21-40 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	22.66	29.92	298840	39.62
2006	GB	T	21-40 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	7.19	88.81	239976	88.36
2006	GB	T	21-40 fa	Ringed Lucine	<i>Lucinoma annulata</i>	unsexed	0.64	68.65	8031	66.62
2006	GB	T	21-40 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.22	100	3149	100
2006	GB	T	21-40 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	3.91	56.05	111209	54.9
2006	GB	T	21-40 fa	Salt and Pepper Sea Cucumber	<i>Cucumaria piperata</i>	unsexed	0.10	100	4895	100
2006	GB	T	21-40 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	3.68	74.3	9555	66.51
2006	GB	T	21-40 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	44.78	47.65	415740	53.98
2006	GB	T	21-40 fa	Sea Nymph uniden.	Family Nereidae	unsexed	0.08	100	2564	100
2006	GB	T	21-40 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	4.36	31.83	233047	30.25
2006	GB	T	21-40 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.06	100	31819	100
2006	GB	T	21-40 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	12.51	88.45	1599251	87.98
2006	GB	T	21-40 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	31.76	44.43	660289	33.7
2006	GB	T	21-40 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	0.93	85.27	5590	65.27
2006	GB	T	21-40 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.10	100	4895	100
2006	GB	T	21-40 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	137.13	71.32	1157866	74.24
2006	GB	T	21-40 fa	Speckled Sanddab	<i>Citharichthys stigmatus</i>	unsexed	4.68	75.08	133688	71.01
2006	GB	T	21-40 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	34.44	49.29	35160	48.99
2006	GB	T	21-40 fa	Spiny Lebtheid	<i>Lebbeus groenlandicus</i>	unsexed	0.13	100	26924	100
2006	GB	T	21-40 fa	Spinyhead Sculpin	<i>Dasyctonus setiger</i>	unsexed	7.48	47.37	140443	58.14
2006	GB	T	21-40 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	14.08	98.71	27969	81.43
2006	GB	T	21-40 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	2.73	90	8222	71.62
2006	GB	T	21-40 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.09	100	3149	100
2006	GB	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	3.42	62.88	109840	56.57

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2006	GB	T	21-40 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	35.52	57.56	37183	58.44
2006	GB	T	21-40 fa	Swimming Anemone	<i>Stomphia coccinea</i>	unsexed	0.52	100	9790	100
2006	GB	T	21-40 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	16.50	62.86	109058	62.03
2006	GB	T	21-40 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	21.54	90.3	196919	88.42
2006	GB	T	21-40 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	12.94	36.86	299649	35.49
2006	GB	T	21-40 fa	Warty Sea Squirt	<i>Pyura haastor</i>	unsexed	1.09	100	110142	100
2006	GB	T	21-40 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	2.85	41.8	39179	42.07
2006	GB	T	21-40 fa	Weathervane Scallop	<i>Patinopecten caurinus</i>	unsexed	8.50	100	18870	100
2006	GB	T	21-40 fa	White Sea Cucumber	<i>Eupentacta quinquesemita</i>	unsexed	0.06	100	3149	100
2006	GB	T	21-40 fa	Whitebarred Prickleback	<i>Poroclinus rothrocki</i>	unsexed	0.06	100	5123	100
2006	GB	T	21-40 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	0.49	100	7322	100
2006	GB	T	21-40 fa	Wrinkled Dogwinkle	<i>Nucella lamellosa</i>	unsexed	0.15	100	4881	100
2006	GB	U	41-60 fa	Alaskan Pink Shrimp	<i>Pandalus eos</i>	unsexed	20.40	63.26	3605710	61.51
2006	GB	U	41-60 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.31	72.54	4113	67.67
2006	GB	U	41-60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	1.43	62.19	21836	70.36
2006	GB	U	41-60 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	14.28	96.18	127780	95.85
2006	GB	U	41-60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	21.93	21.97	58568	25.67
2006	GB	U	41-60 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	0.50	100	1575	100
2006	GB	U	41-60 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	0.09	100	1807	100
2006	GB	U	41-60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	0.14	71.5	2735	63.31
2006	GB	U	41-60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	4.54	66.71	13390	54.24
2006	GB	U	41-60 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	2.13	100	8087	100
2006	GB	U	41-60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.41	37.14	203718	42.34
2006	GB	U	41-60 fa	Dall's Dendronotid	<i>Dendronotus dalli</i>	unsexed	0.16	100	2835	100
2006	GB	U	41-60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	39.51	90.09	6373129	89.87
2006	GB	U	41-60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	19.74	42.87	291954	66.59
2006	GB	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	female	156.39	60.96	325229	54.59
2006	GB	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	male	811.74	63.15	1573797	74.05
2006	GB	U	41-60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	220.30	34.05	1550652	26.41
2006	GB	U	41-60 fa	False Ochre Star	<i>Evasterias troschelii</i>	unsexed	8.87	68.46	8977	63.38
2006	GB	U	41-60 fa	Fishing gear	<i>Fishing gear</i>	unsexed	161.74	100	5391	100
2006	GB	U	41-60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	10.93	55.38	90777	55.67
2006	GB	U	41-60 fa	Giant Wrymouth	<i>Cryptacanthodes giganteus</i>	unsexed	5.67	100	1348	100
2006	GB	U	41-60 fa	Graceful Crab	<i>Cancer gracilis</i>	male	0.98	70.23	5034	71.68
2006	GB	U	41-60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.03	100	2842	100
2006	GB	U	41-60 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.01	100	1418	100
2006	GB	U	41-60 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	74.78	98.21	150056	97.14
2006	GB	U	41-60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	36.62	94.75	315650	92.15
2006	GB	U	41-60 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	0.05	100	1807	100
2006	GB	U	41-60 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.45	75.55	6041	76.87
2006	GB	U	41-60 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.45	91.52	103143	92
2006	GB	U	41-60 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	8.95	99.15	3415126	98.91
2006	GB	U	41-60 fa	Leafy Hornmouth	<i>Ceratostoma foliatum</i>	unsexed	0.03	100	1575	100
2006	GB	U	41-60 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	0.69	100	1807	100
2006	GB	U	41-60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	0.57	100	1418	100
2006	GB	U	41-60 fa	Longfin Smelt	<i>Spirinchus thaleichthys</i>	unsexed	0.05	69.7	2996	63.37

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								Coefficient of Variation	Abundance Estimate		
2006	GB	U	41-60 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.34	79.6	46612	86.23	
2006	GB	U	41-60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	13.49	74.94	12373	71.13	
2006	GB	U	41-60 fa	Magister Armhook Squid	<i>Berryteuthis magister</i>	unsexed	0.05	100	1317	100	
2006	GB	U	41-60 fa	Marine vegetation	Marine vegetation	unsexed	5.81	27.83	8885	5.04	
2006	GB	U	41-60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	45.26	65.84	202007	64.01	
2006	GB	U	41-60 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	1.33	79.18	2992	63.38	
2006	GB	U	41-60 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	8.89	92.9	199683	92.65	
2006	GB	U	41-60 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	1.78	100	1575	100	
2006	GB	U	41-60 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	0.06	100	4724	100	
2006	GB	U	41-60 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	1.23	68.96	42565	70.63	
2006	GB	U	41-60 fa	Odhner's Dorid	<i>Archidoris odhneri</i>	unsexed	0.09	100	1418	100	
2006	GB	U	41-60 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	0.87	83.72	8105	76.44	
2006	GB	U	41-60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	3.80	53.71	107429	50.17	
2006	GB	U	41-60 fa	Pacific Halibut	<i>Hippoglossus stenolepis</i>	unsexed	39.07	100	1421	100	
2006	GB	U	41-60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	3.86	29.33	97729	31.86	
2006	GB	U	41-60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	27.01	86.26	120198	84.78	
2006	GB	U	41-60 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	14.69	36.8	62945	38.32	
2006	GB	U	41-60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	6.50	33.86	161190	32.87	
2006	GB	U	41-60 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	26.23	70.72	17764	49.78	
2006	GB	U	41-60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	91.34	60.92	1446364	59.14	
2006	GB	U	41-60 fa	Plastic	Plastic	unsexed	0.09	100	2696	100	
2006	GB	U	41-60 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.05	100	1575	100	
2006	GB	U	41-60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	2.74	100	9435	100	
2006	GB	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	female	3.98	40.48	41340	39.86	
2006	GB	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	male	15.69	44.83	53309	44.47	
2006	GB	U	41-60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	34.19	94.87	42359	96.04	
2006	GB	U	41-60 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	0.14	100	1807	100	
2006	GB	U	41-60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	4.39	26.3	41738	24.09	
2006	GB	U	41-60 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	0.03	100	1575	100	
2006	GB	U	41-60 fa	Ridged Whelk	<i>Neptunea lyrata</i>	unsexed	0.17	100	1421	100	
2006	GB	U	41-60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.34	100	4253	100	
2006	GB	U	41-60 fa	Rough Patch Shrimp	<i>Pandalus stenolepis</i>	unsexed	0.01	100	14172	100	
2006	GB	U	41-60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	22.28	60.31	77140	46.57	
2006	GB	U	41-60 fa	Sea Nymph uniden.	Family <i>Nereididae</i>	unsexed	0.04	100	1348	100	
2006	GB	U	41-60 fa	Sharpnose Crab	<i>Scyra acutifrons</i>	unsexed	0.17	100	1421	100	
2006	GB	U	41-60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.18	75.75	12283	75.75	
2006	GB	U	41-60 fa	Shortfin Eelpout	<i>Lycodes brevipes</i>	unsexed	0.10	70.66	2769	63.28	
2006	GB	U	41-60 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.09	74.03	64897	82.57	
2006	GB	U	41-60 fa	Showy Snailfish	<i>Liparis pulchellus</i>	unsexed	0.17	100	1317	100	
2006	GB	U	41-60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	22.95	52.83	2676890	55.78	
2006	GB	U	41-60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	23.88	43.01	358825	40.28	
2006	GB	U	41-60 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	0.11	100	1418	100	
2006	GB	U	41-60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	0.23	92.94	12440	87.04	
2006	GB	U	41-60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	14.20	65.96	16893	64.76	
2006	GB	U	41-60 fa	Spiny Lebbeid	<i>Lebbeus groenlandicus</i>	unsexed	1.43	96.17	368744	96.85	
2006	GB	U	41-60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	0.19	100	6299	100	

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								Estimate		
2006	GB	U	41-60 fa	Spinyhead Sculpin	<i>Dasycttus setiger</i>	unsexed	4.85	57.19	39797	56.91
2006	GB	U	41-60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	9.72	78.04	672614	83.98
2006	GB	U	41-60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	289.78	61.1	1793758	63.73
2006	GB	U	41-60 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	0.14	100	14172	100
2006	GB	U	41-60 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	0.55	100	1421	100
2006	GB	U	41-60 fa	Steven's Hermit Crab	<i>Pagurus stvensenae</i>	unsexed	1.39	100	32519	100
2006	GB	U	41-60 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	1.16	63.29	8255	67.74
2006	GB	U	41-60 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.20	100	1807	100
2006	GB	U	41-60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.06	100	1575	100
2006	GB	U	41-60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	19.33	29.35	18032	20.92
2006	GB	U	41-60 fa	Sweet Potato Sea Cucumber	<i>Molpadiida intermedia</i>	unsexed	0.11	100	1421	100
2006	GB	U	41-60 fa	Tadpole Sculpin	<i>Psychrolutes paradoxus</i>	unsexed	0.02	100	1575	100
2006	GB	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	0.88	49.66	7766	50.43
2006	GB	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	6.04	65.32	39331	63.56
2006	GB	U	41-60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	42.97	47.77	1056441	47.36
2006	GB	U	41-60 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	1.41	54.36	16239	46.07
2006	GB	U	41-60 fa	Weathervane Scallop	<i>Patinopecten caurinus</i>	unsexed	0.46	100	1317	100
2006	GB	U	41-60 fa	White Sea Cucumber	<i>Eupentacta quinquesemita</i>	unsexed	0.07	100	5671	100
2006	GB	V	>60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	21.23	56.64	4150941	54.66
2006	GB	V	>60 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	1.22	23.88	17105	24.44
2006	GB	V	>60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	3.84	44.12	30133	48.1
2006	GB	V	>60 fa	Barnacle uniden.	<i>Order Thoracica</i>	unsexed	0.16	90.24	7832	70.04
2006	GB	V	>60 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	17.91	48.75	151415	47.71
2006	GB	V	>60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	391.57	61.32	158408	24.71
2006	GB	V	>60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	0.33	76.38	12089	80.65
2006	GB	V	>60 fa	Blackfin Sculpin	<i>Malacocottus kincaidi</i>	unsexed	0.12	100	1561	100
2006	GB	V	>60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.10	56.19	8887	60.34
2006	GB	V	>60 fa	Brittle star uniden.	<i>Ophiuridae</i>	unsexed	0.88	62.42	574946	66.89
2006	GB	V	>60 fa	Brown Cat Shark	<i>Apristurus brunneus</i>	unsexed	1.25	69.05	2893	68.91
2006	GB	V	>60 fa	Brown Rockfish	<i>Sebastes auriculatus</i>	unsexed	0.68	100	1342	100
2006	GB	V	>60 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	0.30	57.31	5352	58.49
2006	GB	V	>60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	0.15	59.54	5729	57.67
2006	GB	V	>60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	11.81	58.4	27598	65.29
2006	GB	V	>60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.91	47.39	565675	60.78
2006	GB	V	>60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	30.50	53.26	4541502	51.74
2006	GB	V	>60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	65.59	20.14	717474	36.99
2006	GB	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	female	182.13	27.83	361479	26.81
2006	GB	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	male	135.95	84.82	177506	84.36
2006	GB	V	>60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	557.64	30.52	2338716	30.96
2006	GB	V	>60 fa	Finger Sponge uniden.	<i>Neoesperiopsis sp.</i>	unsexed	0.07	69.82	3005	68.75
2006	GB	V	>60 fa	Fishing gear	<i>Fishing gear</i>	unsexed	5.23	100	2689	100
2006	GB	V	>60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	7.40	50.76	26105	40.13
2006	GB	V	>60 fa	Giant Pacific Octopus	<i>Enteroctopus dofleini</i>	unsexed	2.23	100	1508	100
2006	GB	V	>60 fa	Giant Wrymouth	<i>Cryptacanthodes giganteus</i>	unsexed	5.33	100	1443	100
2006	GB	V	>60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.15	51.49	7628	48.82
2006	GB	V	>60 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.12	53.68	19823	59.26

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2006	GB	V	>60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	23.73	32.86	309070	32.82
2006	GB	V	>60 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	0.18	100	1593	100
2006	GB	V	>60 fa	Hermit crabs uniden.	Paguridae	unsexed	41.55	29.67	794188	27.33
2006	GB	V	>60 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.11	100	37472	100
2006	GB	V	>60 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	0.04	68.83	17210	75.78
2006	GB	V	>60 fa	Krill uniden.	Order Euphausiacea	unsexed	0.02	83.69	22620	68.8
2006	GB	V	>60 fa	Leafy Hornmouth	<i>Ceratostoma foliatum</i>	unsexed	0.56	48.32	12540	52.03
2006	GB	V	>60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	0.03	100	1456	100
2006	GB	V	>60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	98.41	34.64	95850	20
2006	GB	V	>60 fa	Longnose Skate egg case	<i>Raja rhina egg case</i>	unsexed	0.20	68.75	3036	68.81
2006	GB	V	>60 fa	Lyre Whelk	<i>Buccinum pectrum</i>	unsexed	3.20	74.06	138734	73.57
2006	GB	V	>60 fa	Magister Armhook Squid	<i>Berryteuthis magister</i>	unsexed	0.95	73.56	11972	77.91
2006	GB	V	>60 fa	Marbled Snailfish	<i>Liparis dennyi</i>	unsexed	0.18	56.82	10632	52.63
2006	GB	V	>60 fa	Marine vegetation	Marine vegetation	unsexed	15.07	30.87	26411	6.1
2006	GB	V	>60 fa	Metridium uniden.	Metridium sp.	unsexed	3.32	35.2	29453	32.03
2006	GB	V	>60 fa	Mottled Anemone	<i>Urticina crassicornis</i>	unsexed	0.13	100	5978	100
2006	GB	V	>60 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	560.16	52.91	15683387	53.38
2006	GB	V	>60 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	0.08	100	7807	100
2006	GB	V	>60 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	0.95	100	37472	100
2006	GB	V	>60 fa	Nudibranch uniden.	Order Nudibranchia	unsexed	0.03	100	1446	100
2006	GB	V	>60 fa	Orange Burrowing Sea Cucumber	<i>Cucumaria miniata</i>	unsexed	0.06	100	1508	100
2006	GB	V	>60 fa	Orangepeel Nudibranch	<i>Tochuina tetrica</i>	unsexed	0.04	100	1900	100
2006	GB	V	>60 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	0.28	54.58	4011	54.58
2006	GB	V	>60 fa	Other man-made debris	Other man-made debris	unsexed	0.05	100	1508	100
2006	GB	V	>60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	26.86	46.89	19326	34.82
2006	GB	V	>60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	1.47	31.6	45908	29.51
2006	GB	V	>60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	18.61	38.63	196744	28.01
2006	GB	V	>60 fa	Pacific Halibut	<i>Hippoglossus stenolepis</i>	unsexed	68.74	80.03	2733	68.73
2006	GB	V	>60 fa	Pacific Herring	<i>Clupea pallasi</i>	unsexed	4.75	41.77	112374	42.23
2006	GB	V	>60 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.64	48.06	16194	38.61
2006	GB	V	>60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	1.37	52.79	7118	49.36
2006	GB	V	>60 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	0.85	57.39	6261	58.99
2006	GB	V	>60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	4.57	65.34	95234	69.07
2006	GB	V	>60 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	0.81	100	1224	100
2006	GB	V	>60 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	19.11	47.76	11425	48.73
2006	GB	V	>60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	0.29	55.74	8599	55.61
2006	GB	V	>60 fa	Plastic	Plastic	unsexed	0.81	89.21	12319	48.61
2006	GB	V	>60 fa	Polychaete worm uniden.	Class Polychaeta	unsexed	0.08	100	1900	100
2006	GB	V	>60 fa	Purple Star	<i>Pisaster ochraceus</i>	unsexed	1.64	100	1224	100
2006	GB	V	>60 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.08	56.67	7770	64.98
2006	GB	V	>60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	9.48	69.36	21600	75.16
2006	GB	V	>60 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.09	100	1342	100
2006	GB	V	>60 fa	Red Rock Crab	<i>Cancer productus</i>	female	0.48	77.09	4763	73.26
2006	GB	V	>60 fa	Red Rock Crab	<i>Cancer productus</i>	male	2.21	86.95	6370	78.2
2006	GB	V	>60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	43.53	73.66	76803	69.44
2006	GB	V	>60 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	1.01	57.87	9367	59.12

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2006	GB	V	>60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	8.78	25.31	110779	29.78
2006	GB	V	>60 fa	Ridged Whelk	<i>Neptunea lyrata</i>	unsexed	2.72	78.29	31159	73.11
2006	GB	V	>60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.30	100	1900	100
2006	GB	V	>60 fa	Rough Patch Shrimp	<i>Pandalus stenolepis</i>	unsexed	0.03	100	9557	100
2006	GB	V	>60 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.03	100	1288	100
2006	GB	V	>60 fa	Sand Rose Anemone	<i>Urticina columbiana</i>	unsexed	1.32	56.56	8785	42.73
2006	GB	V	>60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	101.80	56.22	265425	53.84
2006	GB	V	>60 fa	Sandpaper Skate	<i>Bathyraja kincaldi</i>	unsexed	27.63	32.98	36853	28.12
2006	GB	V	>60 fa	Sea mouse uniden.	Family Aphroditidae	unsexed	4.80	50.5	56042	45.42
2006	GB	V	>60 fa	Sharpnose Crab	<i>Scyra acutifrons</i>	unsexed	0.14	73.4	3408	69.23
2006	GB	V	>60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.14	75.23	6523	65.19
2006	GB	V	>60 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.13	94.08	25606	94.08
2006	GB	V	>60 fa	Shortspine Thornyhead	<i>Sebastolobus alascanus</i>	unsexed	0.35	100	1508	100
2006	GB	V	>60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	27.66	41.35	3414880	44.42
2006	GB	V	>60 fa	Sleek Macoma	<i>Macoma lipara</i>	unsexed	0.32	100	1266	100
2006	GB	V	>60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	4.40	41.13	67521	37.83
2006	GB	V	>60 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	20.71	59.53	56721	56.88
2006	GB	V	>60 fa	Slipper Sea Cucumber	<i>Psolus chitonoides</i>	unsexed	0.03	100	1508	100
2006	GB	V	>60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	20.20	38.02	826123	39.12
2006	GB	V	>60 fa	Smoothskin Octopus	<i>Benthoctopus leioderma</i>	unsexed	0.07	100	1443	100
2006	GB	V	>60 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	2.97	41.11	7492	39.54
2006	GB	V	>60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	281.64	28.84	181294	24.46
2006	GB	V	>60 fa	Spiny Lebtheid	<i>Lebbeus groenlandicus</i>	unsexed	0.51	70.37	161035	73.71
2006	GB	V	>60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	5.32	54.77	195302	53.05
2006	GB	V	>60 fa	Spinyhead Sculpin	<i>Dasy cottus setiger</i>	unsexed	8.16	60.54	81292	61.38
2006	GB	V	>60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	50.37	78.32	1455003	74.07
2006	GB	V	>60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	1676.57	25.6	6124541	24.39
2006	GB	V	>60 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei egg case</i>	unsexed	0.07	71.88	5699	69.07
2006	GB	V	>60 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	0.45	100	73383	100
2006	GB	V	>60 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	2.77	59.07	5056	54.7
2006	GB	V	>60 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.48	69	7286	49.42
2006	GB	V	>60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.52	92.52	20380	93.65
2006	GB	V	>60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	59.33	64.56	35002	61.64
2006	GB	V	>60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	8.71	64.77	35341	59.64
2006	GB	V	>60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	7.46	60.76	55320	58.58
2006	GB	V	>60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	141.84	27.87	3089361	26.59
2006	GB	V	>60 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	10.03	46.23	67783	50.98
2006	GB	V	>60 fa	Weathervane Scallop	<i>Patinopecten caurinus</i>	unsexed	0.42	100	1446	100
2006	GB	V	>60 fa	White Sea Cucumber	<i>Eupentacta quinquesemita</i>	unsexed	0.03	100	3097	100
2006	SJ	S	5-20 fa	Alaskan Pink Shrimp	<i>Pandalus eos</i>	unsexed	0.03	100	6438	100
2006	SJ	S	5-20 fa	Aluminum	<i>Aluminum</i>	unsexed	0.12	53.39	9663	52.29
2006	SJ	S	5-20 fa	Bay Goby	<i>Lepidogobius lepidus</i>	unsexed	0.05	100	18840	100
2006	SJ	S	5-20 fa	Bent-nose Macoma	<i>Macoma nasuta</i>	unsexed	150.45	100	263290631	100
2006	SJ	S	5-20 fa	Big Skate	<i>Raja binoculata</i>	unsexed	11.63	73.02	97721	50.01
2006	SJ	S	5-20 fa	Big Skate egg case	<i>Raja binoculata egg case</i>	unsexed	38.87	44.78	87845	43.95
2006	SJ	S	5-20 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	2.15	49.68	227763	56.38

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2006	SJ	S	5-20 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.28	88.31	16792	81.22
2006	SJ	S	5-20 fa	Bubble Gum Coral	<i>Paragorgia pacifica</i>	unsexed	0.21	89.37	42114	89.31
2006	SJ	S	5-20 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	2.89	67.93	17349	67.08
2006	SJ	S	5-20 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	3.04	61	34315	56.9
2006	SJ	S	5-20 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	42.19	61.75	592976	59.11
2006	SJ	S	5-20 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.25	70.91	10754	68.66
2006	SJ	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	34.49	77.93	49528	65.73
2006	SJ	S	5-20 fa	C-O Sole	<i>Pleuronichthys coenosus</i>	unsexed	2.08	71.38	9512	71.27
2006	SJ	S	5-20 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	7.08	90.3	984778	90.53
2006	SJ	S	5-20 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	7.01	37.46	5848973	38.47
2006	SJ	S	5-20 fa	Crescent Gunnel	<i>Pholis laeta</i>	unsexed	0.04	100	8633	100
2006	SJ	S	5-20 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	23.10	99.41	73231	68.75
2006	SJ	S	5-20 fa	Dall's Dendronotid	<i>Dendronotus dalli</i>	unsexed	0.25	100	13580	100
2006	SJ	S	5-20 fa	Danas Blade Shrimp	<i>Spirontocaris lamellicornis</i>	unsexed	0.08	100	32124	100
2006	SJ	S	5-20 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	38.92	30.64	14006731	41.39
2006	SJ	S	5-20 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	2.70	53.98	41745	69.48
2006	SJ	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	male	988.53	27.67	4484378	30.63
2006	SJ	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	female	998.63	27.91	5222631	29.05
2006	SJ	S	5-20 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	209.68	46.43	3430989	38.94
2006	SJ	S	5-20 fa	False Ochre Star	<i>Easterias troschelii</i>	unsexed	3.22	70.04	19197	52.21
2006	SJ	S	5-20 fa	Fishing gear	<i>Fishing gear</i>	unsexed	163.82	51.76	29323	50.24
2006	SJ	S	5-20 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	6.70	63.39	127369	59.53
2006	SJ	S	5-20 fa	Fourhorn Poacher	<i>Hypsagonus quadricornis</i>	unsexed	0.03	100	2902	100
2006	SJ	S	5-20 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	36.56	87.12	214573	78.48
2006	SJ	S	5-20 fa	Glass	<i>Glass</i>	unsexed	59.23	32.73	149897	30.12
2006	SJ	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	female	3.32	50.82	92342	44.05
2006	SJ	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	male	59.98	47.51	604200	47.99
2006	SJ	S	5-20 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.83	32.14	124080	39.22
2006	SJ	S	5-20 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	58.62	31.36	272133	25.29
2006	SJ	S	5-20 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	3.80	100	30215	100
2006	SJ	S	5-20 fa	Grunt Sculpin	<i>Rhamphocottus richardsoni</i>	unsexed	0.20	67.85	10002	67.85
2006	SJ	S	5-20 fa	Hairy Crab	<i>Hapalogaster mertensii</i>	unsexed	5.83	64.22	78512	68.04
2006	SJ	S	5-20 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.03	100	2902	100
2006	SJ	S	5-20 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	21.16	60.6	8720192	64.03
2006	SJ	S	5-20 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	9.49	92.84	15851	81.91
2006	SJ	S	5-20 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	1.31	61.24	173582	60.85
2006	SJ	S	5-20 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	3.17	87.65	19879	72.37
2006	SJ	S	5-20 fa	Lobed Tunicate	<i>Cystodites lobatus</i>	unsexed	0.25	100	13580	100
2006	SJ	S	5-20 fa	Longfin Smelt	<i>Spirinchus thaleichthys</i>	unsexed	0.05	100	5383	100
2006	SJ	S	5-20 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	0.16	100	6438	100
2006	SJ	S	5-20 fa	Lyre Whelk	<i>Buccinum pectrum</i>	unsexed	0.27	100	10730	100
2006	SJ	S	5-20 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	3189.02	50.64	58150	22.35
2006	SJ	S	5-20 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	30.92	97.55	140286	93.38
2006	SJ	S	5-20 fa	Miscellaneous material		unsexed	249.49	43.47	39077	38.9
2006	SJ	S	5-20 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	21.27	59.83	110335	63.28
2006	SJ	S	5-20 fa	Orange Burrowing Sea Cucumber	<i>Cucumaria miniata</i>	unsexed	1.04	100	12949	100

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2006	SJ	S	5-20 fa	Orange Sea Pen	<i>Ptilosarcus gurneyi</i>	unsexed	0.67	68.47	29570	70.1
2006	SJ	S	5-20 fa	Orangepeel Nudibranch	<i>Tochuina tetrica</i>	unsexed	0.06	100	6300	100
2006	SJ	S	5-20 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	0.97	67.25	10002	67.85
2006	SJ	S	5-20 fa	Other man-made debris	Other man-made debris	unsexed	8.37	100	2691	100
2006	SJ	S	5-20 fa	Pacific Herring	<i>Clupea pallasi</i>	unsexed	2.26	63.53	178588	58.18
2006	SJ	S	5-20 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.26	77.22	17065	69.83
2006	SJ	S	5-20 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	53.88	52.65	617353	53.16
2006	SJ	S	5-20 fa	Pacific Spiny Lumpsucker	<i>Eumicrotremus orbis</i>	unsexed	0.04	100	4316	100
2006	SJ	S	5-20 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	7.92	78.66	39278	68.43
2006	SJ	S	5-20 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	7.61	68	134803	60.39
2006	SJ	S	5-20 fa	Padded Sculpin	<i>Artedius fenestralis</i>	unsexed	0.06	100	2902	100
2006	SJ	S	5-20 fa	Penpoint Gunnel	<i>Apodichthys flavidus</i>	unsexed	0.09	100	7377	100
2006	SJ	S	5-20 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	0.12	100	2902	100
2006	SJ	S	5-20 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	38.18	69.62	14821	79.15
2006	SJ	S	5-20 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	11.93	53.6	359980	51.75
2006	SJ	S	5-20 fa	Plastic	Plastic	unsexed	4.71	58.91	31405	34.87
2006	SJ	S	5-20 fa	Puget Sound Rockfish	<i>Sebastodes emphaeus</i>	unsexed	0.42	73.11	9202	72.46
2006	SJ	S	5-20 fa	Purple Star	<i>Pisaster ochraceus</i>	unsexed	2.22	100	3212	100
2006	SJ	S	5-20 fa	Pygmy Poacher	<i>Odontopyxis trispinosa</i>	unsexed	0.03	100	3212	100
2006	SJ	S	5-20 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.14	69.13	10754	68.66
2006	SJ	S	5-20 fa	Red Irish Lord	<i>Hemilepidotus hemilepidotus</i>	unsexed	12.78	100	21582	100
2006	SJ	S	5-20 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	2.16	100	12599	100
2006	SJ	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	female	60.41	27.44	343052	24.53
2006	SJ	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	male	195.13	24.31	546027	25.08
2006	SJ	S	5-20 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	5.18	100	4316	100
2006	SJ	S	5-20 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	0.51	59.72	15639	55.02
2006	SJ	S	5-20 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	2.15	56.36	103559	44.47
2006	SJ	S	5-20 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	6.83	55.79	347406	51.9
2006	SJ	S	5-20 fa	Sand Rose Anemone	<i>Urticina columbiana</i>	unsexed	0.23	100	2902	100
2006	SJ	S	5-20 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	20.67	41.87	337840	54.14
2006	SJ	S	5-20 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	0.06	100	6425	100
2006	SJ	S	5-20 fa	Sharpnose Crab	<i>Scyra acutifrons</i>	unsexed	0.17	100	8633	100
2006	SJ	S	5-20 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.73	60.28	34772	51.47
2006	SJ	S	5-20 fa	Shortfin Eelpout	<i>Lycodes brevipes</i>	unsexed	0.04	100	8643	100
2006	SJ	S	5-20 fa	Shrimp uniden.	<i>Decapoda-Natantia</i>	unsexed	0.04	100	25818	100
2006	SJ	S	5-20 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.05	100	6438	100
2006	SJ	S	5-20 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	15.42	100	13580	100
2006	SJ	S	5-20 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	0.15	68.06	17896	77.29
2006	SJ	S	5-20 fa	Snailfish uniden.	<i>Liparis</i>	unsexed	0.05	100	5383	100
2006	SJ	S	5-20 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	1.46	40.88	246774	54.51
2006	SJ	S	5-20 fa	Southern Rock Sole	<i>Lepidotretis bilineata</i>	unsexed	306.08	40.21	2342082	52.17
2006	SJ	S	5-20 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	23.77	41.4	674091	37.38
2006	SJ	S	5-20 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	424.73	46.46	352999	55.95
2006	SJ	S	5-20 fa	Spiny Lebtheid	<i>Lebbeus groenlandicus</i>	unsexed	0.08	100	16062	100
2006	SJ	S	5-20 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	0.44	67.11	14318	68.8
2006	SJ	S	5-20 fa	Spinyhead Sculpin	<i>Dasyctonus setiger</i>	unsexed	0.96	68.54	29515	85.17

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2006	SJ	S	5-20 fa	Sponge uniden.	Phylum Porifera	unsexed	18.98	85.65	17896	77.29	
2006	SJ	S	5-20 fa	Squat Lobster	Munida quadrispina	unsexed	0.09	100	7377	100	
2006	SJ	S	5-20 fa	Starry Flounder	Platichthys stellatus	unsexed	52.15	49.49	131566	59.03	
2006	SJ	S	5-20 fa	Striped Nudibranch	Armina californica	unsexed	0.68	70.13	44046	69.94	
2006	SJ	S	5-20 fa	Sturgeon Poacher	Podothecus accipenserinus	unsexed	3.06	58.11	140839	52.85	
2006	SJ	S	5-20 fa	Sunflower Star	Pycnopodia helianthoides	unsexed	316.48	37.08	452996	37.26	
2006	SJ	S	5-20 fa	Tanner Crab	Chionoecetes bairdi	female	7.66	83.02	78241	75.57	
2006	SJ	S	5-20 fa	Tanner Crab	Chionoecetes bairdi	male	20.81	85.89	183053	79.54	
2006	SJ	S	5-20 fa	Walleye Pollock	Gadus chalcogrammus	unsexed	3.70	73.37	1475522	72.81	
2006	SJ	S	5-20 fa	Warty Sea Squirt	Pyura haustor	unsexed	7.15	87.69	110437	76.12	
2006	SJ	S	5-20 fa	Whitespotted Greenling	Hexagrammos stelleri	unsexed	2.18	72.88	69915	70.35	
2006	SJ	T	21-40 fa	Alaskan Pink Shrimp	Pandalus eos	unsexed	29.75	69	6789504	67.96	
2006	SJ	T	21-40 fa	American Shad	Alosa sapidissima	unsexed	1.41	100	15712	100	
2006	SJ	T	21-40 fa	Arrowtooth Flounder	Atheresthes stomias	unsexed	0.38	100	6285	100	
2006	SJ	T	21-40 fa	Barnacle uniden.	Order Thoracica	unsexed	312.20	94.99	3123339	82.42	
2006	SJ	T	21-40 fa	Basket Star	Gorgonocephalus eucnemis	unsexed	6.91	59.59	25251	57.34	
2006	SJ	T	21-40 fa	Big Skate	Raja binoculata	unsexed	12.70	60.19	35062	79.26	
2006	SJ	T	21-40 fa	Blackbelly Eelpout	Lycodes pacificus	unsexed	1.07	93.32	40984	91.36	
2006	SJ	T	21-40 fa	Brittle star uniden.	Ophiuridae	unsexed	0.05	92.59	41157	90.97	
2006	SJ	T	21-40 fa	Bubble Gum Coral	Paragorgia pacifica	unsexed	1.65	69.95	444653	77.64	
2006	SJ	T	21-40 fa	Buffalo Sculpin	Enophrys bison	unsexed	4.71	52.13	42712	69.73	
2006	SJ	T	21-40 fa	Butter Sole	Isopsetta isolepis	unsexed	0.09	100	3142	100	
2006	SJ	T	21-40 fa	Cabezon	Scorpaenichthys marmoratus	unsexed	94.13	81.18	36443	89.86	
2006	SJ	T	21-40 fa	California Sea Cucumber	Parastichopus californicus	unsexed	48.96	63.08	84648	53.4	
2006	SJ	T	21-40 fa	Clam uniden.	Class Bivalvia	unsexed	0.09	100	4263	100	
2006	SJ	T	21-40 fa	Clown Nudibranch	Triopha catalinae	unsexed	0.20	100	10813	100	
2006	SJ	T	21-40 fa	Coonstripe Shrimp	Pandalus hypsinotus	unsexed	0.98	67.53	97620	67.26	
2006	SJ	T	21-40 fa	Copper Rockfish	Sebastes caurinus	unsexed	12.47	100	6888	100	
2006	SJ	T	21-40 fa	Crangonid shrimp uniden.	Crangonidae	unsexed	0.95	63.1	386710	82.03	
2006	SJ	T	21-40 fa	Danas Blade Shrimp	Spirontocaris lamellicornis	unsexed	0.02	100	4714	100	
2006	SJ	T	21-40 fa	Decorated Warbonnet	Chirolophis decoratus	unsexed	0.13	100	3274	100	
2006	SJ	T	21-40 fa	Dock Shrimp	Pandalus danae	unsexed	256.39	40.01	38199705	48.03	
2006	SJ	T	21-40 fa	Dover Sole	Microstomus pacificus	unsexed	10.37	60.95	264961	54.48	
2006	SJ	T	21-40 fa	Dungeness Crab	Cancer magister	male	62.69	67.16	101709	72.08	
2006	SJ	T	21-40 fa	Dungeness Crab	Cancer magister	female	77.35	76.53	186388	79.8	
2006	SJ	T	21-40 fa	English Sole	Parophrys vetulus	unsexed	102.16	97.77	1019295	98.49	
2006	SJ	T	21-40 fa	False Ochre Star	Easterias troschelii	unsexed	17.83	79.13	15076	73.74	
2006	SJ	T	21-40 fa	Fishing gear	Fishing gear	unsexed	26.92	87.92	7857	67.82	
2006	SJ	T	21-40 fa	Flathead Sole	Hippoglossoides elassodon	unsexed	6.98	100	197977	100	
2006	SJ	T	21-40 fa	Giant Barnacle	Balanus nubilis	unsexed	29.80	81.15	224378	83.9	
2006	SJ	T	21-40 fa	Graceful Crab	Cancer gracilis	male	9.50	100	40852	100	
2006	SJ	T	21-40 fa	Graceful Crab	Cancer gracilis	female	19.35	97.92	191823	98.09	
2006	SJ	T	21-40 fa	Graceful Decorator Crab	Oregonia gracilis	unsexed	4.76	100	4714	100	
2006	SJ	T	21-40 fa	Great Sculpin	Myoxocephalus polyacanthocephalus	unsexed	171.50	54.09	365568	46.56	
2006	SJ	T	21-40 fa	Green Sea Urchin	Strongylocentrotus droebachiensis	unsexed	32.68	41.04	627218	41.59	
2006	SJ	T	21-40 fa	Grunt Sculpin	Rhamphocottus richardsoni	unsexed	1.44	44.78	84006	45.82	

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								Estimate		
2006	SJ	T	21-40 fa	Hermit crabs uniden.	Paguridae	unsexed	0.51	79.32	29050	71.23
2006	SJ	T	21-40 fa	Humpy Shrimp	Pandalus goniurus	unsexed	6.76	96.58	1980346	96.94
2006	SJ	T	21-40 fa	Idotea uniden.	Idotea sp.	unsexed	0.02	100	3444	100
2006	SJ	T	21-40 fa	Kelp Greenling	Hexagrammos decagrammus	unsexed	22.04	60.98	54030	56.02
2006	SJ	T	21-40 fa	Krill uniden.	Order Euphausiacea	unsexed	0.07	100	29152	100
2006	SJ	T	21-40 fa	Larval fish uniden.	Larval fish	unsexed	0.18	100	3644	100
2006	SJ	T	21-40 fa	Leafy Hornmouth	Ceratostoma foliatum	unsexed	0.57	75.62	17786	79.59
2006	SJ	T	21-40 fa	Lion's Mane Jelly	Cyanea capillata	unsexed	3.49	100	9428	100
2006	SJ	T	21-40 fa	Longhorned Decorator Crab	Chorilia longipes	unsexed	0.11	100	9821	100
2006	SJ	T	21-40 fa	Longnose Skate	Raja rhina	unsexed	7.99	94.38	6786	66.38
2006	SJ	T	21-40 fa	Lyre Whelk	Buccinum pectrum	unsexed	1.09	100	32796	100
2006	SJ	T	21-40 fa	Marbled Snailfish	Liparis dennyi	unsexed	0.65	78.74	25361	85.59
2006	SJ	T	21-40 fa	Marine vegetation	Marine vegetation	unsexed	248.60	59.28	48032	23.26
2006	SJ	T	21-40 fa	Metridium uniden.	Metridium sp.	unsexed	1.63	75.22	15844	79.45
2006	SJ	T	21-40 fa	Miscellaneous material		unsexed	74.21	66.54	42612	39.99
2006	SJ	T	21-40 fa	Northern Horse Mussel	Modiolus modiolus	unsexed	224.66	57.56	4661480	51.94
2006	SJ	T	21-40 fa	Northern Rock Sole	Lepidopsetta polyxystra	unsexed	11.93	84.19	27622	87.93
2006	SJ	T	21-40 fa	Northern Ronquil	Ronquilus jordani	unsexed	11.16	61.13	275294	58.28
2006	SJ	T	21-40 fa	Northern Sculpin	Icelinus borealis	unsexed	3.09	39.31	286222	44.41
2006	SJ	T	21-40 fa	Northern Spearnose Poacher	Agonopsis vulsa	unsexed	3.69	55.15	137307	57.33
2006	SJ	T	21-40 fa	Orange Burrowing Sea Cucumber	Cucumaria miniata	unsexed	1.84	100	23571	100
2006	SJ	T	21-40 fa	Oregon Hairy Triton	Fusitriton oregonensis	unsexed	7.30	100	79207	100
2006	SJ	T	21-40 fa	Pacific Eulachon	Thaleichthys pacificus	unsexed	0.04	100	8526	100
2006	SJ	T	21-40 fa	Pacific Halibut	Hippoglossus stenolepis	unsexed	8.11	100	3142	100
2006	SJ	T	21-40 fa	Pacific Herring	Clupea pallasi	unsexed	4.29	55.63	81624	49.7
2006	SJ	T	21-40 fa	Pacific Sanddab	Citharichthys sordidus	unsexed	54.13	49.1	397581	51.75
2006	SJ	T	21-40 fa	Pacific Spiny Lumpsucker	Eumicrotremus orbis	unsexed	0.13	100	12788	100
2006	SJ	T	21-40 fa	Pacific Staghorn Sculpin	Leptocottus armatus	unsexed	3.64	78.74	15706	80.03
2006	SJ	T	21-40 fa	Pacific Tomcod	Microgadus proximus	unsexed	8.49	75.14	198099	80.72
2006	SJ	T	21-40 fa	Padded Sculpin	Artedius fenestralis	unsexed	2.88	77.06	112044	66.27
2006	SJ	T	21-40 fa	Plainfin Midshipman	Porichthys notatus	unsexed	3.43	100	34567	100
2006	SJ	T	21-40 fa	Plastic	Plastic	unsexed	0.48	100	3444	100
2006	SJ	T	21-40 fa	Puget Sound Rockfish	Sebastes emphaeus	unsexed	15.43	96.23	309005	92.91
2006	SJ	T	21-40 fa	Pygmy Poacher	Odontopyxis trispinosa	unsexed	0.03	100	6285	100
2006	SJ	T	21-40 fa	Pygmy Rock Crab	Cancer oregonensis	unsexed	0.66	74.18	53639	75.12
2006	SJ	T	21-40 fa	Quillback Rockfish	Sebastes maliger	unsexed	77.47	86.41	50615	85.76
2006	SJ	T	21-40 fa	Red Irish Lord	Hemilepidotus hemilepidotus	unsexed	389.20	55.92	581918	60.02
2006	SJ	T	21-40 fa	Red Octopus	Octopus rubescens	unsexed	2.93	54.41	17091	63.34
2006	SJ	T	21-40 fa	Red Rock Crab	Cancer productus	female	17.23	75.67	93971	66.94
2006	SJ	T	21-40 fa	Red Rock Crab	Cancer productus	male	68.70	72.85	193028	77.02
2006	SJ	T	21-40 fa	Red Sea Urchin	Strongylocentrotus franciscanus	unsexed	8.61	73.13	7907	66.4
2006	SJ	T	21-40 fa	Rex Sole	Glyptocephalus zachirus	unsexed	2.37	90.9	237072	94.98
2006	SJ	T	21-40 fa	Ribbed Sculpin	Triglops pingelii	unsexed	26.77	48.46	886455	50.24
2006	SJ	T	21-40 fa	Rough Patch Shrimp	Pandalus stenolepis	unsexed	1.27	91.04	835430	97.81
2006	SJ	T	21-40 fa	Roughback Sculpin	Chitonotus pugetensis	unsexed	0.10	100	10813	100
2006	SJ	T	21-40 fa	Sailfin Sculpin	Nautichthys oculofasciatus	unsexed	1.34	40.25	28959	47.21

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2006	SJ	T	21-40 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	3.34	100	12570	100	
2006	SJ	T	21-40 fa	Scalyhead Sculpin	<i>Artedius harringtoni</i>	unsexed	0.35	100	20982	100	
2006	SJ	T	21-40 fa	Sharpnose Crab	<i>Scyra acutifrons</i>	unsexed	0.72	84.98	36443	89.86	
2006	SJ	T	21-40 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	1.30	78.05	45240	74.37	
2006	SJ	T	21-40 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.26	53.54	169167	76.06	
2006	SJ	T	21-40 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	3.92	88.31	480427	83.83	
2006	SJ	T	21-40 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.31	100	25140	100	
2006	SJ	T	21-40 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.22	100	28282	100	
2006	SJ	T	21-40 fa	Smooth Alligatorfish	<i>Anoplagonus inermis</i>	unsexed	0.14	71.94	7405	67.11	
2006	SJ	T	21-40 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	11.55	69.01	485575	66.74	
2006	SJ	T	21-40 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.20	64.64	20742	56.46	
2006	SJ	T	21-40 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	71.71	61.96	242803	63.44	
2006	SJ	T	21-40 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	0.09	100	6285	100	
2006	SJ	T	21-40 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	1335.24	38.14	1078883	42.7	
2006	SJ	T	21-40 fa	Spiny Lebtheid	<i>Lebbeus groenlandicus</i>	unsexed	4.35	28.54	893521	30.94	
2006	SJ	T	21-40 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	37.30	71.78	1258466	70.5	
2006	SJ	T	21-40 fa	Spinyhead Sculpin	<i>Dasy cottus setiger</i>	unsexed	7.90	56.03	141196	68.35	
2006	SJ	T	21-40 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	1.09	52.06	17979	57.39	
2006	SJ	T	21-40 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	39.91	94.25	1358371	85.59	
2006	SJ	T	21-40 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	218.07	69.77	390751	69.19	
2006	SJ	T	21-40 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	0.30	100	31359	100	
2006	SJ	T	21-40 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	1.45	100	3142	100	
2006	SJ	T	21-40 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	1.13	93.66	7537	66.87	
2006	SJ	T	21-40 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	1.16	63.05	25693	72.41	
2006	SJ	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.31	72.6	6278	66.14	
2006	SJ	T	21-40 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	47.83	100	29736	100	
2006	SJ	T	21-40 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	0.27	100	12570	100	
2006	SJ	T	21-40 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	13.52	38.09	289359	33.36	
2006	SJ	T	21-40 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	0.38	74.12	23596	67.33	
2006	SJ	T	21-40 fa	White Sea Cucumber	<i>Eupentacta quinquesemita</i>	unsexed	0.27	74.85	22460	83.32	
2006	SJ	T	21-40 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	1.98	75.22	12872	74.77	
2006	SJ	U	41-60 fa	Alaskan Pink Shrimp	<i>Pandalus eos</i>	unsexed	24.48	35.69	5840628	37.85	
2006	SJ	U	41-60 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.17	100	2128	100	
2006	SJ	U	41-60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	1.06	100	7273	100	
2006	SJ	U	41-60 fa	Barnacle uniden.	<i>Order Thoracica</i>	unsexed	0.56	100	42562	100	
2006	SJ	U	41-60 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	1.29	66.49	14352	66.16	
2006	SJ	U	41-60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	176.39	53.91	95268	55.18	
2006	SJ	U	41-60 fa	Big Skate egg case	<i>Raja binoculata egg case</i>	unsexed	1.04	76.16	4339	66.41	
2006	SJ	U	41-60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.09	100	13481	100	
2006	SJ	U	41-60 fa	Bubble Gum Coral	<i>Paragorgia pacifica</i>	unsexed	1.00	51.63	182869	64.71	
2006	SJ	U	41-60 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	3.16	100	16709	100	
2006	SJ	U	41-60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	1.45	100	11703	100	
2006	SJ	U	41-60 fa	Cabezon	<i>Scorpaenichthys marmoratus</i>	unsexed	11.71	100	1998	100	
2006	SJ	U	41-60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	12.94	76.94	67766	88.73	
2006	SJ	U	41-60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	1.88	37.71	861833	45.28	
2006	SJ	U	41-60 fa	Crossaster uniden.	<i>Crossaster sp.</i>	unsexed	0.36	100	17982	100	

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2006	SJ	U	41-60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	323.08	36.76	47870622	36.86
2006	SJ	U	41-60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	27.29	30.87	549536	35.69
2006	SJ	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	male	12.48	56.87	16292	57.01
2006	SJ	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	female	34.03	57.8	62992	58.43
2006	SJ	U	41-60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	405.39	67.65	2381616	67.89
2006	SJ	U	41-60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	14.61	100	53833	100
2006	SJ	U	41-60 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	9.27	96.14	102459	73.61
2006	SJ	U	41-60 fa	Graceful Crab	<i>Cancer gracilis</i>	female	0.77	100	8987	100
2006	SJ	U	41-60 fa	Graceful Crab	<i>Cancer gracilis</i>	male	5.74	55.95	50618	57.9
2006	SJ	U	41-60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	1.65	49.57	126900	44.03
2006	SJ	U	41-60 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.37	45.55	38923	44.13
2006	SJ	U	41-60 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	68.17	42.81	157635	43.21
2006	SJ	U	41-60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	217.04	57.62	1849827	46.45
2006	SJ	U	41-60 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	3.35	64.57	72650	57.32
2006	SJ	U	41-60 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	0.87	67.45	298128	67.16
2006	SJ	U	41-60 fa	Lanternfish uniden.	<i>Myctophidae</i>	unsexed	0.02	100	2341	100
2006	SJ	U	41-60 fa	Leafy Hornmouth	<i>Ceratostoma foliatum</i>	unsexed	0.25	100	6384	100
2006	SJ	U	41-60 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	2.32	100	2128	100
2006	SJ	U	41-60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	6.40	57.84	21632	62.66
2006	SJ	U	41-60 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.13	100	7273	100
2006	SJ	U	41-60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	15.01	91.4	16007	48.53
2006	SJ	U	41-60 fa	Lyre Whelk	<i>Buccinum pectrum</i>	unsexed	0.27	75.45	6827	70.22
2006	SJ	U	41-60 fa	Marbled Snailfish	<i>Liparis dennyi</i>	unsexed	1.44	71.37	42071	55.68
2006	SJ	U	41-60 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	864.66	80.35	100736	51.24
2006	SJ	U	41-60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	29.01	74.15	237278	81
2006	SJ	U	41-60 fa	Miscellaneous material		unsexed	62.43	58.76	22525	41.05
2006	SJ	U	41-60 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	124.06	45.41	3135028	45.86
2006	SJ	U	41-60 fa	Northern Ronquil	<i>Ronquilus jordani</i>	unsexed	0.52	72.04	20642	70.02
2006	SJ	U	41-60 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	1.50	46.79	134466	46.89
2006	SJ	U	41-60 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	4.86	66.99	242484	74.53
2006	SJ	U	41-60 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	2.34	76.03	43295	82.68
2006	SJ	U	41-60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	1.11	100	2128	100
2006	SJ	U	41-60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	0.55	51.91	16022	52.41
2006	SJ	U	41-60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	0.62	40.21	14258	41.02
2006	SJ	U	41-60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	2.30	42.88	55201	43.49
2006	SJ	U	41-60 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	6.24	74.7	148684	76.37
2006	SJ	U	41-60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	13.34	59.19	80256	46.04
2006	SJ	U	41-60 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	9.67	56.49	50789	52.91
2006	SJ	U	41-60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	99.75	60.72	2009449	60.58
2006	SJ	U	41-60 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	26.19	73.32	11326	69.73
2006	SJ	U	41-60 fa	Plastic	Plastic	unsexed	3.37	68.86	9516	77.11
2006	SJ	U	41-60 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	0.49	61.69	19647	51.91
2006	SJ	U	41-60 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.26	66.27	28364	83.67
2006	SJ	U	41-60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	2.22	80.91	9328	78.82
2006	SJ	U	41-60 fa	Red Irish Lord	<i>Hemilepidotus hemilepidotus</i>	unsexed	22.36	94.6	31317	93.04
2006	SJ	U	41-60 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.14	100	2341	100

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2006	SJ	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	male	17.36	64.76	64757	57.08
2006	SJ	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	female	10.08	72.09	86949	71.66
2006	SJ	U	41-60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	101.88	47.2	113287	44.79
2006	SJ	U	41-60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	4.75	51.61	93042	50.56
2006	SJ	U	41-60 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	0.89	90.25	47603	84.41
2006	SJ	U	41-60 fa	Rough Patch Shrimp	<i>Pandalus stenolepis</i>	unsexed	1.43	60.11	447401	77.04
2006	SJ	U	41-60 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	1.47	100	7330	100
2006	SJ	U	41-60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	66.15	99.44	281118	97.12
2006	SJ	U	41-60 fa	Sea mouse uniden.	Family Aphroditidae	unsexed	3.51	100	63195	100
2006	SJ	U	41-60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.90	59.72	44050	57.89
2006	SJ	U	41-60 fa	Shortfin Eelpout	<i>Lycodes brevipes</i>	unsexed	0.20	80.33	6679	72.68
2006	SJ	U	41-60 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	1.31	85.69	1320340	94.03
2006	SJ	U	41-60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	13.26	54.2	1816443	61.01
2006	SJ	U	41-60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	1.56	83.91	38705	70.57
2006	SJ	U	41-60 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	9.59	60.58	49251	66.97
2006	SJ	U	41-60 fa	Slimy Snailfish	<i>Liparis mucosus</i>	unsexed	0.07	100	3665	100
2006	SJ	U	41-60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	22.35	77.8	745418	78.41
2006	SJ	U	41-60 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.02	100	4486	100
2006	SJ	U	41-60 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	3.37	61.09	11173	53.89
2006	SJ	U	41-60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	889.70	23.21	655593	25.15
2006	SJ	U	41-60 fa	Spiny Lebeid	<i>Lebbeus groenlandicus</i>	unsexed	8.12	34.64	1821195	31.47
2006	SJ	U	41-60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	16.53	52.56	491975	49
2006	SJ	U	41-60 fa	Spinyhead Sculpin	<i>Dasyctonus setiger</i>	unsexed	5.90	50.09	67977	57.11
2006	SJ	U	41-60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	159.57	54.95	6117487	57.57
2006	SJ	U	41-60 fa	Spotted Ratfish	<i>Hydrolagus collei</i>	unsexed	2787.22	54.12	6660533	55.65
2006	SJ	U	41-60 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	4.29	100	568439	100
2006	SJ	U	41-60 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	6.39	100	9362	100
2006	SJ	U	41-60 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.19	100	2341	100
2006	SJ	U	41-60 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.26	100	7273	100
2006	SJ	U	41-60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.07	100	3665	100
2006	SJ	U	41-60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	147.40	53.24	74761	51.92
2006	SJ	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	16.64	94.63	81732	93.97
2006	SJ	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	27.22	100	184904	100
2006	SJ	U	41-60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	43.12	37.47	914834	41.21
2006	SJ	U	41-60 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	0.29	100	21990	100
2006	SJ	U	41-60 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	0.36	83.11	6679	72.68
2006	SJ	V	>60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	57.44	44.03	10550948	42.24
2006	SJ	V	>60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	1.93	68.37	19205	63.12
2006	SJ	V	>60 fa	Barnacle uniden.	Order Thoracica	unsexed	0.54	100	134123	100
2006	SJ	V	>60 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	16.99	57.55	183559	66.82
2006	SJ	V	>60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	82.09	65.57	30841	50.99
2006	SJ	V	>60 fa	Big Skate egg case	<i>Raja binoculata</i> egg case	unsexed	0.56	100	1522	100
2006	SJ	V	>60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	0.88	100	35355	100
2006	SJ	V	>60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	1.09	52.77	124626	59.08
2006	SJ	V	>60 fa	Brown Box Crab	<i>Lopholithodes foraminatus</i>	unsexed	0.30	100	1522	100
2006	SJ	V	>60 fa	Bubble Gum Coral	<i>Paragorgia pacifica</i>	unsexed	0.75	76.86	214416	86.61

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2006	SJ	V	>60 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	1.77	100	36114	100	
2006	SJ	V	>60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	1.12	98.56	14565	89.41	
2006	SJ	V	>60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	20.00	68.39	86543	80.55	
2006	SJ	V	>60 fa	Candy Stripe Shrimp	<i>Lebbeus grandimanus</i>	unsexed	0.08	100	8158	100	
2006	SJ	V	>60 fa	Cloud Sponge	<i>Aphrocallistes vastus</i>	unsexed	0.13	100	3142	100	
2006	SJ	V	>60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	1.83	40.95	1004226	45.82	
2006	SJ	V	>60 fa	Crimson Anemone	<i>Cribrinopsis fernaldi</i>	unsexed	3.78	100	11785	100	
2006	SJ	V	>60 fa	Crossaster uniden.	<i>Crossaster sp.</i>	unsexed	0.15	100	6688	100	
2006	SJ	V	>60 fa	Curlfin Sole	<i>Pleuronichthys decurrens</i>	unsexed	1.83	100	1630	100	
2006	SJ	V	>60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	141.12	41.88	22241720	50.96	
2006	SJ	V	>60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	55.84	17	992700	20.02	
2006	SJ	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	male	6.41	100	6522	100	
2006	SJ	V	>60 fa	Dungeness Crab	<i>Cancer magister</i>	female	10.78	71.99	18602	66.65	
2006	SJ	V	>60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	306.48	37.5	1332796	38.79	
2006	SJ	V	>60 fa	False Ochre Star	<i>Easterias troschelii</i>	unsexed	1.12	100	1672	100	
2006	SJ	V	>60 fa	Finger Sponge uniden.	<i>Neoesperiopsis sp.</i>	unsexed	0.31	81.56	4653	72.81	
2006	SJ	V	>60 fa	Fishing gear	<i>Fishing gear</i>	unsexed	5.38	97.13	15853	91.52	
2006	SJ	V	>60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	0.49	62.49	5067	53.81	
2006	SJ	V	>60 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	1.27	75.5	28716	70.2	
2006	SJ	V	>60 fa	Glass	<i>Glass</i>	unsexed	13.12	100	20951	100	
2006	SJ	V	>60 fa	Graceful Crab	<i>Cancer gracilis</i>	female	3.17	65.36	31392	65.75	
2006	SJ	V	>60 fa	Graceful Crab	<i>Cancer gracilis</i>	male	7.35	74.29	47488	64.2	
2006	SJ	V	>60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	2.00	44.82	114484	52.1	
2006	SJ	V	>60 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.38	42.83	38256	39.42	
2006	SJ	V	>60 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	6.00	80.8	21401	84.71	
2006	SJ	V	>60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	385.59	43.76	4614248	38.07	
2006	SJ	V	>60 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	0.02	100	1632	100	
2006	SJ	V	>60 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	3.12	47.21	64430	46.51	
2006	SJ	V	>60 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	0.08	100	45646	100	
2006	SJ	V	>60 fa	Krill uniden.	<i>Order Euphausiacea</i>	unsexed	0.06	63.3	91285	67.42	
2006	SJ	V	>60 fa	Lampshell Brachiopod	<i>Terebratalia transversa</i>	unsexed	0.35	100	35339	100	
2006	SJ	V	>60 fa	Leafy Hornmouth	<i>Ceratostoma foliatum</i>	unsexed	0.77	74.15	19060	72.96	
2006	SJ	V	>60 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	25.98	68.17	5126	69.39	
2006	SJ	V	>60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	1.03	73.87	7351	68.96	
2006	SJ	V	>60 fa	Lobed Tunicate	<i>Cystodytes lobatus</i>	unsexed	1.95	100	14543	100	
2006	SJ	V	>60 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	1.25	50.71	65887	57.85	
2006	SJ	V	>60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	8.72	62.83	22809	52.26	
2006	SJ	V	>60 fa	Lyre Whelk	<i>Buccinum plectrum</i>	unsexed	0.08	100	2678	100	
2006	SJ	V	>60 fa	Marbled Snailfish	<i>Liparis dennyi</i>	unsexed	0.30	45.63	14118	45.2	
2006	SJ	V	>60 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	212.31	69.99	50625	32.19	
2006	SJ	V	>60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	7.49	72.54	47220	73.39	
2006	SJ	V	>60 fa	Miscellaneous material		unsexed	79.98	68.78	13194	53.7	
2006	SJ	V	>60 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	0.77	100	1672	100	
2006	SJ	V	>60 fa	Mottled Anemone	<i>Urticina crassicornis</i>	unsexed	0.23	100	1533	100	
2006	SJ	V	>60 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	2565.50	81.41	42355421	75.58	
2006	SJ	V	>60 fa	Northern Rock Sole	<i>Lepidopsetta polyxystra</i>	unsexed	0.14	100	1533	100	

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2006	SJ	V	>60 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	0.33	61.97	33826	62.31
2006	SJ	V	>60 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	3.33	56.48	124611	65.8
2006	SJ	V	>60 fa	Odhner's Dorid	<i>Archidoris odhneri</i>	unsexed	0.20	100	1309	100
2006	SJ	V	>60 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	2.47	62.57	37394	61.05
2006	SJ	V	>60 fa	Other man-made debris	Other man-made debris	unsexed	30.51	100	1672	100
2006	SJ	V	>60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	7.52	46.75	13860	43.72
2006	SJ	V	>60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	0.50	81.39	12344	86.84
2006	SJ	V	>60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	1.45	51.27	30911	50.88
2006	SJ	V	>60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	2.90	57.45	69861	58.15
2006	SJ	V	>60 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	12.98	59.27	249133	55.43
2006	SJ	V	>60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	50.51	62.13	213713	60.4
2006	SJ	V	>60 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	0.33	100	1630	100
2006	SJ	V	>60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	3.71	85.66	94812	74.6
2006	SJ	V	>60 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	4.62	100	1926	100
2006	SJ	V	>60 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	0.02	100	1522	100
2006	SJ	V	>60 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	0.03	100	1533	100
2006	SJ	V	>60 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.65	60.28	48363	55.15
2006	SJ	V	>60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	1.93	100	1632	100
2006	SJ	V	>60 fa	Red anemone uniden.	<i>Urticina sp.</i>	unsexed	0.14	100	1522	100
2006	SJ	V	>60 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.31	100	1616	100
2006	SJ	V	>60 fa	Red Rock Crab	<i>Cancer productus</i>	female	8.20	47.98	53178	46.14
2006	SJ	V	>60 fa	Red Rock Crab	<i>Cancer productus</i>	male	17.27	64.35	60630	65.73
2006	SJ	V	>60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	18.18	70.46	26791	63.79
2006	SJ	V	>60 fa	Redbanded Rockfish	<i>Sebastes babcocki</i>	unsexed	0.06	100	1926	100
2006	SJ	V	>60 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	2.24	55.58	20068	47.48
2006	SJ	V	>60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	22.39	32.77	506674	39.02
2006	SJ	V	>60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	4.33	61.14	65613	61.06
2006	SJ	V	>60 fa	Rough Patch Shrimp	<i>Pandalus stenolepis</i>	unsexed	0.04	100	24474	100
2006	SJ	V	>60 fa	Roughback Sculpin	<i>Chitonotus pugentensis</i>	unsexed	0.02	100	1522	100
2006	SJ	V	>60 fa	Sand Rose Anemone	<i>Urticina columbiana</i>	unsexed	0.34	73.24	3055	68.14
2006	SJ	V	>60 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	0.88	100	1630	100
2006	SJ	V	>60 fa	Sandpaper Skate	<i>Bathyraja kincaidi</i>	unsexed	2.48	97.9	3556	68.41
2006	SJ	V	>60 fa	Sharpnose Crab	<i>Scyra acutifrons</i>	unsexed	1.25	100	20063	100
2006	SJ	V	>60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.20	75.69	7720	61.44
2006	SJ	V	>60 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.14	68.98	47238	71.8
2006	SJ	V	>60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	39.31	34.24	4626216	33.96
2006	SJ	V	>60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	12.98	44.39	244370	40.63
2006	SJ	V	>60 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	41.87	37.13	125666	37.09
2006	SJ	V	>60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	168.16	46.88	7534653	51.85
2006	SJ	V	>60 fa	Snailfish uniden.	<i>Liparis</i>	unsexed	0.10	100	4848	100
2006	SJ	V	>60 fa	Southern Rock Sole	<i>Lepidotsetta bilineata</i>	unsexed	1.34	79.09	3183	68.24
2006	SJ	V	>60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	581.23	20.03	353814	23.27
2006	SJ	V	>60 fa	Spiny Lebtheid	<i>Lebbeus groenlandicus</i>	unsexed	4.54	51.85	899689	51.13
2006	SJ	V	>60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	150.74	56.51	4720898	57.16
2006	SJ	V	>60 fa	Spinyhead Sculpin	<i>Dasyctonus setiger</i>	unsexed	7.30	54.64	91304	49.73
2006	SJ	V	>60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	298.66	28.57	9189642	29.58

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass Estimate Coefficient of Variation		Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
2006	SJ	V	>60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	1157.49	42.07	2334892	39.94	
2006	SJ	V	>60 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei</i> egg case	unsexed	0.08	100	6043	100	
2006	SJ	V	>60 fa	Spotted Snailfish	<i>Liparis callyodon</i>	unsexed	0.03	100	1533	100	
2006	SJ	V	>60 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	0.46	100	73182	100	
2006	SJ	V	>60 fa	Steven's Hermit Crab	<i>Pagurus stevensae</i>	unsexed	0.42	100	20063	100	
2006	SJ	V	>60 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	3.69	86.2	16678	71.75	
2006	SJ	V	>60 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.13	100	1672	100	
2006	SJ	V	>60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.15	72.1	4933	72.1	
2006	SJ	V	>60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	247.29	39.04	84766	40.35	
2006	SJ	V	>60 fa	Sweet Potato Sea Cucumber	<i>Molpadia intermedia</i>	unsexed	3.01	100	124393	100	
2006	SJ	V	>60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	0.42	100	1630	100	
2006	SJ	V	>60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	1.85	99.12	13307	88.49	
2006	SJ	V	>60 fa	Variable Topsnail	<i>Calliostoma variegatum</i>	unsexed	0.03	100	3142	100	
2006	SJ	V	>60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	147.34	20.26	2968579	21.77	
2006	SJ	V	>60 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	0.50	100	3928	100	
2006	SJ	V	>60 fa	White Sea Cucumber	<i>Eupentacta quinquesemita</i>	unsexed	0.15	80.75	15407	80.75	
2007	DB	S	5-20 fa	Bent-nose Macoma	<i>Macoma nasuta</i>	unsexed	0.77	65.34	11374	63.41	
2007	DB	S	5-20 fa	Big Skate egg case	<i>Raja binoculata</i> egg case	unsexed	0.20	100	541	100	
2007	DB	S	5-20 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	0.15	50	16039	50.74	
2007	DB	S	5-20 fa	Brown Rockfish	<i>Sebastes auriculatus</i>	unsexed	0.01	100	280	100	
2007	DB	S	5-20 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	6.05	51.8	93885	53.13	
2007	DB	S	5-20 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	0.05	46.85	1755	48.88	
2007	DB	S	5-20 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.05	68.5	2692	77.75	
2007	DB	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	2.43	46.85	1627	51.03	
2007	DB	S	5-20 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	5.29	62.49	581573	90.58	
2007	DB	S	5-20 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.02	63.74	8514	64.84	
2007	DB	S	5-20 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.01	79.04	1421	78.74	
2007	DB	S	5-20 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.98	60.46	222998	57.56	
2007	DB	S	5-20 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	0.06	81.18	2944	80.01	
2007	DB	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	female	13.96	69.83	29229	70.87	
2007	DB	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	male	12.03	61.26	38571	70.9	
2007	DB	S	5-20 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	8.19	26.82	232325	30.81	
2007	DB	S	5-20 fa	False Ochre Star	<i>Easterias troschelii</i>	unsexed	0.29	100	1622	100	
2007	DB	S	5-20 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	0.34	39.29	24954	42.97	
2007	DB	S	5-20 fa	Ghost Sand Shrimp	<i>Neotrypaea californiensis</i>	unsexed	0.60	64.89	20428	65.96	
2007	DB	S	5-20 fa	Glassy Tunicate	<i>Ascidia paratropa</i>	unsexed	0.01	100	855	100	
2007	DB	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	male	1.15	32.7	9277	27.27	
2007	DB	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	female	1.17	57.28	15379	55.48	
2007	DB	S	5-20 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	0.27	84.45	2152	66.27	
2007	DB	S	5-20 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	0.20	100	52163	100	
2007	DB	S	5-20 fa	Jointed Tube Worm	<i>Spiochaetopterus costarum</i>	unsexed	0.82	58.41	2144	46.96	
2007	DB	S	5-20 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	0.08	100	801	100	
2007	DB	S	5-20 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	0.01	100	855	100	
2007	DB	S	5-20 fa	Longspine Combfish	<i>Zaniolepis latipinnis</i>	unsexed	0.23	44.9	11528	47.78	
2007	DB	S	5-20 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	7.64	70.01	2222	53.97	
2007	DB	S	5-20 fa	Metridium uniden.	<i>Metridium</i> sp.	unsexed	125.87	41.46	162317	34.76	

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								Estimate		
2007	DB	S	5-20 fa	Miscellaneous material		unsexed	8.70	63.95	2197	46.27
2007	DB	S	5-20 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	0.30	39.43	36606	42.7
2007	DB	S	5-20 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	0.10	100	2432	100
2007	DB	S	5-20 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	0.21	35.46	7864	33.49
2007	DB	S	5-20 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	19.50	98.94	20821	98.39
2007	DB	S	5-20 fa	Plastic	Plastic	unsexed	0.15	83.33	1949	45.32
2007	DB	S	5-20 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	0.03	84.36	6513	85.93
2007	DB	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	male	1.49	38.89	4616	32.63
2007	DB	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	female	0.73	40.44	4109	41.76
2007	DB	S	5-20 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.03	100	541	100
2007	DB	S	5-20 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.83	50.85	60381	51.99
2007	DB	S	5-20 fa	Sand Sole	<i>Psettichthys melanostictus</i>	unsexed	0.89	52.33	3034	50.96
2007	DB	S	5-20 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	0.01	100	488	100
2007	DB	S	5-20 fa	Sea Nymph uniden.	Family Nereidae	unsexed	0.07	62.2	2568	50.77
2007	DB	S	5-20 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.01	100	855	100
2007	DB	S	5-20 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.09	25.32	10264	40.14
2007	DB	S	5-20 fa	Southern Rock Sole	<i>Lepidotsetta bilineata</i>	unsexed	0.40	72.24	1666	63.28
2007	DB	S	5-20 fa	Speckled Sanddab	<i>Citharichthys stigmatus</i>	unsexed	1.01	55.59	53724	55.61
2007	DB	S	5-20 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	42.29	16.9	68209	22.58
2007	DB	S	5-20 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	1.38	84.2	2380	78.03
2007	DB	S	5-20 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	21.64	41.83	41440	37.65
2007	DB	S	5-20 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.01	100	855	100
2007	DB	S	5-20 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	5.07	42.38	22015	48.43
2007	DB	S	5-20 fa	White Sea Cucumber	<i>Eupentacta quinquesemita</i>	unsexed	0.00	100	488	100
2007	DB	T	21-40 fa	Alaskan Pink Shrimp	<i>Pandalus eos</i>	unsexed	20.61	36.85	7753754	41.64
2007	DB	T	21-40 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	1.13	45.33	54184	51.79
2007	DB	T	21-40 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	0.17	50.7	3495	54.19
2007	DB	T	21-40 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	1.82	35.83	297204	43.62
2007	DB	T	21-40 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	0.81	100	14033	100
2007	DB	T	21-40 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	0.24	69.72	2865	63.3
2007	DB	T	21-40 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	5.70	25.05	669190	22.29
2007	DB	T	21-40 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	0.01	100	461	100
2007	DB	T	21-40 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.20	58.01	34128	64.9
2007	DB	T	21-40 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.02	100	1400	100
2007	DB	T	21-40 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	1.53	97.75	247003	97.3
2007	DB	T	21-40 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	0.07	100	2303	100
2007	DB	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	male	40.37	25.53	142063	49.19
2007	DB	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	female	23.95	17.95	130523	60.64
2007	DB	T	21-40 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	35.10	22.1	486185	21.33
2007	DB	T	21-40 fa	Fishing gear	Fishing gear	unsexed	0.02	100	405	100
2007	DB	T	21-40 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	1.08	44.33	78732	26.9
2007	DB	T	21-40 fa	Glass	Glass	unsexed	1.46	91.71	3668	87.54
2007	DB	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	female	0.00	100	461	100
2007	DB	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	male	3.42	43.04	23166	41.15
2007	DB	T	21-40 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	9.21	88.45	17195	86.56
2007	DB	T	21-40 fa	Green Sturgeon	<i>Acipenser medirostris</i>	unsexed	2.93	100	371	100

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								Estimate		
2007	DB	T	21-40 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	9.26	57.09	2522393	57.09
2007	DB	T	21-40 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	0.08	100	461	100
2007	DB	T	21-40 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.01	100	1382	100
2007	DB	T	21-40 fa	Longspine Combfish	<i>Zanolepis latipinnis</i>	unsexed	0.16	96.61	6848	92.16
2007	DB	T	21-40 fa	Marine vegetation	Marine vegetation	unsexed	59.67	52.51	5343	24.45
2007	DB	T	21-40 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	5.03	57.86	14972	83.35
2007	DB	T	21-40 fa	Miscellaneous material		unsexed	41.48	61.57	7110	20.56
2007	DB	T	21-40 fa	Other man-made debris	Other man-made debris	unsexed	0.02	100	371	100
2007	DB	T	21-40 fa	Pacific Herring	<i>Clupea pallasi</i>	unsexed	1.70	34.95	162109	37.94
2007	DB	T	21-40 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.01	100	1203	100
2007	DB	T	21-40 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	2.00	54.42	33862	42.82
2007	DB	T	21-40 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	0.12	100	1382	100
2007	DB	T	21-40 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	3.19	77.37	80283	73.99
2007	DB	T	21-40 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	0.05	100	2303	100
2007	DB	T	21-40 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	6.40	100	3268	100
2007	DB	T	21-40 fa	Plainfin Midshipman	<i>Porichthys notatus</i>	unsexed	0.60	58	3153	53.27
2007	DB	T	21-40 fa	Plastic	Plastic	unsexed	0.62	56.79	5318	34.07
2007	DB	T	21-40 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.03	100	4884	100
2007	DB	T	21-40 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	0.13	49.36	7803	48.7
2007	DB	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	male	1.93	72.14	5512	72.39
2007	DB	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	female	4.18	82.44	22113	79.56
2007	DB	T	21-40 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	0.02	100	2303	100
2007	DB	T	21-40 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.01	100	1203	100
2007	DB	T	21-40 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.03	100	921	100
2007	DB	T	21-40 fa	Sea Nymph uniden.	Family Nereidiidae	unsexed	0.19	100	9623	100
2007	DB	T	21-40 fa	Sea whip uniden.	<i>Virgulariidae</i>	unsexed	0.27	95.94	2543	66.74
2007	DB	T	21-40 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	1.02	73.97	73590	73.45
2007	DB	T	21-40 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	0.26	65.59	58517	81
2007	DB	T	21-40 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.13	53.84	15726	55.2
2007	DB	T	21-40 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	1.09	100	37777	100
2007	DB	T	21-40 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	65.23	41.7	109919	36.27
2007	DB	T	21-40 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	4.29	57.06	360223	57.5
2007	DB	T	21-40 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	50.42	24.73	79070	12.12
2007	DB	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.13	100	3686	100
2007	DB	T	21-40 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	7.65	61.38	8026	72.37
2007	DB	T	21-40 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	2.32	71.23	126552	64.34
2007	DB	T	21-40 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	0.03	100	371	100
2007	JE	S	5-20 fa	Alaskan Pink Shrimp	<i>Pandalus eos</i>	unsexed	0.09	100	14358	100
2007	JE	S	5-20 fa	Aluminum	Aluminum	unsexed	0.28	98.79	6603	66.33
2007	JE	S	5-20 fa	Barnacle uniden.	Order Thoracica	unsexed	54.61	100	451514	100
2007	JE	S	5-20 fa	Big Skate	<i>Raja binoculata</i>	unsexed	48.91	98.63	10488	70.97
2007	JE	S	5-20 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	0.09	100	2872	100
2007	JE	S	5-20 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.07	100	3431	100
2007	JE	S	5-20 fa	Brown Irish Lord	<i>Hemilepidotus spinosus</i>	unsexed	0.92	100	6164	100
2007	JE	S	5-20 fa	Brown Rockfish	<i>Sebastes auriculatus</i>	unsexed	0.18	100	6164	100
2007	JE	S	5-20 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	2.31	68.35	29340	58.72

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2007	JE	S	5-20 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	0.46	100	10563	100
2007	JE	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	471.55	51.69	498754	50.26
2007	JE	S	5-20 fa	Canary Rockfish	<i>Sebastes pinniger</i>	unsexed	0.31	100	15410	100
2007	JE	S	5-20 fa	Clown Nudibranch	<i>Triopha catalinae</i>	unsexed	0.03	100	2872	100
2007	JE	S	5-20 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	8.10	100	1619667	100
2007	JE	S	5-20 fa	Copper Rockfish	<i>Sebastes caurinus</i>	unsexed	3.79	94.62	24666	86.79
2007	JE	S	5-20 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.34	74.41	127651	70.47
2007	JE	S	5-20 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.13	53.06	22362	68.09
2007	JE	S	5-20 fa	Curlfin Sole	<i>Pleuronichthys decurrens</i>	unsexed	0.68	66.43	6999	66.75
2007	JE	S	5-20 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	35.62	89.7	13454276	95.3
2007	JE	S	5-20 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	0.59	66.33	23330	67.95
2007	JE	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	female	73.91	72.36	149939	72.22
2007	JE	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	male	125.12	71.97	207666	75.16
2007	JE	S	5-20 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	74.91	48.06	827608	51.89
2007	JE	S	5-20 fa	False Ochre Star	<i>Easterias troschelii</i>	unsexed	14.07	50.56	32770	55.89
2007	JE	S	5-20 fa	Fish-eating Star	<i>Stylasterias forneri</i>	unsexed	0.34	100	2872	100
2007	JE	S	5-20 fa	Fishing gear	Fishing gear	unsexed	0.06	100	6185	100
2007	JE	S	5-20 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	5.70	100	190135	100
2007	JE	S	5-20 fa	Giant Pacific Octopus	<i>Enteroctopus dofleini</i>	unsexed	0.49	100	3082	100
2007	JE	S	5-20 fa	Glass	Glass	unsexed	3.30	100	9246	100
2007	JE	S	5-20 fa	Glassy Tunicate	<i>Ascidia paratropa</i>	unsexed	0.40	100	9278	100
2007	JE	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	male	1.16	66.19	14063	76.12
2007	JE	S	5-20 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.08	53.9	15139	58.66
2007	JE	S	5-20 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.12	100	18491	100
2007	JE	S	5-20 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	130.32	56.8	275992	62
2007	JE	S	5-20 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	2.55	100	19588	100
2007	JE	S	5-20 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	0.07	100	7042	100
2007	JE	S	5-20 fa	Grunt Sculpin	<i>Rhamphocottus richardsoni</i>	unsexed	0.09	70.75	6174	66.14
2007	JE	S	5-20 fa	Gumboot Chiton	<i>Cryptochiton stelleri</i>	unsexed	8.29	50.58	10377	50
2007	JE	S	5-20 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.37	100	6185	100
2007	JE	S	5-20 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.29	76.41	111367	96.51
2007	JE	S	5-20 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	3.64	82.66	46987	80.27
2007	JE	S	5-20 fa	Leather Star	<i>Dermasterias imbricata</i>	unsexed	4.65	100	5743	100
2007	JE	S	5-20 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	5.56	100	34310	100
2007	JE	S	5-20 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.06	100	15410	100
2007	JE	S	5-20 fa	Marine vegetation	Marine vegetation	unsexed	427.78	53.49	26862	12.96
2007	JE	S	5-20 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	61.02	96.36	89790	85.64
2007	JE	S	5-20 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	0.25	100	3093	100
2007	JE	S	5-20 fa	Mottled Anemone	<i>Urticina crassicornis</i>	unsexed	0.17	100	3431	100
2007	JE	S	5-20 fa	Mud Nemertean	<i>Paranemertes peregrina</i>	unsexed	0.12	100	3093	100
2007	JE	S	5-20 fa	Northern Anchovy	<i>Engraulis mordax</i>	unsexed	0.04	100	3521	100
2007	JE	S	5-20 fa	Northern Kelp Crab	<i>Pugettia producta</i>	unsexed	0.04	100	3521	100
2007	JE	S	5-20 fa	Northern Rock Sole	<i>Lepidotsetta polyxystra</i>	unsexed	1.63	76.25	6372	66.56
2007	JE	S	5-20 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	0.53	100	6185	100
2007	JE	S	5-20 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	15.55	73.76	989257	91.54
2007	JE	S	5-20 fa	Pacific Sand Lance	<i>Ammodytes personatus</i>	unsexed	0.08	100	7835	100

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2007	JE	S	5-20 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	98.18	61.22	2137625	50.06
2007	JE	S	5-20 fa	Pacific Spiny Lumpsucker	<i>Eumicrotremus orbis</i>	unsexed	0.14	100	6862	100
2007	JE	S	5-20 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	0.18	100	7042	100
2007	JE	S	5-20 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	1.13	56.89	26433	56.32
2007	JE	S	5-20 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	112.13	51.63	40275	53.29
2007	JE	S	5-20 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	0.33	53.52	16298	53.52
2007	JE	S	5-20 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	11.38	60.83	35365	59.76
2007	JE	S	5-20 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.34	100	3093	100
2007	JE	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	female	6.02	67.74	45729	64.23
2007	JE	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	male	22.91	52.79	88204	61.8
2007	JE	S	5-20 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	22.63	51.43	25241	45.38
2007	JE	S	5-20 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	0.31	80	31250	89.44
2007	JE	S	5-20 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	0.24	42.11	16538	41.36
2007	JE	S	5-20 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	6.60	57.12	250409	50.32
2007	JE	S	5-20 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	2.96	70.01	15859	59.77
2007	JE	S	5-20 fa	Sea whip uniden.	<i>Virgulariidae</i>	unsexed	0.17	100	17499	100
2007	JE	S	5-20 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	4.17	96.71	218467	98.42
2007	JE	S	5-20 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.10	72.31	6614	66.32
2007	JE	S	5-20 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.06	100	12328	100
2007	JE	S	5-20 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	9.87	100	235051	100
2007	JE	S	5-20 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	153.49	32.51	1338501	75.84
2007	JE	S	5-20 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	13.92	36.7	640206	37.41
2007	JE	S	5-20 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	290.62	87.82	199023	72.58
2007	JE	S	5-20 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	163.03	66.31	3208959	66.21
2007	JE	S	5-20 fa	Spotted Ratfish	<i>Hydrolagus collei</i>	unsexed	876.43	99.79	1550851	99.75
2007	JE	S	5-20 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	233.99	50.46	203795	45.11
2007	JE	S	5-20 fa	Striped Nudibranch	<i>Armina californica</i>	unsexed	0.42	90.85	13022	74.57
2007	JE	S	5-20 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.10	100	3446	100
2007	JE	S	5-20 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	234.65	50.03	348196	39.8
2007	JE	S	5-20 fa	Variable Topsnail	<i>Calliostoma variegatum</i>	unsexed	0.04	100	3521	100
2007	JE	S	5-20 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	9.13	95.33	485926	95.63
2007	JE	S	5-20 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	5.84	79.53	54266	71.66
2007	JE	T	21-40 fa	Alaskan Pink Shrimp	<i>Pandalus eos</i>	unsexed	50.68	99.53	10139901	99.47
2007	JE	T	21-40 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	6.45	100	334200	100
2007	JE	T	21-40 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	0.88	100	15532	100
2007	JE	T	21-40 fa	Big Skate	<i>Raja binoculata</i>	unsexed	321.65	99.04	14163	70.56
2007	JE	T	21-40 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	0.05	100	4774	100
2007	JE	T	21-40 fa	Bubble Gum Coral	<i>Paragorgia pacifica</i>	unsexed	0.10	100	15532	100
2007	JE	T	21-40 fa	Butter Clam	<i>Saxidomus giganteus</i>	unsexed	0.29	100	4774	100
2007	JE	T	21-40 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.19	76.87	9138	65.55
2007	JE	T	21-40 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	91.23	96.28	176246	97.2
2007	JE	T	21-40 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	10.14	78.85	795693	76.99
2007	JE	T	21-40 fa	Diamondback Nudibranch	<i>Tritonia festiva</i>	unsexed	0.04	100	4363	100
2007	JE	T	21-40 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	19.71	46.64	2259819	49.67
2007	JE	T	21-40 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	4.40	66.01	100088	63.86
2007	JE	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	male	256.70	38.89	336749	38.43

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2007	JE	T	21-40 fa	Dungeness Crab	<i>Cancer magister</i>	female	212.91	50.84	430711	50.85
2007	JE	T	21-40 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	155.19	43.78	3096387	44.82
2007	JE	T	21-40 fa	False Ochre Star	<i>Evasterias troschelii</i>	unsexed	1.29	100	4615	100
2007	JE	T	21-40 fa	Fish-eating Star	<i>Styela sterias forsteri</i>	unsexed	17.84	67.61	26786	58.11
2007	JE	T	21-40 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	21.48	55.78	691431	72.38
2007	JE	T	21-40 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	20.79	93.03	158988	85.43
2007	JE	T	21-40 fa	Giant Pacific Octopus	<i>Enteroctopus dofleini</i>	unsexed	0.88	100	4615	100
2007	JE	T	21-40 fa	Glassy Tunicate	<i>Ascidia paratropa</i>	unsexed	0.36	100	7257	100
2007	JE	T	21-40 fa	Graceful Crab	<i>Cancer gracilis</i>	male	1.65	75.97	14285	69.09
2007	JE	T	21-40 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.05	100	5290	100
2007	JE	T	21-40 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	38.82	41.65	84750	53.05
2007	JE	T	21-40 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	3.13	73.24	44492	59.17
2007	JE	T	21-40 fa	Greenstriped Rockfish	<i>Sebastodes elongatus</i>	unsexed	0.09	100	4615	100
2007	JE	T	21-40 fa	Grunt Sculpin	<i>Rhamphocottus richardsoni</i>	unsexed	0.78	65.66	63188	69.56
2007	JE	T	21-40 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.34	53.97	46073	52.34
2007	JE	T	21-40 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	0.01	100	5177	100
2007	JE	T	21-40 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	1.78	100	27443	100
2007	JE	T	21-40 fa	Marine vegetation	Marine vegetation	unsexed	51.65	31.29	50253	17.64
2007	JE	T	21-40 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	100.36	49.38	284156	47.83
2007	JE	T	21-40 fa	Northern Anchovy	<i>Engraulis mordax</i>	unsexed	0.10	100	4774	100
2007	JE	T	21-40 fa	Northern Ronquil	<i>Ronquilus jordani</i>	unsexed	0.31	100	5177	100
2007	JE	T	21-40 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	0.16	100	5290	100
2007	JE	T	21-40 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	0.69	100	13722	100
2007	JE	T	21-40 fa	Other man-made debris	Other man-made debris	unsexed	0.42	100	5290	100
2007	JE	T	21-40 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	2.90	100	7257	100
2007	JE	T	21-40 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	0.24	100	4774	100
2007	JE	T	21-40 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	9.44	52.89	493767	52.01
2007	JE	T	21-40 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	545.26	36.64	8392777	29.77
2007	JE	T	21-40 fa	Pacific Staghorn Sculpin	<i>Leptocottus armatus</i>	unsexed	0.39	100	4363	100
2007	JE	T	21-40 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	0.83	100	13844	100
2007	JE	T	21-40 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	2.97	89.91	77203	81.61
2007	JE	T	21-40 fa	Pile Perch	<i>Rhacochilus vacca</i>	unsexed	0.14	100	9549	100
2007	JE	T	21-40 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	11.77	100	4615	100
2007	JE	T	21-40 fa	Quillback Rockfish	<i>Sebastodes maliger</i>	unsexed	0.68	60.91	36825	73.38
2007	JE	T	21-40 fa	Rainbow Star	<i>Orthasterias koehlerii</i>	unsexed	7.45	68.08	20015	53.79
2007	JE	T	21-40 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.57	100	4774	100
2007	JE	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	female	1.20	100	4615	100
2007	JE	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	male	1.92	100	5055	100
2007	JE	T	21-40 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	3.37	58.84	253445	58.12
2007	JE	T	21-40 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	5.04	60.96	203019	57.47
2007	JE	T	21-40 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	9.62	49.16	657538	57.5
2007	JE	T	21-40 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.15	100	7257	100
2007	JE	T	21-40 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	5.16	79.19	29874	56.39
2007	JE	T	21-40 fa	Sea mouse uniden.	Family Aphroditidae	unsexed	1.06	100	5290	100
2007	JE	T	21-40 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	7.93	45.15	609439	46.47
2007	JE	T	21-40 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.09	100	4615	100

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2007	JE	T	21-40 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.25	62.76	19718	55.6
2007	JE	T	21-40 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	16.19	100	13722	100
2007	JE	T	21-40 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	44.36	80.28	1592221	73.36
2007	JE	T	21-40 fa	Snake Prickleback	<i>Lumpenus sagitta</i>	unsexed	0.14	100	4615	100
2007	JE	T	21-40 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	129.80	41.31	1124769	36.37
2007	JE	T	21-40 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	2.76	64.44	142359	65.46
2007	JE	T	21-40 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	447.94	58.75	556215	52.36
2007	JE	T	21-40 fa	Spiny Lebbed	<i>Lebbeus groenlandicus</i>	unsexed	0.01	100	5177	100
2007	JE	T	21-40 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	185.85	95.6	5609626	95.32
2007	JE	T	21-40 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	0.77	80.57	78720	73.67
2007	JE	T	21-40 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	535.92	70.61	1434679	75.61
2007	JE	T	21-40 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	10.67	60.05	13752	48.85
2007	JE	T	21-40 fa	Steven's Hermit Crab	<i>Pagurus stevensae</i>	unsexed	7.14	100	68609	100
2007	JE	T	21-40 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.92	67.93	14718	72.34
2007	JE	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	1.71	81.81	51739	80.05
2007	JE	T	21-40 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	205.55	44.81	261600	41.95
2007	JE	T	21-40 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	female	0.28	100	13844	100
2007	JE	T	21-40 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	58.90	39.21	4078342	40.55
2007	JE	T	21-40 fa	Whitespotted Greenling	<i>Hexagrammos stelleri</i>	unsexed	1.29	79.97	20587	75.93
2007	JE	U	41-60 fa	Alaskan Deepwater Star	<i>Pseudarchaster alascensis</i>	unsexed	1.75	100	8135	100
2007	JE	U	41-60 fa	Alaskan Pink Shrimp	<i>Pandalus eos</i>	unsexed	112.81	44.82	27852324	47.85
2007	JE	U	41-60 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.46	100	3550	100
2007	JE	U	41-60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	9.57	53.86	411085	50.03
2007	JE	U	41-60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	354.61	61.46	81348	42.45
2007	JE	U	41-60 fa	Blackbelly Eelpout	<i>Lycodes pacificus</i>	unsexed	0.31	100	13827	100
2007	JE	U	41-60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.02	100	3090	100
2007	JE	U	41-60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	49.75	82.55	256836	84.72
2007	JE	U	41-60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	0.06	100	12359	100
2007	JE	U	41-60 fa	Cloud Sponge	<i>Aphrocallistes vastus</i>	unsexed	13.87	68.55	6952	67.43
2007	JE	U	41-60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.39	86.41	94826	72.09
2007	JE	U	41-60 fa	Cryptic Kelp Crab	<i>Pugettia richii</i>	unsexed	0.11	100	9741	100
2007	JE	U	41-60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	25.80	61.95	2894165	58.18
2007	JE	U	41-60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	14.01	26.62	252758	25.46
2007	JE	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	male	24.10	100	22832	100
2007	JE	U	41-60 fa	Dungeness Crab	<i>Cancer magister</i>	female	103.39	100	169607	100
2007	JE	U	41-60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	252.39	42.94	2620312	45.91
2007	JE	U	41-60 fa	Fish-eating Star	<i>Stylasterias forneri</i>	unsexed	2.47	100	3090	100
2007	JE	U	41-60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	10.63	78.76	33202	72.9
2007	JE	U	41-60 fa	Fragile Sea Urchin	<i>Strongylocentrotus fragilis</i>	unsexed	1.41	100	9741	100
2007	JE	U	41-60 fa	Fried Egg Jellyfish	<i>Phacellophora camtschatica</i>	unsexed	0.25	100	3550	100
2007	JE	U	41-60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.11	100	9741	100
2007	JE	U	41-60 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.07	100	7100	100
2007	JE	U	41-60 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	108.09	75.3	144001	79.14
2007	JE	U	41-60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	67.03	67.33	490619	68.27
2007	JE	U	41-60 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	0.40	100	3090	100
2007	JE	U	41-60 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.48	100	16308	100

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2007	JE	U	41-60 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.10	73.85	26142	67.72
2007	JE	U	41-60 fa	Humpy Shrimp	<i>Pandalus goniurus</i>	unsexed	0.06	67.54	73458	78.06
2007	JE	U	41-60 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	14.66	60	69950	62.34
2007	JE	U	41-60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	4.05	81.57	10352	70.11
2007	JE	U	41-60 fa	Longhorned Decorator Crab	<i>Chorilia longipes</i>	unsexed	0.21	83.78	10470	72.05
2007	JE	U	41-60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	43.02	75.58	21155	49.66
2007	JE	U	41-60 fa	Marine vegetation	Marine vegetation	unsexed	249.41	39.91	45033	19.77
2007	JE	U	41-60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	25.15	88.21	50254	65.05
2007	JE	U	41-60 fa	Miscellaneous material		unsexed	20.14	75.06	61577	51.12
2007	JE	U	41-60 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	0.07	100	3550	100
2007	JE	U	41-60 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	0.96	100	16308	100
2007	JE	U	41-60 fa	Northern Ronquil	<i>Ronquilus jordani</i>	unsexed	5.43	80.56	127451	77.81
2007	JE	U	41-60 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	0.16	68.13	16830	70.22
2007	JE	U	41-60 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	1.22	56.7	48489	53.24
2007	JE	U	41-60 fa	Other man-made debris	Other man-made debris	unsexed	39.14	100	3262	100
2007	JE	U	41-60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	15.04	84.53	13558	54.54
2007	JE	U	41-60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	0.47	69.34	13417	67.67
2007	JE	U	41-60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	12.21	39.36	468188	39.24
2007	JE	U	41-60 fa	Pacific Halibut	<i>Hippoglossus stenolepis</i>	unsexed	120.38	56.43	13890	59.22
2007	JE	U	41-60 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	33.20	74.06	206634	29.31
2007	JE	U	41-60 fa	Pacific Lyre Crab	<i>Hyas lyratus</i>	unsexed	0.40	100	3619	100
2007	JE	U	41-60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	163.49	34.41	945306	35.12
2007	JE	U	41-60 fa	Pacific Spiny Lumpsucker	<i>Eumicrotremus orbis</i>	unsexed	0.15	100	7657	100
2007	JE	U	41-60 fa	Pacific Tomcod	<i>Microgadus proximus</i>	unsexed	0.67	70.68	16264	68.99
2007	JE	U	41-60 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	6.61	69.71	63486	57.05
2007	JE	U	41-60 fa	Pink Short-Spined Star	<i>Pisaster brevispinus</i>	unsexed	18.44	100	9741	100
2007	JE	U	41-60 fa	Polychaete worm uniden.	Class Polychaeta	unsexed	0.04	100	3829	100
2007	JE	U	41-60 fa	Puget Sound King Crab	<i>Lopholithodes mandtii</i>	unsexed	0.89	100	3550	100
2007	JE	U	41-60 fa	Puget Sound Rockfish	<i>Sebastes empheaeus</i>	unsexed	0.07	100	3550	100
2007	JE	U	41-60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	3.95	58.7	13402	57.11
2007	JE	U	41-60 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	6.56	66.53	13692	42.75
2007	JE	U	41-60 fa	Red Irish Lord	<i>Hemilepidotus hemilepidotus</i>	unsexed	0.39	100	3550	100
2007	JE	U	41-60 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.17	100	3433	100
2007	JE	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	female	0.51	100	2985	100
2007	JE	U	41-60 fa	Red Rock Crab	<i>Cancer productus</i>	male	2.40	68.17	10352	70.11
2007	JE	U	41-60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	173.27	98.37	231387	95.5
2007	JE	U	41-60 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	0.37	100	3090	100
2007	JE	U	41-60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	34.23	56.15	1476937	70.75
2007	JE	U	41-60 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	5.54	83.43	156534	86.03
2007	JE	U	41-60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	2.53	88.26	19927	82.2
2007	JE	U	41-60 fa	Rough Patch Shrimp	<i>Pandalus stenolepis</i>	unsexed	0.35	69.09	109544	67.45
2007	JE	U	41-60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	12.05	62.8	85522	58.58
2007	JE	U	41-60 fa	Sea Lemon	<i>Anisodoris nobilis</i>	unsexed	0.04	100	3550	100
2007	JE	U	41-60 fa	Shiner Perch	<i>Cymatogaster aggregata</i>	unsexed	0.24	100	10370	100
2007	JE	U	41-60 fa	Shortscale Eulaid	<i>Eualus suckleyi</i>	unsexed	0.20	84.33	49783	71.21
2007	JE	U	41-60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	53.31	93.61	6558641	96.33

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								Estimate		
2007	JE	U	41-60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.95	83.42	67040	82.12
2007	JE	U	41-60 fa	Slim Sculpin	<i>Radulinus asprellus</i>	unsexed	0.07	100	10856	100
2007	JE	U	41-60 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	13.07	67.42	26863	69.25
2007	JE	U	41-60 fa	Smooth Alligatorfish	<i>Anoplagonus inermis</i>	unsexed	0.06	100	5971	100
2007	JE	U	41-60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	43.08	73.8	2811936	75.12
2007	JE	U	41-60 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	24.86	59.78	109137	83.35
2007	JE	U	41-60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	405.06	31.59	399748	28.5
2007	JE	U	41-60 fa	Spiny Lebtheid	<i>Lebbeus groenlandicus</i>	unsexed	0.41	68.95	83187	68.05
2007	JE	U	41-60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	2.36	40.52	107251	43.48
2007	JE	U	41-60 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	0.90	100	7237	100
2007	JE	U	41-60 fa	Spinyhead Sculpin	<i>Dasycttus setiger</i>	unsexed	1.62	100	28146	100
2007	JE	U	41-60 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	14.08	71.99	6640	67.61
2007	JE	U	41-60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	78.99	42.18	2604560	40.59
2007	JE	U	41-60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	4531.79	33.17	12527297	33.3
2007	JE	U	41-60 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	2.58	96.14	603395	95.62
2007	JE	U	41-60 fa	Stalked Trumpet Sponge	<i>Styliissa stipitata</i>	unsexed	0.82	100	3433	100
2007	JE	U	41-60 fa	Starry Flounder	<i>Platichthys stellatus</i>	unsexed	16.92	100	9741	100
2007	JE	U	41-60 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.04	100	3550	100
2007	JE	U	41-60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	2.84	73.99	61686	65.85
2007	JE	U	41-60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	3.08	100	3619	100
2007	JE	U	41-60 fa	Swimming Anemone	<i>Stomphia coccinea</i>	unsexed	0.29	100	3619	100
2007	JE	U	41-60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	1.06	100	3518	100
2007	JE	U	41-60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	3.65	100	3619	100
2007	JE	U	41-60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	186.78	37.53	9169063	34.77
2007	JE	U	41-60 fa	Warty Sea Squirt	<i>Pyura haustor</i>	unsexed	0.56	100	48925	100
2007	JE	V	>60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	41.17	75.42	9293794	78.51
2007	JE	V	>60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	10.37	29.72	95222	23.94
2007	JE	V	>60 fa	Barnacle uniden.	<i>Order Thoracica</i>	unsexed	0.17	100	25677	100
2007	JE	V	>60 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	0.62	100	3105	100
2007	JE	V	>60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	424.62	41.92	78196	46.76
2007	JE	V	>60 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	0.25	100	4112	100
2007	JE	V	>60 fa	Cloud Sponge	<i>Aphrocallistes vastus</i>	unsexed	1.50	76.6	6725	70.06
2007	JE	V	>60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.09	51.21	30147	56.65
2007	JE	V	>60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	3.88	99.08	413708	99.14
2007	JE	V	>60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	67.60	25.88	1019258	31.07
2007	JE	V	>60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	218.45	46.59	1632644	62.88
2007	JE	V	>60 fa	Finger Sponge uniden.	<i>Neoesperiopsis sp.</i>	unsexed	0.29	100	4112	100
2007	JE	V	>60 fa	Fragile Sea Urchin	<i>Strongylocentrotus fragilis</i>	unsexed	0.56	100	3105	100
2007	JE	V	>60 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.06	100	6210	100
2007	JE	V	>60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	9.85	31.48	85678	31.71
2007	JE	V	>60 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	0.65	100	3835	100
2007	JE	V	>60 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.04	100	8225	100
2007	JE	V	>60 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	0.85	68.2	5348	68.16
2007	JE	V	>60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	14.65	48.13	33050	62.08
2007	JE	V	>60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	22.98	55.15	13330	44.65
2007	JE	V	>60 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	16.30	32.83	23470	28.71

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2007	JE	V	>60 fa	Northern Horse Mussel	<i>Modiolus modiolus</i>	unsexed	0.15	100	22807	100
2007	JE	V	>60 fa	Northern Sculpin	<i>Icelinus borealis</i>	unsexed	0.05	100	2613	100
2007	JE	V	>60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	26.11	29.63	68672	31.37
2007	JE	V	>60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	0.66	75.94	33301	80.28
2007	JE	V	>60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	8.69	20.71	353134	25.35
2007	JE	V	>60 fa	Pacific Halibut	<i>Hippoglossus stenolepis</i>	unsexed	69.90	84.23	7217	68.9
2007	JE	V	>60 fa	Pacific Herring	<i>Clupea pallasi</i>	unsexed	10.15	26.39	269907	28.35
2007	JE	V	>60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	2.53	45.26	20065	38.88
2007	JE	V	>60 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	2.99	49.37	15765	38.66
2007	JE	V	>60 fa	Puget Sound Rockfish	<i>Sebastes emphaeus</i>	unsexed	0.08	100	4112	100
2007	JE	V	>60 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	18.82	59.57	47085	56.54
2007	JE	V	>60 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.22	100	3105	100
2007	JE	V	>60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	15.15	72.58	18160	70.89
2007	JE	V	>60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	24.44	35.57	544654	35
2007	JE	V	>60 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	0.15	68.15	5153	68.15
2007	JE	V	>60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.96	68.38	5526	68.31
2007	JE	V	>60 fa	Rough Patch Shrimp	<i>Pandalus stenolepis</i>	unsexed	0.08	100	28787	100
2007	JE	V	>60 fa	Sablefish	<i>Anoplopoma fimbria</i>	unsexed	2.27	100	5164	100
2007	JE	V	>60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	12.31	89.68	52913	83.08
2007	JE	V	>60 fa	Sandpaper Skate	<i>Bathyraja kincaidi</i>	unsexed	18.44	42.27	37242	42.29
2007	JE	V	>60 fa	Shortscale Eulaid	<i>Eualus suckleyi</i>	unsexed	0.05	73.33	12168	78.45
2007	JE	V	>60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	23.78	27.58	2092197	28.16
2007	JE	V	>60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.09	100	3105	100
2007	JE	V	>60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	12.32	53.2	598227	49.28
2007	JE	V	>60 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	0.96	100	2735	100
2007	JE	V	>60 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	0.08	100	4112	100
2007	JE	V	>60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	376.73	29.41	274412	30.17
2007	JE	V	>60 fa	Spiny Lebbeid	<i>Lebbeus groenlandicus</i>	unsexed	0.01	100	3327	100
2007	JE	V	>60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	0.20	55.71	10561	54.58
2007	JE	V	>60 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	0.92	100	3287	100
2007	JE	V	>60 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	0.92	68.73	5687	68.47
2007	JE	V	>60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	33.86	47.98	761141	47.36
2007	JE	V	>60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	6680.34	22.18	18474130	19.81
2007	JE	V	>60 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei egg case</i>	unsexed	0.23	88.62	15847	84.36
2007	JE	V	>60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.05	100	2735	100
2007	JE	V	>60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	2.71	100	5706	100
2007	JE	V	>60 fa	Swifts Star	<i>Gephyreaster swifti</i>	unsexed	3.91	68.48	8994	70.92
2007	JE	V	>60 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	2.09	68.76	7160	68.29
2007	JE	V	>60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	337.72	34.25	11691443	31.45
2007	JW	S	5-20 fa	Aluminum	Aluminum	unsexed	0.22	100	2761	100
2007	JW	S	5-20 fa	Basket Star	<i>Gorgonocephalus eucnemis</i>	unsexed	0.60	100	3169	100
2007	JW	S	5-20 fa	Buffalo Sculpin	<i>Enophrys bison</i>	unsexed	2.93	100	74539	100
2007	JW	S	5-20 fa	Cabezon	<i>Scorpaenichthys marmoratus</i>	unsexed	0.39	100	2761	100
2007	JW	S	5-20 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	42.23	72.03	57314	70.93
2007	JW	S	5-20 fa	Coonstripe Shrimp	<i>Pandalus hypsinotus</i>	unsexed	0.03	100	5521	100
2007	JW	S	5-20 fa	Curlfin Sole	<i>Pleuronichthys decurrens</i>	unsexed	14.20	83.04	57997	74.61

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2007	JW	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	male	7.50	63.52	11451	68.28
2007	JW	S	5-20 fa	Dungeness Crab	<i>Cancer magister</i>	female	19.32	100	41411	100
2007	JW	S	5-20 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	11.63	63.81	77551	47.44
2007	JW	S	5-20 fa	Fish-eating Star	<i>Styelaasterias forreri</i>	unsexed	0.74	65.19	6494	57.77
2007	JW	S	5-20 fa	Graceful Crab	<i>Cancer gracilis</i>	female	0.03	100	2761	100
2007	JW	S	5-20 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.09	66.87	15496	62.32
2007	JW	S	5-20 fa	Great Sculpin	<i>Myoxocephalus polyacanthocephalus</i>	unsexed	14.92	75.27	24866	73.36
2007	JW	S	5-20 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	10.13	69.31	76814	57.74
2007	JW	S	5-20 fa	Gumboot Chiton	<i>Cryptochiton stelleri</i>	unsexed	10.05	100	13804	100
2007	JW	S	5-20 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.25	100	3169	100
2007	JW	S	5-20 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.17	55.76	28579	50.13
2007	JW	S	5-20 fa	Jellyfish uniden.	<i>Class Scyphozoa</i>	unsexed	0.07	100	3325	100
2007	JW	S	5-20 fa	Leafy Hornmouth	<i>Ceratostoma foliatum</i>	unsexed	0.27	100	3325	100
2007	JW	S	5-20 fa	Leather Star	<i>Dermasterias imbricata</i>	unsexed	2.82	100	3169	100
2007	JW	S	5-20 fa	Lewis's Moon Snail	<i>Euspira lewisi</i>	unsexed	0.99	100	5521	100
2007	JW	S	5-20 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	0.76	100	6650	100
2007	JW	S	5-20 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	0.47	100	3325	100
2007	JW	S	5-20 fa	Marbled Snailfish	<i>Liparis dennyi</i>	unsexed	0.08	100	2761	100
2007	JW	S	5-20 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	72.41	51.48	12025	4.74
2007	JW	S	5-20 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	8.66	68.71	26926	59.51
2007	JW	S	5-20 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	1.80	68.23	5939	57.99
2007	JW	S	5-20 fa	Northern Sun Star	<i>Solaster endeca</i>	unsexed	0.54	100	3169	100
2007	JW	S	5-20 fa	Orange Burrowing Sea Cucumber	<i>Cucumaria miniata</i>	unsexed	0.26	70.21	6095	58.21
2007	JW	S	5-20 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	0.58	100	8312	100
2007	JW	S	5-20 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	0.92	74.65	9108	66
2007	JW	S	5-20 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	3.04	100	76050	100
2007	JW	S	5-20 fa	Pacific Spiny Lumpsucker	<i>Eumicrotremus orbis</i>	unsexed	0.03	100	2761	100
2007	JW	S	5-20 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	12.51	42.75	36463	23.99
2007	JW	S	5-20 fa	Red Rock Crab	<i>Cancer productus</i>	male	4.36	100	19325	100
2007	JW	S	5-20 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	14.05	99.68	33802	87.38
2007	JW	S	5-20 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	0.58	60.91	28503	73.41
2007	JW	S	5-20 fa	Ringed Lucine	<i>Lucinoma annulata</i>	unsexed	0.44	100	2761	100
2007	JW	S	5-20 fa	Roughback Sculpin	<i>Chitonotus pugetensis</i>	unsexed	0.32	65.53	9662	63.1
2007	JW	S	5-20 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	4.74	74.61	16000	74.9
2007	JW	S	5-20 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	6.75	100	164775	100
2007	JW	S	5-20 fa	Southern Rock Sole	<i>Lepidotsetta bilineata</i>	unsexed	110.05	22.73	418214	30.5
2007	JW	S	5-20 fa	Speckled Sanddab	<i>Citharichthys stigmaeus</i>	unsexed	4.12	47.74	289730	44.84
2007	JW	S	5-20 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	65.39	89.9	1312547	91.82
2007	JW	S	5-20 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	3840.16	61.36	8932065	56.55
2007	JW	S	5-20 fa	Steven's Hermit Crab	<i>Pagurus stevensae</i>	unsexed	22.28	81.62	350505	81.22
2007	JW	S	5-20 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.35	100	3169	100
2007	JW	S	5-20 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.38	100	6338	100
2007	JW	S	5-20 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	115.02	64.66	75086	44.42
2007	JW	S	5-20 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.50	100	23273	100
2007	JW	T	21-40 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	2.54	66.63	91903	61.29
2007	JW	T	21-40 fa	Brown Irish Lord	<i>Hemilepidotus spinosus</i>	unsexed	0.14	61.37	4056	61.68

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								Coefficient of Variation		
2007	JW	T	21-40 fa	Butter Sole	<i>Isopsetta isolepis</i>	unsexed	0.45	65.02	3918	61.28
2007	JW	T	21-40 fa	California Market Squid	<i>Loligo opalescens</i>	unsexed	0.08	71.91	3918	61.28
2007	JW	T	21-40 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	4.86	64.44	8093	46.84
2007	JW	T	21-40 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.07	100	22169	100
2007	JW	T	21-40 fa	Curlfin Sole	<i>Pleuronichthys decurrens</i>	unsexed	0.70	100	1900	100
2007	JW	T	21-40 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.15	85.63	16980	75.88
2007	JW	T	21-40 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	4.25	41.04	61630	28.31
2007	JW	T	21-40 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	35.52	60.95	183123	61.21
2007	JW	T	21-40 fa	Fat Blood Star	<i>Henricia sanguinolenta</i>	unsexed	0.02	100	1839	100
2007	JW	T	21-40 fa	Fish-eating Star	<i>Stylasterias forneri</i>	unsexed	0.16	100	1565	100
2007	JW	T	21-40 fa	Fishing gear	<i>Fishing gear</i>	unsexed	0.13	82.49	3918	61.28
2007	JW	T	21-40 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	0.04	100	1839	100
2007	JW	T	21-40 fa	Fragile Sea Urchin	<i>Strongylocentrotus fragilis</i>	unsexed	0.04	100	2217	100
2007	JW	T	21-40 fa	Fried Egg Jellyfish	<i>Phacellophora camtschatica</i>	unsexed	0.99	100	1900	100
2007	JW	T	21-40 fa	Giant Barnacle	<i>Balanus nubilis</i>	unsexed	11.86	100	70940	100
2007	JW	T	21-40 fa	Glassy Tunicate	<i>Ascidia paratropa</i>	unsexed	0.04	100	1839	100
2007	JW	T	21-40 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.02	100	1900	100
2007	JW	T	21-40 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	263.86	95.65	2814794	90.25
2007	JW	T	21-40 fa	Gumboot Chiton	<i>Cryptochiton stelleri</i>	unsexed	5.39	93.53	11992	81.65
2007	JW	T	21-40 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.06	100	2019	100
2007	JW	T	21-40 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.04	61.68	12546	69.42
2007	JW	T	21-40 fa	Kelp Greenling	<i>Hexagrammos decagrammus</i>	unsexed	0.64	100	11036	100
2007	JW	T	21-40 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	4.64	75.96	24655	72.55
2007	JW	T	21-40 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	11.18	82.22	5818	65.85
2007	JW	T	21-40 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	119.17	45.78	9540	5.62
2007	JW	T	21-40 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	0.70	100	1565	100
2007	JW	T	21-40 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	2.02	100	9197	100
2007	JW	T	21-40 fa	Northern Ronquil	<i>Ronquilus jordani</i>	unsexed	1.00	55.72	22988	60.05
2007	JW	T	21-40 fa	Northern Spearnose Poacher	<i>Agonopsis vulsa</i>	unsexed	0.02	100	2019	100
2007	JW	T	21-40 fa	Other man-made debris	<i>Other man-made debris</i>	unsexed	944.53	96.75	4056	61.68
2007	JW	T	21-40 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	13.57	42.82	71513	46.78
2007	JW	T	21-40 fa	Pacific Halibut	<i>Hippoglossus stenolepis</i>	unsexed	21.21	100	1565	100
2007	JW	T	21-40 fa	Pacific Herring	<i>Clupea pallasii</i>	unsexed	0.04	100	2217	100
2007	JW	T	21-40 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	20.91	27.16	350001	24.49
2007	JW	T	21-40 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	12.09	51.34	114754	46.29
2007	JW	T	21-40 fa	Plastic	<i>Plastic</i>	unsexed	0.02	100	1839	100
2007	JW	T	21-40 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	0.74	43.31	14544	58.03
2007	JW	T	21-40 fa	Red Octopus	<i>Octopus rubescens</i>	unsexed	0.14	100	2019	100
2007	JW	T	21-40 fa	Red Rock Crab	<i>Cancer productus</i>	male	0.60	72.03	4056	61.68
2007	JW	T	21-40 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	6.52	100	28819	100
2007	JW	T	21-40 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	3.56	62.16	114225	63.28
2007	JW	T	21-40 fa	Ribbed Sculpin	<i>Triglops pingelii</i>	unsexed	0.31	100	8867	100
2007	JW	T	21-40 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.63	100	9197	100
2007	JW	T	21-40 fa	Salp uniden.	<i>Family Salpidae</i>	unsexed	0.08	100	1900	100
2007	JW	T	21-40 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	1.33	74.13	7838	51.83
2007	JW	T	21-40 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	6.51	87.8	22450	88.18

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2007	JW	T	21-40 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	70.62	96.06	2955922	92.64	
2007	JW	T	21-40 fa	Southern Rock Sole	<i>Lepidopsetta bilineata</i>	unsexed	31.45	37.63	113283	37.8	
2007	JW	T	21-40 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	6.03	100	1839	100	
2007	JW	T	21-40 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	0.52	68.83	16955	71.92	
2007	JW	T	21-40 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	4.07	49.57	27092	40.95	
2007	JW	T	21-40 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	0.34	59.91	25056	48.98	
2007	JW	T	21-40 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	613.03	31.59	2072232	36.59	
2007	JW	T	21-40 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei</i> egg case	unsexed	0.16	100	1565	100	
2007	JW	T	21-40 fa	Steven's Hermit Crab	<i>Pagurus stvensae</i>	unsexed	0.85	81.86	24290	89.03	
2007	JW	T	21-40 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.28	66.96	4970	64.59	
2007	JW	T	21-40 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.49	82.68	19197	78.28	
2007	JW	T	21-40 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	1.41	70.17	25766	69.29	
2007	JW	T	21-40 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	9.08	91.12	16030	85.95	
2007	JW	T	21-40 fa	Tanner Crab	<i>Chionoecetes bairdi</i>	male	0.57	100	1900	100	
2007	JW	T	21-40 fa	Thornback Sculpin	<i>Paricelinus holiticus</i>	unsexed	0.10	65.32	5896	64.3	
2007	JW	T	21-40 fa	Tunicate uniden.	<i>Subphylum Tunicata</i>	unsexed	0.03	100	1565	100	
2007	JW	T	21-40 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.66	93.22	28722	84.9	
2007	JW	T	21-40 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	7.56	48.53	409458	51.73	
2007	JW	U	41-60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	0.54	66.44	97059	62.34	
2007	JW	U	41-60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	4.35	31.1	131887	29.34	
2007	JW	U	41-60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	2.21	100	968	100	
2007	JW	U	41-60 fa	Blood Star	<i>Henricia leviuscula</i>	unsexed	0.01	100	1056	100	
2007	JW	U	41-60 fa	Brown Box Crab	<i>Lopholithodes foraminatus</i>	unsexed	0.06	100	1023	100	
2007	JW	U	41-60 fa	Brown Irish Lord	<i>Hemilepidotus spinosus</i>	unsexed	0.18	83.02	2037	66.67	
2007	JW	U	41-60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	0.48	66.78	2007	66.67	
2007	JW	U	41-60 fa	Canary Rockfish	<i>Sebastes pinniger</i>	unsexed	6.26	100	18239	100	
2007	JW	U	41-60 fa	Cloud Sponge	<i>Aphrocallytes vastus</i>	unsexed	5.25	83.05	5913	27.31	
2007	JW	U	41-60 fa	Clown Nudibranch	<i>Triopha catalinae</i>	unsexed	0.01	100	1013	100	
2007	JW	U	41-60 fa	Diamondback Nudibranch	<i>Tritonia festiva</i>	unsexed	0.02	100	1023	100	
2007	JW	U	41-60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.05	69.07	9149	67.66	
2007	JW	U	41-60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	5.11	33.28	44183	29.57	
2007	JW	U	41-60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	7.55	92.23	40625	84.57	
2007	JW	U	41-60 fa	Fishing gear	Fishing gear	unsexed	0.02	100	1023	100	
2007	JW	U	41-60 fa	Fragile Sea Urchin	<i>Strongylocentrotus fragilis</i>	unsexed	0.28	63.88	2874	50.96	
2007	JW	U	41-60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	18.20	45.74	159293	49.41	
2007	JW	U	41-60 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	0.62	48.2	7951	45.37	
2007	JW	U	41-60 fa	Gumboot Chiton	<i>Cryptochiton stelleri</i>	unsexed	0.67	100	968	100	
2007	JW	U	41-60 fa	Horned Shrimp	<i>Paracrangon echinata</i>	unsexed	0.08	77.01	17068	82.93	
2007	JW	U	41-60 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	1.84	58.07	8905	57.13	
2007	JW	U	41-60 fa	Lion's Mane Jelly	<i>Cyanea capillata</i>	unsexed	0.39	100	931	100	
2007	JW	U	41-60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	12.41	75.36	3843	55.49	
2007	JW	U	41-60 fa	Marine vegetation	Marine vegetation	unsexed	22.78	61.37	5740	27.27	
2007	JW	U	41-60 fa	Metridium uniden.	<i>Metridium sp.</i>	unsexed	4.77	64.87	24180	73.7	
2007	JW	U	41-60 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	0.44	67.83	1927	66.78	
2007	JW	U	41-60 fa	Northern Ronquil	<i>Ronquilus jordanii</i>	unsexed	3.69	32.07	79359	25.98	
2007	JW	U	41-60 fa	Northern Sun Star	<i>Solaster endeca</i>	unsexed	0.40	81.03	3014	71.82	

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2007	JW	U	41-60 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	0.03	100	1023	100	
2007	JW	U	41-60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	11.75	34.32	58767	31.09	
2007	JW	U	41-60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	0.78	60.69	37848	60.25	
2007	JW	U	41-60 fa	Pacific Halibut	<i>Hippoglossus stenolepis</i>	unsexed	4.78	100	994	100	
2007	JW	U	41-60 fa	Pacific Herring	<i>Clupea pallasi</i>	unsexed	2.59	47	45014	46.84	
2007	JW	U	41-60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	0.87	48.2	10439	38.42	
2007	JW	U	41-60 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	2.75	69.08	22173	58.53	
2007	JW	U	41-60 fa	Pygmy Rock Crab	<i>Cancer oregonensis</i>	unsexed	0.00	100	931	100	
2007	JW	U	41-60 fa	Quillback Rockfish	<i>Sebastes maliger</i>	unsexed	26.40	94.98	24281	95.62	
2007	JW	U	41-60 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	2.25	43.18	12940	30.3	
2007	JW	U	41-60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	1.29	80.56	4144	77.48	
2007	JW	U	41-60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	2.67	91.19	54189	94.13	
2007	JW	U	41-60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.11	100	1023	100	
2007	JW	U	41-60 fa	Roughspine Sculpin	<i>Triglops macellus</i>	unsexed	0.23	46.13	3823	40.89	
2007	JW	U	41-60 fa	Sablefish	<i>Anoplopoma fimbria</i>	unsexed	0.97	100	1987	100	
2007	JW	U	41-60 fa	Sailfin Sculpin	<i>Nautichthys oculofasciatus</i>	unsexed	0.16	100	975	100	
2007	JW	U	41-60 fa	Salp uniden.	<i>Family Salpidae</i>	unsexed	0.18	78.13	2930	70.85	
2007	JW	U	41-60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	0.10	66.8	1937	66.8	
2007	JW	U	41-60 fa	Sandpaper Skate	<i>Bathyraja kincaidi</i>	unsexed	1.07	100	1936	100	
2007	JW	U	41-60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	0.06	100	3872	100	
2007	JW	U	41-60 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	3.62	41.27	9664	25.02	
2007	JW	U	41-60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	27.14	58.85	1522888	58.74	
2007	JW	U	41-60 fa	Southern Rock Sole	<i>Lepidotretta bilineata</i>	unsexed	2.87	58.9	5846	57.63	
2007	JW	U	41-60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	125.17	37.02	161678	45.34	
2007	JW	U	41-60 fa	Spiny Pink Scallop	<i>Chlamys hastata</i>	unsexed	0.15	72.16	7860	70.06	
2007	JW	U	41-60 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	0.79	65.51	8766	76.25	
2007	JW	U	41-60 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	0.42	70.37	2928	51.07	
2007	JW	U	41-60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	0.58	68.24	53319	83.85	
2007	JW	U	41-60 fa	Spotted Ratfish	<i>Hydrolagus collicei</i>	unsexed	693.67	23.12	1947608	23.02	
2007	JW	U	41-60 fa	Spotted Ratfish egg case	<i>Hydrolagus collicei egg case</i>	unsexed	0.02	100	1013	100	
2007	JW	U	41-60 fa	Squat Lobster	<i>Munida quadrispina</i>	unsexed	0.02	66.67	3947	76.75	
2007	JW	U	41-60 fa	Steven's Hermit Crab	<i>Pagurus stevensae</i>	unsexed	0.04	75.23	1944	66.74	
2007	JW	U	41-60 fa	Stimpson's Sun Star	<i>Solaster stimpsoni</i>	unsexed	0.17	100	2113	100	
2007	JW	U	41-60 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.58	48.28	28127	42.26	
2007	JW	U	41-60 fa	Sturgeon Poacher	<i>Podothecus accipenserinus</i>	unsexed	0.05	100	968	100	
2007	JW	U	41-60 fa	Sunflower Star	<i>Pycnopodia helianthoides</i>	unsexed	9.81	57.55	15380	62.4	
2007	JW	U	41-60 fa	Thornback Sculpin	<i>Paricelinus hopliticus</i>	unsexed	0.21	76.48	5856	82.43	
2007	JW	U	41-60 fa	Threadfin Sculpin	<i>Icelinus filamentosus</i>	unsexed	1.55	48.65	15575	35.31	
2007	JW	U	41-60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.06	50.72	3906	40.86	
2007	JW	U	41-60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	129.80	67.35	5517250	57.95	
2007	JW	V	>60 fa	Alaskan Pink Shrimp	<i>Pandalus eous</i>	unsexed	43.99	43.04	11498366	46.33	
2007	JW	V	>60 fa	American Shad	<i>Alosa sapidissima</i>	unsexed	0.62	100	2486	100	
2007	JW	V	>60 fa	Arrowtooth Flounder	<i>Atheresthes stomias</i>	unsexed	713.00	17.56	1266452	15.56	
2007	JW	V	>60 fa	Big Skate	<i>Raja binoculata</i>	unsexed	199.82	52.19	20986	48.77	
2007	JW	V	>60 fa	Brittle star uniden.	<i>Ophiuridae</i>	unsexed	0.03	89.41	11708	75.65	
2007	JW	V	>60 fa	California Sea Cucumber	<i>Parastichopus californicus</i>	unsexed	0.47	100	2614	100	

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass Estimate Coefficient of Variation		Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
2007	JW	V	>60 fa	Canary Rockfish	<i>Sebastes pinniger</i>	unsexed	5.06	100	2470	100	
2007	JW	V	>60 fa	Cloud Sponge	<i>Aphrocallistes vastus</i>	unsexed	0.77	100	3099	100	
2007	JW	V	>60 fa	Crangonid shrimp uniden.	<i>Crangonidae</i>	unsexed	0.02	73.33	12924	83.97	
2007	JW	V	>60 fa	Darkblotched Rockfish	<i>Sebastes crameri</i>	unsexed	0.40	89.2	4565	69.07	
2007	JW	V	>60 fa	Dock Shrimp	<i>Pandalus danae</i>	unsexed	0.01	100	2190	100	
2007	JW	V	>60 fa	Dover Sole	<i>Microstomus pacificus</i>	unsexed	456.27	20.17	1690871	13.88	
2007	JW	V	>60 fa	English Sole	<i>Parophrys vetulus</i>	unsexed	9.20	77.74	35235	70.2	
2007	JW	V	>60 fa	Fat Blood Star	<i>Henricia sanguinolenta</i>	unsexed	0.03	100	2614	100	
2007	JW	V	>60 fa	Fish-eating Star	<i>Stylasterias forneri</i>	unsexed	0.15	100	2486	100	
2007	JW	V	>60 fa	Flathead Sole	<i>Hippoglossoides elassodon</i>	unsexed	0.40	100	2484	100	
2007	JW	V	>60 fa	Fragile Sea Urchin	<i>Strongylocentrotus fragilis</i>	unsexed	50.54	27.08	577948	28.23	
2007	JW	V	>60 fa	Fuzzy Slime Star	<i>Diplopteraster multipes</i>	unsexed	0.50	100	2791	100	
2007	JW	V	>60 fa	Glassy Tunicate	<i>Ascidia paratropa</i>	unsexed	0.06	100	2935	100	
2007	JW	V	>60 fa	Graceful Decorator Crab	<i>Oregonia gracilis</i>	unsexed	0.00	100	2791	100	
2007	JW	V	>60 fa	Gray Starsnout	<i>Bathyagonus alascanus</i>	unsexed	0.03	100	2614	100	
2007	JW	V	>60 fa	Green Sea Urchin	<i>Strongylocentrotus droebachiensis</i>	unsexed	100.44	34.12	1033772	29.5	
2007	JW	V	>60 fa	Greenstriped Rockfish	<i>Sebastes elongatus</i>	unsexed	4.03	81.36	20251	77.95	
2007	JW	V	>60 fa	Hermit crabs uniden.	<i>Paguridae</i>	unsexed	0.02	100	2177	100	
2007	JW	V	>60 fa	Lampshell Brachiopod	<i>Terebratalia transversa</i>	unsexed	0.07	77.66	8703	70.37	
2007	JW	V	>60 fa	Lingcod	<i>Ophiodon elongatus</i>	unsexed	81.27	45.86	28834	37.16	
2007	JW	V	>60 fa	Longnose Skate	<i>Raja rhina</i>	unsexed	231.94	23.67	181665	22.11	
2007	JW	V	>60 fa	Marine vegetation	<i>Marine vegetation</i>	unsexed	24.08	65.8	19003	32.82	
2007	JW	V	>60 fa	Morning Sun Star	<i>Solaster dawsoni</i>	unsexed	0.15	100	2177	100	
2007	JW	V	>60 fa	Northern Sun Star	<i>Solaster endeca</i>	unsexed	0.22	100	2486	100	
2007	JW	V	>60 fa	Oregon Hairy Triton	<i>Fusitriton oregonensis</i>	unsexed	0.08	74.45	5257	69.14	
2007	JW	V	>60 fa	Other man-made debris	<i>Other man-made debris</i>	unsexed	290.05	61.36	11219	46.5	
2007	JW	V	>60 fa	Pacific Cod	<i>Gadus macrocephalus</i>	unsexed	289.05	21.71	306513	26.26	
2007	JW	V	>60 fa	Pacific Eulachon	<i>Thaleichthys pacificus</i>	unsexed	1.01	56.78	36734	56.57	
2007	JW	V	>60 fa	Pacific Hake	<i>Merluccius productus</i>	unsexed	32.14	40.26	1497218	41.76	
2007	JW	V	>60 fa	Pacific Halibut	<i>Hippoglossus stenolepis</i>	unsexed	262.27	42.68	29881	31.02	
2007	JW	V	>60 fa	Pacific Herring	<i>Clupea pallasi</i>	unsexed	19.88	65.8	393534	63.98	
2007	JW	V	>60 fa	Pacific Ocean Perch	<i>Sebastes alutus</i>	unsexed	36.81	50.83	40407	50.21	
2007	JW	V	>60 fa	Pacific Sanddab	<i>Citharichthys sordidus</i>	unsexed	1.35	60.63	11065	46.71	
2007	JW	V	>60 fa	Pacific Viperfish	<i>Chauliodus macouni</i>	unsexed	0.03	100	2532	100	
2007	JW	V	>60 fa	Pandalid shrimp uniden.	<i>Pandalus sp.</i>	unsexed	0.00	100	2886	100	
2007	JW	V	>60 fa	Petrale Sole	<i>Eopsetta jordani</i>	unsexed	1.96	45.92	18481	44.1	
2007	JW	V	>60 fa	Plastic	<i>Plastic</i>	unsexed	0.27	65.34	11734	60.59	
2007	JW	V	>60 fa	Rainbow Star	<i>Orthasterias koehleri</i>	unsexed	5.53	41.96	31739	39.77	
2007	JW	V	>60 fa	Red Rock Crab	<i>Cancer productus</i>	male	0.35	100	2190	100	
2007	JW	V	>60 fa	Red Sea Urchin	<i>Strongylocentrotus franciscanus</i>	unsexed	11.85	83.04	25701	77.27	
2007	JW	V	>60 fa	Redbanded Rockfish	<i>Sebastes babcocki</i>	unsexed	0.25	100	2470	100	
2007	JW	V	>60 fa	Redstripe Rockfish	<i>Sebastes proriger</i>	unsexed	0.32	100	2484	100	
2007	JW	V	>60 fa	Rex Sole	<i>Glyptocephalus zachirus</i>	unsexed	21.56	58.74	153291	48.2	
2007	JW	V	>60 fa	Ridged Blood Star	<i>Henricia aspera</i>	unsexed	0.04	100	2177	100	
2007	JW	V	>60 fa	Rose Star	<i>Crossaster papposus</i>	unsexed	0.14	64.29	8396	55.22	
2007	JW	V	>60 fa	Rough Patch Shrimp	<i>Pandalus stenolepis</i>	unsexed	0.01	100	2190	100	

Survey Year	Region Code	Stratum Code	Stratum Depth	Species Common Name	Species Scientific Name	Pre-Weight Sex (crab only)	Biomass Estimate (metric tons)	Biomass	Abundance Estimate (number of individuals)	Abundance Estimate Coefficient of Variation
								Estimate		
2007	JW	V	>60 fa	Rougheye Rockfish	<i>Sebastes aleutianus</i>	unsexed	1.26	100	2791	100
2007	JW	V	>60 fa	Sablefish	<i>Anoplopoma fimbria</i>	unsexed	33.58	48.83	53129	62.64
2007	JW	V	>60 fa	Sand Star	<i>Luidia foliolata</i>	unsexed	0.48	82.73	5525	69.16
2007	JW	V	>60 fa	Sandpaper Skate	<i>Bathyraja kincardi</i>	unsexed	59.47	31.92	98720	30.95
2007	JW	V	>60 fa	Sea cucumber uniden.	<i>Class Holothuroidea</i>	unsexed	0.94	44.78	24089	42.89
2007	JW	V	>60 fa	Sharpchin Rockfish	<i>Sebastes zacentrus</i>	unsexed	0.79	90.16	4989	69.09
2007	JW	V	>60 fa	Shortscale Eualid	<i>Eualus suckleyi</i>	unsexed	0.01	100	3099	100
2007	JW	V	>60 fa	Shortspine Thornyhead	<i>Sebastolobus alascanus</i>	unsexed	3.22	62.3	50843	74.51
2007	JW	V	>60 fa	Shrimp uniden.	<i>Decapoda-Natantia</i>	unsexed	0.01	100	5179	100
2007	JW	V	>60 fa	Sidestriped Shrimp	<i>Pandalus dispar</i>	unsexed	10.45	44.76	961914	41.22
2007	JW	V	>60 fa	Slender Sole	<i>Lyopsetta exilis</i>	unsexed	6.16	53.61	157605	50.87
2007	JW	V	>60 fa	Slime Star	<i>Pteraster tesselatus</i>	unsexed	11.91	64.49	53467	50.36
2007	JW	V	>60 fa	Smooth Pink Scallop	<i>Chlamys rubida</i>	unsexed	4.76	68.6	270865	66.98
2007	JW	V	>60 fa	Spiny Dogfish	<i>Squalus suckleyi</i>	unsexed	570.00	23.84	571724	25.35
2007	JW	V	>60 fa	Spiny Vermilion Star	<i>Hippasteria spinosa</i>	unsexed	3.32	33.27	49169	36.21
2007	JW	V	>60 fa	Splitnose Rockfish	<i>Sebastes diploproa</i>	unsexed	0.35	100	1762	100
2007	JW	V	>60 fa	Sponge uniden.	<i>Phylum Porifera</i>	unsexed	0.21	100	2935	100
2007	JW	V	>60 fa	Spot Prawn	<i>Pandalus platyceros</i>	unsexed	1.09	37.78	42898	31.49
2007	JW	V	>60 fa	Spotted Ratfish	<i>Hydrolagus colliei</i>	unsexed	9345.82	9.41	21199034	8.61
2007	JW	V	>60 fa	Spotted Ratfish egg case	<i>Hydrolagus colliei egg case</i>	unsexed	0.22	69.46	11166	69.46
2007	JW	V	>60 fa	Stubby Squid	<i>Rossia pacifica</i>	unsexed	0.11	100	2824	100
2007	JW	V	>60 fa	Vermilion Star	<i>Mediaster aequalis</i>	unsexed	0.88	29.57	40584	24.75
2007	JW	V	>60 fa	Walleye Pollock	<i>Gadus chalcogrammus</i>	unsexed	176.30	37.23	5729844	50.95
2007	JW	V	>60 fa	Wattled Eelpout	<i>Lycodes palearis</i>	unsexed	0.17	100	2886	100
2007	JW	V	>60 fa	Yellowtail Rockfish	<i>Sebastes flavidus</i>	unsexed	23.45	61.91	17750	71.65



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