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| **Table S1.** Definitions of generalized prey categories used to calculate diet composition as a basis for trophic guild analysis. | |
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| **Prey Categories** | **Definition** |
| algae | Chromista of the Class Phaeophyceae; plants of the Phyla Chlorophyta and Rhodophyta |
| amphipod | malacostracans of the Order Amphipoda |
| argent | fishes of the Order Argentiniformes |
| belon | fishes of the Order Beloniformes |
| bivalve | molluscs of the Class Bivalvia |
| chondrichthyes | fishes of the Classes Holocephali and Elasmobranchii |
| clupeid | fishes of the Order Clupeiformes |
| copepod | Hexanauplia of the Subclass Copepoda |
| decapod | malacostracans of the Order Decapoda |
| echinoderm | invertebrates of the Phylum Echinodermata |
| euphausiid | malacostracans of the Order Euphausiacea |
| fish | vertebrates of the Infraphylum Agnatha and Parvphyla Chondrichthyes and Osteichthyes |
| flatfish | fishes of the Order Pleuronectiformes |
| gadid | fishes of the Order Gadiformes |
| gastropod | molluscs of the Class Gastropoda |
| gelatinous | gelatinous zooplankton of the Phylum Chaetognatha; Phylum Cnidaria; Phylum Ctenophora; Class Appendicularia; Class Thaliacea |
| insect | arthropods of the Class Insecta |
| isopoda | malacostracans of the Order Isopoda |
| jawless | jawless fishes of the Classes Myxini and Petromyzonti |
| myctophid | fishes of the Order Myctophiformes |
| myopsida | squids of the Order Myopsida |
| mysid | malacostracans of the Order Mysida |
| ocrust | other crustaceans (all crustacean groups not defined elsewhere) |
| octopus | cephalopods of the Order Octopoda |
| oegopsida | squids of the Order Oegopsida |
| osmerid | fishes of the Order Osmeriformes |
| other | other organisms (all animal or plant groups not defined elsewhere) |
| perciform | fishes of the Order Perciformes |
| polychaete | annelid worms of the Class Polychaeta |
| salmon | fishes of the Order Salmoniformes |
| scorpionfish | fishes of the Order Scorpaeniformes |
| squid | cephalopods of the Orders Myopsida; Oegopsida; and Decapodiformes |







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| **Table S5.** Pacific Northwest guild membership, species-length class loadings from | | | | | |
| from correspondence analysis axes 1-3, and distance to guild centroid. | | | | |  |
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| **Species-Length Class** | **Guild** | **CA1** | **CA2** | **CA3** | **Distance** |
| Albacore | PNW-1 | -0.198 | -0.526 | -0.696 | 0.296 |
| Humboldt Squid | PNW-1 | -0.105 | -0.153 | -1.145 | 0.296 |
| Dover Sole | PNW-2 | 4.842 | 1.246 | 0.317 | 0.000 |
| Herring | PNW-3 | 0.174 | 0.695 | 0.040 | 0.068 |
| Sardine | PNW-3 | 0.275 | 0.783 | 0.017 | 0.068 |
| Chinook A | PNW-4 | 0.122 | -0.309 | 0.177 | 0.163 |
| Chinook B | PNW-4 | -0.008 | -0.582 | 0.154 | 0.276 |
| Chinook C | PNW-4 | -0.301 | -0.149 | 0.047 | 0.323 |
| Coho | PNW-4 | 0.067 | -0.198 | 0.098 | 0.149 |
| Kelp Greenling | PNW-5 | 1.545 | 0.037 | -0.793 | 0.000 |
| Harbor Seal | PNW-6 | -0.542 | -2.025 | 1.002 | 0.000 |
| Hake | PNW-7 | -0.740 | 1.063 | -0.132 | 0.314 |
| Jack Mackerel | PNW-7 | -0.295 | 0.936 | -0.020 | 0.179 |
| Mackerel | PNW-7 | -0.270 | 1.115 | -0.038 | 0.184 |
| Lingcod | PNW-8 | 0.030 | -1.466 | -3.409 | 0.000 |
| Sablefish A | PNW-9 | 0.169 | 0.209 | 0.052 | 0.174 |
| Steelhead | PNW-9 | 0.154 | 0.226 | 0.092 | 0.186 |
| Surf Smelt | PNW-9 | 0.689 | 0.308 | 0.076 | 0.357 |
| Sablefish B | PNW-10 | 0.415 | -0.303 | -0.181 | 0.155 |
| SST | PNW-10 | 0.655 | -0.268 | 0.012 | 1.235 |

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| **Table S6.** Central California guild membership, species-length class loadings from | | | | | |
| from correspondence analysis axes 1-3, and distance to guild centroid. | | | | |  |
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| **Species-Length Class** | **Guild** | **CA1** | **CA2** | **CA3** | **Distance** |
| Longnose Skate A | CC-1 | 0.305 | 0.054 | -0.931 | 0.234 |
| Longnose Skate B | CC-1 | -0.095 | 0.136 | -0.641 | 0.303 |
| Sandpaper Skate | CC-1 | 0.376 | 0.391 | -0.661 | 0.384 |
| SST | CC-1 | 0.160 | -0.326 | -0.683 | 0.394 |
| Blue Shark | CC-2 | -1.203 | -0.235 | 0.068 | 0.132 |
| Fur Seal | CC-2 | -1.158 | -0.432 | 0.237 | 0.176 |
| SBC Dolphin | CC-2 | -1.218 | -0.092 | -0.116 | 0.352 |
| Sea Lion | CC-2 | -1.338 | -0.519 | 0.356 | 0.297 |
| Swordfish | CC-2 | -1.392 | -0.352 | 0.169 | 0.135 |
| Blue Rockfish B | CC-3 | 1.546 | -0.349 | 2.474 | 0.000 |
| Chinook A | CC-4 | 1.021 | -0.146 | 0.205 | 0.300 |
| Kelp Greenling B | CC-4 | 0.805 | -0.512 | -0.186 | 0.556 |
| Sablefish | CC-4 | 0.221 | -0.185 | 0.067 | 0.542 |
| Yellowtail Rockfish | CC-4 | 0.866 | 0.093 | 0.946 | 0.755 |
| Hake A | CC-5 | -0.107 | 2.083 | -0.157 | 0.000 |
| Dover Sole | CC-6 | 1.410 | -0.625 | -0.984 | 0.381 |
| Gopher Rockfish | CC-6 | 0.806 | -0.482 | -1.759 | 0.654 |
| LST A | CC-6 | 1.073 | -0.470 | -0.781 | 0.398 |
| Chinook B | CC-7 | 0.044 | 0.240 | 0.064 | 0.626 |
| Chinook C | CC-7 | -0.761 | -0.111 | 0.069 | 0.265 |
| Hake B | CC-7 | -0.771 | 0.581 | -0.064 | 0.582 |
| Lingcod | CC-7 | -0.675 | -0.330 | 0.242 | 0.445 |
| Longnose Skate D | CC-7 | -0.605 | -0.106 | -0.037 | 0.192 |

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| **Table S7.** Southern California guild membership, species-length class loadings from | | | | | |
| from correspondence analysis axes 1-3, and distance to guild centroid. | | | | |  |
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| **Species-Length Class** | **Guild** | **CA1** | **CA2** | **CA3** | **Distance** |
| Bluefin Tuna B | SC-1 | -0.266 | 0.292 | 0.200 | 0.561 |
| Fur Seal | SC-1 | 0.171 | -0.153 | 0.582 | 0.533 |
| LBC Dolphin | SC-1 | 0.364 | -0.061 | 0.051 | 0.177 |
| Sea Lion | SC-1 | 0.411 | 0.090 | -0.439 | 0.561 |
| Thresher Shark | SC-1 | 0.369 | -0.059 | 0.007 | 0.193 |
| Black Surfperch | SC-2 | -2.731 | 1.206 | 0.128 | 0.203 |
| Blackeye Goby | SC-2 | -2.721 | 0.620 | 0.054 | 0.395 |
| Rock Wrasse | SC-2 | -2.696 | 1.350 | 0.093 | 0.336 |
| Sheephead | SC-2 | -2.592 | 1.643 | -0.074 | 0.655 |
| Walleye Perch | SC-2 | -2.750 | 0.251 | 0.165 | 0.771 |
| Blacksmith | SC-3 | -2.023 | -8.399 | -1.686 | 0.000 |
| Garibaldi | SC-4 | -2.478 | -0.644 | -0.296 | 0.119 |
| Kelp Bass A | SC-4 | -2.216 | -0.401 | -0.441 | 0.499 |
| Kelp Perch | SC-4 | -2.850 | -1.271 | -0.267 | 0.611 |
| Senorita | SC-4 | -2.628 | -0.658 | -0.135 | 0.192 |
| Blue Shark | SC-5 | 0.211 | -0.148 | 2.258 | 0.241 |
| Bluefin Tuna A | SC-5 | -0.440 | 0.070 | 1.244 | 1.105 |
| Lingcod | SC-5 | 0.117 | -0.680 | 1.373 | 0.803 |
| Mako A | SC-5 | 0.354 | -0.279 | 2.059 | 0.183 |
| Mako B | SC-5 | 0.311 | -0.361 | 2.615 | 0.553 |
| SBC Dolphin | SC-5 | 0.288 | -0.365 | 2.541 | 0.477 |
| Swordfish | SC-5 | 0.381 | -0.389 | 2.483 | 0.458 |