

Appendix C. The most common and obvious plants and animals seen by SCUBA divers on geoduck surveys performed between 2001-2006¹. Plants and animals are listed by Geoduck Management Region², in order of most encountered to least encountered determined by the percentage of transects surveyed in that region on which that plant or animal was seen. Data is shown in three tables. Table 1 lists animals seen on at least 50% of the transects in each region. Table 2 lists animals observed on all transects by region³. Table 3 lists plants observed on all transects by region⁴. Number of transects (N) is given for each region in each table.

Table 1. The Most Common and Obvious Animals Observed by Divers on at least 50% of the Transects in each Geoduck Management Region Surveyed from 2001-2006.

Scientific Name	Common Name	Phylum	% of Transects in Region	Region
<i>Tresus</i> spp.	HORSE CLAM	MOLLUSCA	81%	Central Sound N = 257
Unspecified hermit crab	HERMIT CRAB	ARTHROPODA	64%	
Chaetopterid polychaete tubes	CHAETOPTERID TUBE WORM	ANNELIDA	60%	
<i>Ptilosarcus gurneyi</i>	SEA PEN	CNIDARIA	57%	
<i>Cancer magister</i>	DUNGENESS CRAB	ARTHROPODA	50%	
<i>Metridium</i> spp.	PLUMED ANEMONE	CNIDARIA	54%	Hood Canal N = 456
<i>Tresus</i> spp.	HORSE CLAM	MOLLUSCA	54%	
<i>Ptilosarcus gurneyi</i>	SEA PEN	CNIDARIA	50%	
Unspecified hermit crab	HERMIT CRAB	ARTHROPODA	87%	North Sound N = 129
<i>Metridium</i> spp.	PLUMED ANEMONE	CNIDARIA	84%	
<i>Pisaster brevispinus</i>	SHORT-SPINED STAR	ECHINODERMATA	66%	
<i>Pycnopodia helianthoides</i>	SUNFLOWER STAR	ECHINODERMATA	56%	
Unspecified hermit crab	HERMIT CRAB	ARTHROPODA	60%	South Sound N = 817
<i>Pycnopodia helianthoides</i>	SUNFLOWER STAR	ECHINODERMATA	58%	
<i>Metridium</i> spp.	PLUMED ANEMONE	CNIDARIA	52%	
<i>Cancer gracilis</i>	GRACEFUL CRAB	ARTHROPODA	50%	
Sabellid spp.	SABELLID TUBE WORM	ANNELIDA	81%	Strait of Juan de Fuca N = 355
<i>Urticina</i> spp.	STRIPED ANEMONE	CNIDARIA	54%	

Table 2. The Most Common and Obvious Animals Observed by Divers on All Transects in Each Geoduck Management Region Surveyed from 2001-2006. Table 2.A. Central Sound, Table 2.B. Hood Canal, Table 2.C. North Sound, Table 2.D. South Sound, and Table 2.E. Strait of Juan de Fuca.

Table 2.A. Central Puget Sound Geoduck Management Region			
Scientific Name	Common Name	Phylum	% of Transects (N = 257)
<i>Tresus</i> spp.	HORSE CLAM	MOLLUSCA	81%
Unspecified hermit crab	HERMIT CRAB	ARTHROPODA	64%
Chaetopterid polychaete tubes	CHAETOPTERID TUBE WORM	ANNELIDA	60%
<i>Ptilosarcus gurneyi</i>	SEA PEN	CNIDARIA	57%
<i>Cancer magister</i>	DUNGENESS CRAB	ARTHROPODA	50%
Unspecified shrimp	SHRIMP	ARTHROPODA	49%
<i>Terebellid</i> spp.	TEREBELLID TUBE WORM	ANNELIDA	46%
<i>Pycnopodia helianthoides</i>	SUNFLOWER STAR	ECHINODERMATA	46%
<i>Armina californica</i>	ARMINA	MOLLUSCA	45%
<i>Stylatula elongata</i>	SEA WHIP	CNIDARIA	40%
<i>Veneridae</i> spp.	HARDSHELL CLAMS	MOLLUSCA	39%

<i>Citharichthys</i> spp.	SANDDAB	CHORDATA	38%
Sabellid spp.	SABELLID TUBE WORM	ANNELIDA	38%
<i>Cancer productus</i>	RED ROCK CRAB	ARTHROPODA	37%
<i>Metridium</i> spp.	PLUMED ANEMONE	CNIDARIA	31%
Unspecified Cottidae	SCULPIN	CHORDATA	30%
<i>Cancer gracilis</i>	GRACEFUL CRAB	ARTHROPODA	25%
<i>Oregonia gracilis</i>	DECORATOR CRAB	ARTHROPODA	23%
Unspecified nudibranch	NUDIBRANCH	MOLLUSCA	22%
<i>Modiolus rectus</i>	HORSE MUSSEL	MOLLUSCA	19%
Unspecified flatfish	FLATFISH	CHORDATA	19%
Unspecified tunicate	SESSILE TUNICATE	CHORDATA	18%
<i>Parophrys vetulus</i>	ENGLISH SOLE	CHORDATA	15%
Unspecified brittle star	BRITTLE STAR	ECHINODERMATA	14%
<i>Mya truncata</i>	TRUNCATED MYA	MOLLUSCA	12%
Unspecified opisthobranch	OPISTHOBRANCH	MOLLUSCA	11%
<i>Parastichopus californicus</i>	CALIFORNIA SEA CUCUMBER	ECHINODERMATA	11%
<i>Pachycerianthus fimbriatus</i>	BURROWING ANEMONE	CNIDARIA	10%
<i>Pleuronichthys coenosus</i>	C-O SOLE	CHORDATA	9%
<i>Urticina</i> spp.	STRIPED ANEMONE	CNIDARIA	9%
<i>Iopsetta isolepis</i>	BUTTER SOLE	CHORDATA	8%
<i>Dirona albolineata</i>	DIRONA	MOLLUSCA	6%
<i>Mediaster aequalis</i>	VERMILLION STAR	ECHINODERMATA	5%
Unspecified fish	FISH	CHORDATA	5%
<i>Lepidopsetta bilineata</i>	ROCK SOLE	CHORDATA	5%
<i>Panomya</i> spp.	FALSE GEODUCK	MOLLUSCA	5%
<i>Henricia leviuscula</i>	BLOOD STAR	ECHINODERMATA	4%
<i>Pisaster brevispinus</i>	SHORT-SPINED STAR	ECHINODERMATA	4%
Unspecified ghost shrimp	GHOST SHRIMP	ARTHROPODA	4%
<i>Polinices lewisii</i> egg case	MOON SNAIL EGGS	MOLLUSCA	4%
<i>Clinocardium nuttalli</i>	HEART COCKLE	MOLLUSCA	4%
<i>Pododesmus macrochisma</i>	JINGLESHELL OYSTER	MOLLUSCA	4%
Unspecified Serpulidae tubeworm	TUBE WORM	ANNELIDA	4%
Unspecified Embiotocidae	PERCH	CHORDATA	3%
<i>Evasterias troschelli</i>	FALSE OCHRE STAR	ECHINODERMATA	2%
<i>Pentamera</i> spp.	MUD CUCUMBER	ECHINODERMATA	2%
<i>Platichthys stellatus</i>	STARRY FLOUNDER	CHORDATA	2%
<i>Cryptochiton stelleri</i>	GUMBOOT CHITON	MOLLUSCA	2%
<i>Squalus acanthias</i>	DOG FISH SHARK	CHORDATA	2%
<i>Tritonia diomedea</i>	ROSY TRITONIA	MOLLUSCA	2%
<i>Luidia foliolata</i>	SAND STAR	ECHINODERMATA	1%
<i>Pugettia</i> spp.	KELP CRAB	ARTHROPODA	1%
<i>Telmessus cheiragonus</i>	HELMET CRAB	ARTHROPODA	1%
<i>Crossaster papposus</i>	ROSE STAR	ECHINODERMATA	1%
<i>Dendronotus</i> spp.	DENDRONOTUS	MOLLUSCA	1%
<i>Hermisenda crassicornis</i>	HERMISSENDA	MOLLUSCA	1%
<i>Raja</i> spp. egg case	SKATE EGG CASE	CHORDATA	1%
Unspecified bryozoan	MOSS ANIMAL	BRYOZOA	1%
Unspecified hydroid	HYDROIDS	CNIDARIA	1%
<i>Chlamys hastata</i>	SPINY SCALLOP	MOLLUSCA	< 1%
<i>Clupea harengus pallasii</i>	PACIFIC HERRING	CHORDATA	< 1%
<i>Crassadoma gigantea</i>	ROCK SCALLOP	MOLLUSCA	< 1%
<i>Cribrinopsis fernaldi</i>	CRIMSON ANEMONE	CNIDARIA	< 1%
<i>Hydrolagus colliei</i>	RATFISH	CHORDATA	< 1%

<i>Octopus</i> or <i>Enteroctopus</i> spp.	OCTOPUS	MOLLUSCA	< 1%
<i>Polinices lewisii</i>	MOON SNAIL	MOLLUSCA	< 1%
<i>Rossia pacifica</i>	STUBBY SQUID	MOLLUSCA	< 1%
<i>Scorpaenichthys marmoratus</i>	CABEZON	CHORDATA	< 1%
<i>Solaster</i> spp.	SUN STAR	ECHINODERMATA	< 1%
Unspecified Agonidae	POACHER	CHORDATA	< 1%
Unspecified annelid worm	WORM	ANNELIDA	< 1%
Unspecified burrowing holothurian	BURROWING CUCUMBER	ECHINODERMATA	< 1%
Unspecified <i>Hexagrammos</i> spp.	GREENLING	CHORDATA	< 1%
Unspecified Pholadidae	PIDDOCK	MOLLUSCA	< 1%
Unspecified Porifera	SPONGE	PORIFERA	< 1%
Unspecified <i>Raja</i> spp.	SKATE	CHORDATA	< 1%

Table 2.B. Hood Canal Geoduck Management Region

Scientific Name	Common Name	Phylum	% of Transects (N = 456)
<i>Metridium</i> spp.	PLUMED ANEMONE	CNIDARIA	54%
<i>Tresus</i> spp.	HORSE CLAM	MOLLUSCA	54%
<i>Ptilosarcus gurneyi</i>	SEA PEN	CNIDARIA	50%
<i>Stylatula elongata</i>	SEA WHIP	CNIDARIA	46%
Unspecified hermit crab	HERMIT CRAB	ARTHROPODA	44%
<i>Pycnopodia helianthoides</i>	SUNFLOWER STAR	ECHINODERMATA	39%
<i>Pisaster brevispinus</i>	SHORT-SPINED STAR	ECHINODERMATA	36%
<i>Cancer productus</i>	RED ROCK CRAB	ARTHROPODA	29%
Chaetopterid polychaete tubes	CHAETOPTERID TUBE WORM	ANNELIDA	27%
Unspecified nudibranch	NUDIBRANCH	MOLLUSCA	27%
Sabellid spp.	SABELLID TUBE WORM	ANNELIDA	27%
<i>Cancer gracilis</i>	GRACEFUL CRAB	ARTHROPODA	24%
<i>Urticina</i> spp.	STRIPED ANEMONE	CNIDARIA	22%
Unspecified annelid worm	WORM	ANNELIDA	21%
<i>Cancer magister</i>	DUNGENESS CRAB	ARTHROPODA	20%
<i>Pachycerianthus fimbriatus</i>	BURROWING ANEMONE	CNIDARIA	19%
Unspecified tunicate	SESSILE TUNICATE	CHORDATA	18%
<i>Parastichopus californicus</i>	CALIFORNIA SEA CUCUMBER	ECHINODERMATA	17%
<i>Armina californica</i>	ARMINA	MOLLUSCA	17%
<i>Luidia foliolata</i>	SAND STAR	ECHINODERMATA	16%
<i>Hermisenda crassicornis</i>	HERMISENDA	MOLLUSCA	16%
Unspecified shrimp	SHRIMP	ARTHROPODA	15%
Unspecified flatfish	FLATFISH	CHORDATA	15%
<i>Terebellid</i> spp.	TEREBELLID TUBE WORM	ANNELIDA	14%
<i>Modiolus rectus</i>	HORSE MUSSEL	MOLLUSCA	12%
<i>Citharichthys</i> spp.	SANDDAB	CHORDATA	11%
<i>Veneridae</i> spp.	HARDSHELL CLAMS	MOLLUSCA	11%
Unspecified Cottidae	SCULPIN	CHORDATA	10%
<i>Dirona albolineata</i>	DIRONA	MOLLUSCA	9%
<i>Oregonia gracilis</i>	DECORATOR CRAB	ARTHROPODA	9%
<i>Lepidopsetta bilineata</i>	ROCK SOLE	CHORDATA	8%
<i>Evasterias troschelli</i>	FALSE OCHRE STAR	ECHINODERMATA	7%
<i>Mya truncata</i>	TRUNCATED MYA	MOLLUSCA	7%
<i>Tritonia diomedea</i>	ROSY TRITONIA	MOLLUSCA	7%
<i>Clinocardium nuttalli</i>	HEART COCKLE	MOLLUSCA	7%
<i>Polinices lewisii</i> egg case	MOON SNAIL EGGS	MOLLUSCA	6%

Unspecified ghost shrimp	GHOST SHRIMP	ARTHROPODA	6%
<i>Raja</i> spp. egg case	SKATE EGG CASE	CHORDATA	5%
<i>Parophrys vetulus</i>	ENGLISH SOLE	CHORDATA	5%
<i>Dermasterias imbricata</i>	LEATHER STAR	ECHINODERMATA	5%
<i>Panomya</i> spp.	FALSE GEODUCK	MOLLUSCA	4%
<i>Platichthys stellatus</i>	STARRY FLOUNDER	CHORDATA	4%
Unspecified Pholadidae	PIDDOCK	MOLLUSCA	4%
Unspecified Porifera	SPONGE	PORIFERA	4%
<i>Solaster</i> spp.	SUN STAR	ECHINODERMATA	4%
Unspecified burrowing holothurian	BURROWING CUCUMBER	ECHINODERMATA	4%
<i>Pododesmus macrochisma</i>	JINGLESHELL OYSTER	MOLLUSCA	3%
Unspecified arthropod	ARTHROPOD	ARTHROPODA	3%
<i>Dendronotus</i> spp.	DENDRONOTUS	MOLLUSCA	3%
<i>Hydrolagus colliei</i>	RATFISH	CHORDATA	3%
<i>Pleuronichthys coenosus</i>	C-O SOLE	CHORDATA	3%
<i>Polinices lewisii</i>	MOON SNAIL	MOLLUSCA	3%
<i>Henricia leviuscula</i>	BLOOD STAR	ECHINODERMATA	2%
Unspecified bryozoan	MOSS ANIMAL	BRYOZOA	2%
Unspecified <i>Hexagrammos</i> spp.	GREENLING	CHORDATA	2%
<i>Cribrinopsis fernaldi</i>	CRIMSON ANEMONE	CNIDARIA	1%
<i>Crossaster papposus</i>	ROSE STAR	ECHINODERMATA	1%
Unspecified hydroid	HYDROIDS	CNIDARIA	1%
Unspecified fish	FISH	CHORDATA	1%
Unspecified holothurian	BLACK CUCUMBER	ECHINODERMATA	1%
Unspecified <i>Raja</i> spp.	SKATE	CHORDATA	1%
<i>Mediaster aequalis</i>	VERMILLION STAR	ECHINODERMATA	1%
<i>Pugettia</i> spp.	KELP CRAB	ARTHROPODA	1%
<i>Telmessus cheiragonus</i>	HELMET CRAB	ARTHROPODA	1%
Unspecified Agonidae	POACHER	CHORDATA	1%
Unspecified Embiotocidae	PERCH	CHORDATA	1%
Unspecified Pectinidae	SCALLOP	MOLLUSCA	1%
<i>Aulorhynchus flavidus</i>	TUBESNOUT	CHORDATA	< 1%
<i>Cryptochiton stelleri</i>	GUMBOOT CHITON	MOLLUSCA	< 1%
<i>Cucumaria miniata</i>	ORANGE CUCUMBER	ECHINODERMATA	< 1%
<i>Dendraster excentricus</i>	SAND DOLLAR	ECHINODERMATA	< 1%
<i>Syngnathus leptorhynchus</i>	BAY PIPEFISH	CHORDATA	< 1%
Unspecified Gobiidae	GOBIE	CHORDATA	< 1%
<i>Balanus nubilis</i>	GIANT BARNACLE	ARTHROPODA	< 1%
<i>Chlamys hastata</i>	SPINY SCALLOP	MOLLUSCA	< 1%
<i>Fusitriton oregonensis</i>	OREGON HAIRY TRITON	MOLLUSCA	< 1%
<i>Munida quadrispina</i>	PINCH BUG/ SQUAT LOBSTER	ARTHROPODA	< 1%
<i>Octopus</i> or <i>Enteroctopus</i> spp.	OCTOPUS	MOLLUSCA	< 1%
<i>Orthasterias koehleri</i>	RAINBOW STAR	ECHINODERMATA	< 1%
<i>Psettichthys melanostictus</i>	SAND SOLE	CHORDATA	< 1%
<i>Pteraster tesselatus</i>	SLIME STAR	ECHINODERMATA	< 1%
<i>Squalus acanthias</i>	DOGFISH SHARK	CHORDATA	< 1%
<i>Stylasterias forreri</i>	FISH-EATING STAR	ECHINODERMATA	< 1%
Unspecified bivalve mollusc	MOLLUSC	MOLLUSCA	< 1%
Unspecified opisthobranch	OPISTHOBRANCH	MOLLUSCA	< 1%
Unspecified Serpulidae tubeworm	TUBE WORM	ANNELIDA	< 1%

Table 2.C. North Puget Sound Geoduck Management Region

Scientific Name	Common Name	Phylum	% of Transects (N = 129)
Unspecified hermit crab	HERMIT CRAB	ARTHROPODA	87%
<i>Metridium</i> spp.	PLUMED ANEMONE	CNIDARIA	84%
<i>Pisaster brevispinus</i>	SHORT-SPINED STAR	ECHINODERMATA	66%
<i>Pycnopodia helianthoides</i>	SUNFLOWER STAR	ECHINODERMATA	56%
<i>Cancer magister</i>	DUNGENESS CRAB	ARTHROPODA	47%
Sabellid spp.	SABELLID TUBE WORM	ANNELIDA	30%
Unspecified opisthobranch	OPISTHOBRANCH	MOLLUSCA	30%
<i>Solaster</i> spp.	SUN STAR	ECHINODERMATA	21%
<i>Platichthys stellatus</i>	STARRY FLOUNDER	CHORDATA	18%
<i>Raja</i> spp. egg case	SKATE EGG CASE	CHORDATA	18%
<i>Terebellid</i> spp.	TEREBELLID TUBE WORM	ANNELIDA	18%
<i>Citharichthys</i> spp.	SANDDAB	CHORDATA	14%
<i>Cancer productus</i>	RED ROCK CRAB	ARTHROPODA	13%
Unspecified Cottidae	SCULPIN	CHORDATA	13%
Unspecified flatfish	FLATFISH	CHORDATA	9%
Unspecified nudibranch	NUDIBRANCH	MOLLUSCA	9%
<i>Parophrys vetulus</i>	ENGLISH SOLE	CHORDATA	7%
<i>Lepidopsetta bilineata</i>	ROCK SOLE	CHORDATA	5%
<i>Oregonia gracilis</i>	DECORATOR CRAB	ARTHROPODA	5%
<i>Hippasteria spinosa</i>	SPINY STAR	ECHINODERMATA	5%
<i>Pleuronichthys coenosus</i>	C-O SOLE	CHORDATA	5%
<i>Tresus</i> spp.	HORSE CLAM	MOLLUSCA	5%
Unspecified tunicate	SESSILE TUNICATE	CHORDATA	5%
<i>Armina californica</i>	ARMINA	MOLLUSCA	3%
<i>Cancer gracilis</i>	GRACEFUL CRAB	ARTHROPODA	3%
<i>Pachycerianthus fimbriatus</i>	BURROWING ANEMONE	CNIDARIA	3%
<i>Mediaster aequalis</i>	VERMILLION STAR	ECHINODERMATA	2%
<i>Pentamera</i> spp.	MUD CUCUMBER	ECHINODERMATA	2%
<i>Ammodytes hexapterus</i>	SAND LANCE	CHORDATA	2%
<i>Crossaster papposus</i>	ROSE STAR	ECHINODERMATA	2%
<i>Evasterias troschelli</i>	FALSE OCHRE STAR	ECHINODERMATA	2%
<i>Loligo opalescens</i>	SQUID EGGS	MOLLUSCA	2%
Unspecified brittle star	BRITTLE STAR	ECHINODERMATA	2%
<i>Parastichopus californicus</i>	CALIFORNIA SEA CUCUMBER	ECHINODERMATA	2%
<i>Polinices lewisii</i>	MOON SNAIL	MOLLUSCA	2%
<i>Sebastes maliger</i>	QUILLBACK ROCKFISH	CHORDATA	2%
<i>Chlamys hastata</i>	SPINY SCALLOP	MOLLUSCA	1%
<i>Clinocardium nuttalli</i>	HEART COCKLE	MOLLUSCA	1%
<i>Mya truncata</i>	TRUNCATED MYA	MOLLUSCA	1%
<i>Ptilosarcus gurneyi</i>	SEA PEN	CNIDARIA	1%
<i>Rossia pacifica</i>	STUBBY SQUID	MOLLUSCA	1%
<i>Strongylocentrotus droebachiensis</i>	GREEN URCHIN	ECHINODERMATA	1%
Unspecified Agonidae	POACHER	CHORDATA	1%
Unspecified shrimp	SHRIMP	ARTHROPODA	1%
<i>Urticina</i> spp.	STRIPED ANEMONE	CNIDARIA	1%

Table 2.D. South Puget Sound Geoduck Management Region

Scientific Name	Common Name	Phylum	% of Transects (N = 817)
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Unspecified hermit crab	HERMIT CRAB	ARTHROPODA	60%
<i>Pycnopodia helianthoides</i>	SUNFLOWER STAR	ECHINODERMATA	58%
<i>Metridium</i> spp.	PLUMED ANEMONE	CNIDARIA	52%
<i>Cancer gracilis</i>	GRACEFUL CRAB	ARTHROPODA	50%
<i>Citharichthys</i> spp.	SANDDAB	CHORDATA	48%
<i>Tresus</i> spp.	HORSE CLAM	MOLLUSCA	48%
Sabellid spp.	SABELLID TUBE WORM	ANNELIDA	42%
<i>Pachycerianthus fimbriatus</i>	BURROWING ANEMONE	CNIDARIA	39%
Unspecified Cottidae	SCULPIN	CHORDATA	37%
<i>Cancer productus</i>	RED ROCK CRAB	ARTHROPODA	35%
<i>Terebellid</i> spp.	TEREBELLID TUBE WORM	ANNELIDA	32%
<i>Pisaster brevispinus</i>	SHORT-SPINED STAR	ECHINODERMATA	32%
<i>Polinices lewisii</i> egg case	MOON SNAIL EGGS	MOLLUSCA	30%
<i>Ptilosarcus gurneyi</i>	SEA PEN	CNIDARIA	28%
Unspecified tunicate	SESSILE TUNICATE	CHORDATA	25%
<i>Luidia foliolata</i>	SAND STAR	ECHINODERMATA	24%
<i>Stylatula elongata</i>	SEA WHIP	CNIDARIA	19%
Unspecified flatfish	FLATFISH	CHORDATA	19%
<i>Parastichopus californicus</i>	CALIFORNIA SEA CUCUMBER	ECHINODERMATA	19%
Unspecified ghost shrimp	GHOST SHRIMP	ARTHROPODA	16%
<i>Veneridae</i> spp.	HARDSHELL CLAMS	MOLLUSCA	15%
Chaetopterid polychaete tubes	CHAETOPTERID TUBE WORM	ANNELIDA	15%
<i>Panomya</i> spp.	FALSE GEODUCK	MOLLUSCA	14%
Unspecified brittle star	BRITTLE STAR	ECHINODERMATA	14%
<i>Armina californica</i>	ARMINA	MOLLUSCA	14%
Unspecified opisthobranch	OPISTHOBRANCH	MOLLUSCA	12%
<i>Urticina</i> spp.	STRIPED ANEMONE	CNIDARIA	12%
<i>Oregonia gracilis</i>	DECORATOR CRAB	ARTHROPODA	11%
<i>Solaster</i> spp.	SUN STAR	ECHINODERMATA	11%
<i>Lepidopsetta bilineata</i>	ROCK SOLE	CHORDATA	9%
Unspecified nudibranch	NUDIBRANCH	MOLLUSCA	9%
<i>Mya truncata</i>	TRUNCATED MYA	MOLLUSCA	8%
Unspecified shrimp	SHRIMP	ARTHROPODA	8%
<i>Crossaster papposus</i>	ROSE STAR	ECHINODERMATA	8%
<i>Platichthys stellatus</i>	STARRY FLOUNDER	CHORDATA	8%
<i>Polinices lewisii</i>	MOON SNAIL	MOLLUSCA	8%
<i>Parophrys vetulus</i>	ENGLISH SOLE	CHORDATA	8%
<i>Cancer magister</i>	DUNGENESS CRAB	ARTHROPODA	7%
<i>Mediaster aequalis</i>	VERMILLION STAR	ECHINODERMATA	6%
Unspecified annelid worm	WORM	ANNELIDA	6%
Unspecified Pholadidae	PIDDOCK	MOLLUSCA	6%
<i>Dendronotus</i> spp.	DENDRONOTUS	MOLLUSCA	6%
<i>Hermisenda crassicornis</i>	HERMISENDA	MOLLUSCA	5%
<i>Hydrolagus colliei</i>	RATFISH	CHORDATA	5%
<i>Evasterias troschelli</i>	FALSE OCHRE STAR	ECHINODERMATA	5%
<i>Dermasterias imbricata</i>	LEATHER STAR	ECHINODERMATA	5%
Unspecified Porifera	SPONGE	PORIFERA	4%
Unspecified fish	FISH	CHORDATA	4%
<i>Pleuronichthys coenosus</i>	C-O SOLE	CHORDATA	4%
Unspecified hydroid	HYDROIDS	CNIDARIA	4%
Unspecified burrowing holothurian	BURROWING CUCUMBER	ECHINODERMATA	3%
<i>Henricia leviuscula</i>	BLOOD STAR	ECHINODERMATA	3%
<i>Modiolus rectus</i>	HORSE MUSSEL	MOLLUSCA	3%

Unspecified Agonidae	POACHER	CHORDATA	2%
<i>Hippasteria spinosa</i>	SPINY STAR	ECHINODERMATA	2%
<i>Pododesmus macrochisma</i>	JINGLESHELL OYSTER	MOLLUSCA	2%
Unspecified holothurian	BLACK CUCUMBER	ECHINODERMATA	2%
<i>Raja</i> spp. egg case	SKATE EGG CASE	CHORDATA	2%
<i>Clinocardium nuttalli</i>	HEART COCKLE	MOLLUSCA	1%
<i>Tritonia diomedea</i>	ROSY TRITONIA	MOLLUSCA	1%
Unspecified Embiotocidae	PERCH	CHORDATA	1%
<i>Squalus acanthias</i>	DOG FISH SHARK	CHORDATA	1%
<i>Aulorhynchus flavidus</i>	TUBESNOUT	CHORDATA	1%
<i>Hydrolagus colliei</i> egg case	RAT FISH EGG CASE	CHORDATA	1%
<i>Loligo opalescens</i>	SQUID EGGS	MOLLUSCA	1%
<i>Crassadoma gigantea</i>	ROCK SCALLOP	MOLLUSCA	1%
<i>Eupentacta quinquesemita</i>	WHITE CUCUMBER	ECHINODERMATA	1%
<i>Pugettia</i> spp.	KELP CRAB	ARTHROPODA	1%
<i>Dirona albolineata</i>	DIRONA	MOLLUSCA	1%
Unspecified bivalve mollusc	MOLLUSC	MOLLUSCA	1%
Unspecified <i>Raja</i> spp.	SKATE	CHORDATA	1%
<i>Syngnathus leptorhynchus</i>	BAY PIPEFISH	CHORDATA	1%
Unspecified bryozoan	MOSS ANIMAL	BRYOZOA	1%
<i>Dendraster excentricus</i>	SAND DOLLAR	ECHINODERMATA	1%
<i>Chlamys hastata</i>	SPINY SCALLOP	MOLLUSCA	< 1%
<i>Rossia pacifica</i>	STUBBY SQUID	MOLLUSCA	< 1%
Unspecified anemone	ANEMONE	CNIDARIA	< 1%
Unspecified Gobiidae	GOBIE	CHORDATA	< 1%
Unspecified <i>Hexagrammos</i> spp.	GREENLING	CHORDATA	< 1%
<i>Balanus nubilis</i>	GIANT BARNACLE	ARTHROPODA	< 1%
<i>Octopus</i> or <i>Enteroctopus</i> spp.	OCTOPUS	MOLLUSCA	< 1%
Unspecified <i>Sebastes</i> spp.	ROCKFISH	CHORDATA	< 1%
<i>Chlamys rubida</i>	PINK SCALLOP	MOLLUSCA	< 1%
<i>Cryptochiton stelleri</i>	GUMBOOT CHITON	MOLLUSCA	< 1%
<i>Cucumaria miniata</i>	ORANGE CUCUMBER	ECHINODERMATA	< 1%
<i>Leptasterias hexactis</i>	SIX-RAYED SEA STAR	ECHINODERMATA	< 1%
<i>Olivella biplicata</i>	OLIVE SNAIL	MOLLUSCA	< 1%
<i>Ophiodon elongatus</i>	LINGCOD	CHORDATA	< 1%
<i>Pisaster ochraceus</i>	OCHRE STAR	ECHINODERMATA	< 1%
<i>Psettichthys melanostictus</i>	SAND SOLE	CHORDATA	< 1%
<i>Scorpaenichthys marmoratus</i>	CABEZON	CHORDATA	< 1%
<i>Sebastes caurinus</i>	COPPER ROCKFISH	CHORDATA	< 1%
<i>Sebastes maliger</i>	QUILLBACK ROCKFISH	CHORDATA	< 1%
<i>Semele rubropicta</i>	ROSE SEMELE	MOLLUSCA	< 1%
<i>Strongylocentrotus droebachiensis</i>	GREEN URCHIN	ECHINODERMATA	< 1%
<i>Telmessus cheiragonus</i>	HELMET CRAB	ARTHROPODA	< 1%
Unspecified mysid	MYSID SHRIMP	ARTHROPODA	< 1%

Table 2.E. Strait of Juan de Fuca Geoduck Management Region

Scientific Name	Common Name	Phylum	% of Transects (N = 355)
Sabellid spp.	SABELLID TUBE WORM	ANNELIDA	81%
<i>Urticina</i> spp.	STRIPED ANEMONE	CNIDARIA	54%
<i>Pycnopodia helianthoides</i>	SUNFLOWER STAR	ECHINODERMATA	49%
<i>Tresus</i> spp.	HORSE CLAM	MOLLUSCA	48%

Chaetopterid polychaete tubes	CHAETOPTERID TUBE WORM	ANNELIDA	45%
<i>Cancer productus</i>	RED ROCK CRAB	ARTHROPODA	42%
Unspecified hermit crab	HERMIT CRAB	ARTHROPODA	34%
Unspecified Cottidae	SCULPIN	CHORDATA	32%
<i>Cancer magister</i>	DUNGENESS CRAB	ARTHROPODA	31%
<i>Mya truncata</i>	TRUNCATED MYA	MOLLUSCA	31%
<i>Citharichthys</i> spp.	SANDDAB	CHORDATA	30%
<i>Panomya</i> spp.	FALSE GEODUCK	MOLLUSCA	29%
<i>Oregonia gracilis</i>	DECORATOR CRAB	ARTHROPODA	28%
Unspecified shrimp	SHRIMP	ARTHROPODA	26%
<i>Veneridae</i> spp.	HARDSHELL CLAMS	MOLLUSCA	26%
<i>Parastichopus californicus</i>	CALIFORNIA SEA CUCUMBER	ECHINODERMATA	22%
Unspecified nudibranch	NUDIBRANCH	MOLLUSCA	22%
<i>Henricia leviuscula</i>	BLOOD STAR	ECHINODERMATA	12%
<i>Polinices lewisii</i> egg case	MOON SNAIL EGGS	MOLLUSCA	11%
Unspecified hydroid	HYDROIDS	CNIDARIA	10%
<i>Orthasterias koehleri</i>	RAINBOW STAR	ECHINODERMATA	10%
<i>Raja</i> spp. egg case	SKATE EGG CASE	CHORDATA	10%
Unspecified Porifera	SPONGE	PORIFERA	10%
<i>Clinocardium nuttalli</i>	HEART COCKLE	MOLLUSCA	10%
<i>Pisaster brevispinus</i>	SHORT-SPINED STAR	ECHINODERMATA	10%
Unspecified bryozoan	MOSS ANIMAL	BRYOZOA	10%
Unspecified annelid worm	WORM	ANNELIDA	8%
Unspecified flatfish	FLATFISH	CHORDATA	7%
<i>Cryptochiton stelleri</i>	GUMBOOT CHITON	MOLLUSCA	7%
Unspecified anemone	ANEMONE	CNIDARIA	6%
<i>Fusitriton oregonensis</i>	OREGON HAIRY TRITON	MOLLUSCA	6%
<i>Mediaster aequalis</i>	VERMILLION STAR	ECHINODERMATA	6%
Unspecified burrowing holothurian	BURROWING CUCUMBER	ECHINODERMATA	6%
<i>Cribrinopsis fernaldi</i>	CRIMSON ANEMONE	CNIDARIA	5%
<i>Cancer gracilis</i>	GRACEFUL CRAB	ARTHROPODA	5%
<i>Evasterias troschelli</i>	FALSE OCHRE STAR	ECHINODERMATA	5%
Unspecified fish	FISH	CHORDATA	4%
<i>Polinices lewisii</i>	MOON SNAIL	MOLLUSCA	4%
<i>Terebellid</i> spp.	TEREBELLID TUBE WORM	ANNELIDA	4%
<i>Platichthys stellatus</i>	STARRY FLOUNDER	CHORDATA	3%
<i>Ptilosarcus gurneyi</i>	SEA PEN	CNIDARIA	3%
<i>Pugettia</i> spp.	KELP CRAB	ARTHROPODA	3%
Unspecified coral	CORAL	CNIDARIA	3%
<i>Hydrolagus colliei</i>	RATFISH	CHORDATA	3%
<i>Ammodytes hexapterus</i>	SAND LANCE	CHORDATA	3%
<i>Modiolus rectus</i>	HORSE MUSSEL	MOLLUSCA	3%
<i>Strongylocentrotus droebachiensis</i>	GREEN URCHIN	ECHINODERMATA	3%
Unspecified Pholadidae	PIDDOCK	MOLLUSCA	3%
<i>Dirona albolineata</i>	DIRONA	MOLLUSCA	2%
<i>Balanus nubilis</i>	GIANT BARNACLE	ARTHROPODA	2%
<i>Solaster</i> spp.	SUN STAR	ECHINODERMATA	2%
Unspecified tunicate	SESSILE TUNICATE	CHORDATA	2%
<i>Cucumaria miniata</i>	ORANGE CUCUMBER	ECHINODERMATA	1%
<i>Telmessus cheiragonus</i>	HELMET CRAB	ARTHROPODA	1%
Unspecified <i>Hexagrammos</i> spp.	GREENLING	CHORDATA	1%
<i>Hermisenda crassicornis</i>	HERMISSENDA	MOLLUSCA	1%
<i>Parophrys vetulus</i>	ENGLISH SOLE	CHORDATA	1%

<i>Strongylocentrotus franciscanus</i>	RED URCHIN	ECHINODERMATA	1%
<i>Armina californica</i>	ARMINA	MOLLUSCA	1%
<i>Luidia foliolata</i>	SAND STAR	ECHINODERMATA	1%
Unspecified brittle star	BRITTLE STAR	ECHINODERMATA	1%
<i>Stylasterias forreri</i>	FISH-EATING STAR	ECHINODERMATA	1%
<i>Chlamys hastata</i>	SPINY SCALLOP	MOLLUSCA	1%
<i>Crassadoma gigantea</i>	ROCK SCALLOP	MOLLUSCA	1%
<i>Hydrolagus colliei</i> egg case	RATFISH EGG CASE	CHORDATA	1%
<i>Lepidopsetta bilineata</i>	ROCK SOLE	CHORDATA	1%
<i>Pleuronichthys coenosus</i>	C-O SOLE	CHORDATA	1%
<i>Chlamys rubida</i>	PINK SCALLOP	MOLLUSCA	< 1%
<i>Chlamys</i> spp.	SWIMMING SCALLOPS	MOLLUSCA	< 1%
<i>Dendraster excentricus</i>	SAND DOLLAR	ECHINODERMATA	< 1%
<i>Dendronotus</i> spp.	DENDRONOTUS	MOLLUSCA	< 1%
<i>Metridium</i> spp.	PLUMED ANEMONE	CNIDARIA	< 1%
<i>Octopus</i> or <i>Enteroctopus</i> spp.	OCTOPUS	MOLLUSCA	< 1%
<i>Ophiodon elongatus</i>	LINGCOD	CHORDATA	< 1%
<i>Pachycerianthus fimbriatus</i>	BURROWING ANEMONE	CNIDARIA	< 1%
<i>Patinopecten caurinus</i>	WEATHERVANE SCALLOP	MOLLUSCA	< 1%
<i>Solen sicarius</i>	JACK KNIFE CLAM	MOLLUSCA	< 1%
<i>Stylatula elongata</i>	SEA WHIP	CNIDARIA	< 1%
Unspecified ghost shrimp	GHOST SHRIMP	ARTHROPODA	< 1%
Unspecified mysid	MYSID SHRIMP	ARTHROPODA	< 1%
Unspecified opisthobranch	OPISTHOBRANCH	MOLLUSCA	< 1%
Unspecified <i>Raja</i> spp.	SKATE	CHORDATA	< 1%
Unspecified <i>Sebastes</i> spp.	ROCKFISH	CHORDATA	< 1%
NO ANIMALS			< 1%

Table 3. The Most Common and Obvious Plants Observed by Divers on All Transects in Each Geoduck Management Region Surveyed from 2001-2006. Table 3.A. Central Sound, Table 3.B. Hood Canal, Table 3.C. North Sound, Table 3.D. South Sound, and Table 3.E. Strait of Juan de Fuca.

Table 3.A. Central Puget Sound Geoduck Management Region			
Scientific Name	Description	Phylum	% of Transects (N = 257)
<i>Laminaria</i> spp.	BROWN KELP	OCHROPHYTA	77%
Unspecified	SMALL RED ALGAE	RHODOPHYTA	67%
<i>Desmarestia</i> spp.	ACID KELP	OCHROPHYTA	46%
Diatoms	BROWN SINGLE-CELL ALGAE	BACILLARIOPHYTA	40%
Unspecified	LARGE RED ALGAE	RHODOPHYTA	36%
<i>Ulva</i> spp.	SEA LETTUCE	CHLOROPHYTA	24%
<i>Zostera marina</i>	EELGRASS	TRACHEOPHYTA	2%
	NO PLANTS		2%

Table 3.B. Hood Canal Geoduck Management Region			
Scientific Name	Description	Phylum	% of Transects (N = 456)
Unspecified	SMALL RED ALGAE	RHODOPHYTA	41%
<i>Laminaria</i> spp.	BROWN KELP	OCHROPHYTA	35%
	NO PLANTS		29%
Diatoms	BROWN SINGLE-CELL ALGAE	BACILLARIOPHYTA	23%

Unspecified	LARGE RED ALGAE	RHODOPHYTA	21%
<i>Ulva</i> spp.	SEA LETTUCE	CHLOROPHYTA	20%
<i>Desmarestia</i> spp.	ACID KELP	OCHROPHYTA	7%
<i>Gigartina papillata</i>	TURKISH TOWEL	RHODOPHYTA	1%
<i>Iridaea cordata</i>	IRIDESCENT RED ALGAE	RHODOPHYTA	1%
<i>Zostera marina</i>	EELGRASS	TRACHEOPHYTA	1%
<i>Costaria costata</i>	5-RIB BULLATE BROWN ALGAE	OCHROPHYTA	< 1%
<i>Pterygophora californica</i>	FEATHER PALM ALGAE	OCHROPHYTA	< 1%
Unspecified	SMALL BROWN ALGAE	OCHROPHYTA	< 1%

Table 3.C. North Puget Sound Geoduck Management Region

Scientific Name	Description	Phylum	% of Transects (N = 129)
<i>Ulva</i> spp.	SEA LETTUCE	CHLOROPHYTA	76%
Diatoms	BROWN SINGLE-CELL ALGAE	BACILLARIOPHYTA	26%
	NO PLANTS		14%

Table 3.D. South Puget Sound Geoduck Management Region

Scientific Name	Description	Phylum	% of Transects (N = 817)
<i>Ulva</i> spp.	SEA LETTUCE	CHLOROPHYTA	71%
Unspecified	SMALL RED ALGAE	RHODOPHYTA	66%
<i>Laminaria</i> spp.	BROWN KELP	OCHROPHYTA	61%
Unspecified	LARGE RED ALGAE	RHODOPHYTA	29%
Diatoms	BROWN SINGLE-CELL ALGAE	BACILLARIOPHYTA	26%
<i>Desmarestia</i> spp.	ACID KELP	OCHROPHYTA	17%
	NO PLANTS		7%
<i>Nereocystis luetkeana</i>	BLADDER OR BULL WHIP KELP	OCHROPHYTA	1%
<i>Costaria costata</i>	5-RIB BULLATE BROWN ALGAE	OCHROPHYTA	< 1%
<i>Zostera marina</i>	EELGRASS	TRACHEOPHYTA	< 1%

Table 3.E. Strait of Juan de Fuca Geoduck Management Region

Scientific Name	Description	Phylum	% of Transects (N = 355)
Unspecified	SMALL RED ALGAE	RHODOPHYTA	96%
Diatoms	BROWN SINGLE-CELL ALGAE	BACILLARIOPHYTA	56%
<i>Laminaria</i> spp.	BROWN KELP	OCHROPHYTA	54%
Unspecified	LARGE RED ALGAE	RHODOPHYTA	33%
<i>Desmarestia</i> spp.	ACID KELP	OCHROPHYTA	23%
<i>Lithothamnion</i> or <i>Lithophyllum</i> spp.	CRUSTOSE CORALLINE ALGAE	RHODOPHYTA	4%
<i>Pterygophora californica</i>	FEATHER PALM ALGAE	OCHROPHYTA	2%
<i>Corallina</i> spp., <i>Bosiella</i> spp.	ARTICULATED CORALLINE ALGAE	RHODOPHYTA	2%
<i>Ulva</i> spp.	SEA LETTUCE	CHLOROPHYTA	1%
<i>Alaria</i> spp.	RIBBON KELP	OCHROPHYTA	1%
<i>Nereocystis luetkeana</i>	BLADDER OR BULL WHIP KELP	OCHROPHYTA	1%
<i>Iridaea cordata</i>	IRIDESCENT RED ALGAE	RHODOPHYTA	1%
<i>Sarcodiotheca gaudichaudii</i>	BRANCHING RED ALGAE	RHODOPHYTA	< 1%
	NO PLANTS		< 1%

¹ Geoduck surveys performed by Washington Department of Fish and Wildlife (WDFW). Data were queried from the master geoduck database on October 2, 2006 by Tina Blewett, WDFW, 360-902-2678. No WDFW surveys took place in the San Juan Island Geoduck Management Region during those years.

² Six geoduck management regions were established in marine waters of Washington by state and tribal managers (in 1995) based on major hydrogeographic basins of Puget Sound, Usual and Accustomed fishing areas of treaty tribes, and WDFW Marine Fish/Shellfish Management and Catch Reporting Areas. These regions are described in annual state/tribal commercial geoduck harvest management plans.

³ Please read the following notes for important information regarding these observations. These are data from WDFW geoduck surveys, from tracts surveyed in the years 2001-2006. This table contains a list of the most common and obvious animals that were seen by divers while surveying geoduck on those tracts. This list is not meant to be a comprehensive list of everything that occurs on tracts with geoducks. Many animals may exist on or in the vicinity of the tract but may not be seen or identified. Reasons are varied but include and are not limited to: animals that are too small to be seen or identified by the naked eye, are buried in the substrate, have the ability and the awareness to avoid the divers, are exceptionally cryptic, are migratory and thus are not on the tract when the surveys are conducted, are rare enough that the number of transects done for geoduck surveys is not adequate to encounter it, if visibility is poor (divers cannot see well), or seasonality (if the tract survey was done during a season of the year when that species is not on the tract or not as noticeable due to behavior, life stage, or change in appearance).

The tracts queried for these results were simply the tracts that happened to be surveyed in these years; they were not selected as "average" or "representative" of that region. Other animals may exist on other tracts not represented here. These tracts may include pre-fishing surveys, surveys on unfished tracts, or post-harvest surveys, which may affect the species present on the tract.

These data are Presence/Absence only. They are not meant to be used quantitatively. Also, any ranking of species or groups based on number of transects may not represent that species' or group's biomass on the tract.

Lastly, highly mobile and migratory animals (for example but not limited to: salmon, birds, and marine mammals) are assumed to be able to occur on or near any geoduck tract.

⁴ These are data from WDFW geoduck surveys, from tracts surveyed in the years 2001-2006. This table contains a list of the most common and obvious plants attached to the substrate that were seen by divers while surveying geoduck on those tracts. This list is not meant to be a comprehensive list of everything that occurs on tracts with geoducks; other species may occur that are not listed here. Most plants observed are not identified to species level. We do not include "drift algae" but only list algae here that were attached to the substrate. An important note is that most algae are annual (die back in the winter), so certain plants may not be found on a tract if that survey was done during a season of the year when that species is not on the tract or not as noticeable due to its life stage, or seasonal differences in appearance.

These surveys may include pre-fishing surveys, surveys on unfished tracts, or post-harvest surveys, which may affect the species present on the tract. Also, the tracts queried for these results were simply tracts that happened to be surveyed in these years; they were not selected as "average" or "representative" of that region. Other plants may exist on other tracts not represented here. These data are Presence/Absence only and are not meant to be used quantitatively. Also, any ranking of species or groups based on number of transects may not represent that species' or group's biomass on the tract.