

## Year-round algal toxin exposure in free-ranging sea lions

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Table S1. Sample information and percent frequency of occurrence (FO) of Steller sea lion *Eumetopias jubatus* prey items by total FO and by season with years combined. Prey items are listed in decreasing order of FO within and between taxonomic groupings (i.e. family, order, or class). Scat containing no identifiable prey group refer to those containing only unidentified bony fish (class Osteichthyes) and/or unidentified cartilaginous fish (subclass Elasmobranchii).

	Total	Spring	Summer	Fall	Winter
<b>Samples</b>					
Total scat samples collected	383	100	96	105	82
Scat containing >0 identifiable prey group	373	99	90	100	81
Scat containing no identifiable prey group	10	1	6	3	1
Prey identified to lowest taxonomic group	39	29	25	35	23
<b>Prey item</b>					
Herring, shad, sardine: family Clupeidae	56	51	66	61	45
Clupeid, unidentified	31	30	34	32	26
Pacific herring ( <i>Clupea pallasii</i> )	15	14	8.3	20	17
Pacific sardine ( <i>Sardinops sagax</i> )	9.4	0.0	24	11	1.2
American shad ( <i>Alosa sapidissima</i> )	4.7	8.0	1.0	3.8	6.1
Skate: family Rajidae					
Skate, unidentified	40	51	28	37	46
Salmon: family Salmonidae	40	45	18	34	67
Non-juvenile salmonid	36	43	15	31	57
Juvenile salmonid	8.9	7.0	3.1	6.7	21
Rockfish: family Sebastidae					
Rockfish ( <i>Sebastes</i> spp.)	36	49	7.3	30	60
Dogfish sharks: family Squalidae					
Pacific spiny dogfish ( <i>Squalus acanthias</i> )	28	32	18	36	26
Flatfishes: order Pleuronectiformes	21	19	32	28	1.2
Starry flounder ( <i>Platichthys stellatus</i> )	9.4	7.0	17	12	0.0
Flatfishes, unidentified	7.3	8.0	8.3	10	1.2
Arrowtooth flounder ( <i>Atheresthes stomias</i> )	2.9	4.0	5.2	1.9	0.0
Butter sole ( <i>Isopsetta exilis</i> )	2.4	4.0	4.2	1.0	0.0
Rex sole ( <i>Glyptocephalus zachirus</i> )	1.0	0.0	1.0	2.9	0.0
Dover sole ( <i>Microstomus pacificus</i> )	0.8	3.0	0.0	0.0	0.0
Sanddabs ( <i>Citharichthys</i> spp.)	0.8	1.0	0.0	1.9	0.0
Sand sole ( <i>Psettichthys melanostictus</i> )	0.5	2.0	0.0	0.0	0.0
Codfishes: family Gadidae	18	32	5.2	12	22
Codfishes, unidentified	7.6	14	1.0	2.9	13
Pacific cod ( <i>Gadus macrocephalus</i> )	5.5	2.0	4.2	7.6	8.5
Walleye pollock ( <i>Gadus chalcogramma</i> )	4.7	16	0.0	1.9	0.0

	Total	Spring	Summer	Fall	Winter
Bony fish: class Osteichthyes					
Bony fish, unidentified	14	10	25	14	4.9
Hakes: family Merlucciidae					
Pacific hake ( <i>Merluccius productus</i> )	12	3.0	18	25	0.0
Anchovies: family Engraulidae					
Northern anchovy ( <i>Engraulis mordax</i> )	7.3	7.0	7.3	10	3.7
Greenlings: family Hexagrammidae	6.8	7.0	2.1	10	7.3
Lingcod ( <i>Ophiodon elongatus</i> )	4.2	7.0	2.1	4.8	2.4
Hexagrammids, unidentified	1.8	0.0	0.0	2.9	4.9
Atka mackerel ( <i>Pleurogrammus monopterygius</i> )	0.8	0.0	0.0	2.9	0.0
Sand lances: family Ammodytidae					
Pacific sand lance ( <i>Ammodytes hexapterus</i> )	4.4	3.0	4.2	2.9	8.5
Squids and octopus: class Cephalopoda	4.2	3.0	1.0	7.6	4.9
Cephalopods, unidentified	2.9	2.0	1.0	4.8	3.7
Squid, unidentified	0.8	0.0	0.0	1.9	1.2
Octopus, unidentified	0.5	1.0	0.0	1.0	0.0
Cartilaginous fish: subclass Elasmobranchii					
Sharks and rays, unidentified	3.1	4.0	1.0	3.8	3.7
Smelts: family Osmeridae					
Smelts, unidentified	2.9	5.0	0.0	1.0	6.1
Lamprey: family Petromyzontidae	2.6	0.0	1.0	4.8	4.9
Pacific lamprey ( <i>Lampetra tridentata</i> )	1.6	0.0	0.0	1.9	4.9
Lampreys, unidentified	1.0	0.0	1.0	2.9	0.0
Mackerel and tuna: family Scrombidae					
Pacific mackerel ( <i>Scomber japonicus</i> )	1.6	0.0	4.2	1.9	0.0
Poachers: family Agonidae					
Poacher, unidentified	1.6	2.0	2.1	1.0	1.2
Sticklebacks: family Gasterosteidae					
Threespine stickleback ( <i>Gasterosteus aculeatus</i> )	1.6	5.0	0.0	1.0	0.0
Sculpins: family Cottidae					
Sculpins, unidentified	1.3	0.0	0.0	2.9	2.4
Hagfishes: family Myxinidae					
Pacific hagfish ( <i>Eptatretus stoutii</i> )	0.8	1.0	0.0	1.9	0.0
Gunnel: Family Pholidae					
Gunnels, unidentified	0.8	2.0	1.0	0.0	0.0
Snailfishes: family Liparidae					
Snailfishes, unidentified	0.5	0.0	0.0	0.0	2.4

Table S2. Sample information and percent frequency of occurrence (FO) of California sea lion *Zalophus californianus* prey items by total FO and by season for each collection period. Prey items are listed in decreasing order of FO within and between taxonomic groupings (i.e. family, order, or class). Scat containing no identifiable prey group refer to those containing only unidentified bony fish (class Osteichthyes) and/or unidentified cartilaginous fish (subclass Elasmobranchii).

	Total	2011		2012	
		Spring	Fall	Summer	Fall
<b>Samples</b>					
Total scat samples collected	123	20	45	19	39
Scat containing >0 identifiable prey group	117	19	43	18	37
Scat containing no identifiable prey group	6	1	2	1	2
Prey identified to lowest taxonomic group	30	15	21	16	26
<b>Prey item</b>					
Herring, shad, sardine: family Clupeidae	79	60	87	63	87
Pacific herring ( <i>Clupea pallasii</i> )	31	35	22	32	38
Clupeid, unidentified	25	15	29	26	26
American shad ( <i>Alosa sapidissima</i> )	23	25	36	5.3	15
Pacific sardine ( <i>Sardinops sagax</i> )	19	0.0	33	0.0	20.5
Salmon: family Salmonidae	38	40	40	42	33
Non-juvenile salmonid	33	25	36	42	31
Juvenile salmonid	6.5	15	6.7	0.0	5.1
Hakes: family Merlucciidae					
Pacific hake ( <i>Merluccius productus</i> )	32	40	53	21	7.7
Dogfish sharks: family Squalidae					
Pacific spiny dogfish ( <i>Squalus acanthias</i> )	30	45	29	58	10
Rockfish: family Sebastidae					
Rockfish ( <i>Sebastes</i> spp.)	19	65	8.9	21	5.1
Squids and octopus: class Cephalopoda	12	30	4.4	16	10
Cephalopods, unidentified	4.1	15	0.0	5.3	2.6
Octopus, unidentified	6.5	15	2.2	11	5.1
Squid, unidentified	1.6	0.0	2.2	0.0	2.6
Anchovies: family Engraulidae					
Northern anchovy ( <i>Engraulis mordax</i> )	11	5.0	18	5.3	10
Smelts: family Osmeridae	8.9	15	6.7	0.0	13
Smelts, unidentified	8.9	15	6.7	0.0	13
Eulachon ( <i>Thaleichthys pacificus</i> )	0.8	0.0	2.2	0.0	0.0
Bony fishes: class Osteichthyes					
Bony fishes, unidentified	8.9	5.0	4.4	16	13

	Total	2011		2012	
		Spring	Fall	Summer	Fall
Flatfishes: order Pleuronectiformes	8.1	0.0	11	16	5.1
Arrowtooth flounder ( <i>Atheresthes stomias</i> )	4.9	0.0	6.7	11	2.6
Flatfishes, unidentified	2.4	0.0	4.4	0.0	2.6
Dover sole ( <i>Microstomus pacificus</i> )	0.8	0.0	2.2	0.0	0.0
Starry flounder ( <i>Platichthys stellatus</i> )	0.8	0.0	0.0	5.3	0.0
Cartilaginous fishes: subclass Elasmobranchii					
Sharks and rays, unidentified	6.5	5.0	6.7	11	5.1
Codfishes: family Gadidae	5.7	10	0.0	5.3	10.3
Codfishes, unidentified	3.3	10	0.0	0.0	5.1
Pacific cod ( <i>Gadus macrocephalus</i> )	1.6	0.0	0.0	5.3	2.6
Walleye pollock ( <i>Gadus chalcogramma</i> )	0.8	0.0	0.0	0.0	2.6
Skate: family Rajidae					
Skate, unidentified	4.9	10	2.2	11	2.6
Greenlings: family Hexagrammidae					
Hexagrammids, unidentified	0.8	0.0	0.0	0.0	2.6
Jack mackerels: family Carangidae					
Jackmackerel ( <i>Trachurus symmetricus</i> )	0.8	0.0	0.0	0.0	2.6
Lamprey: family Petromyzontidae					
Pacific lamprey ( <i>Lampetra tridentata</i> )	0.8	0.0	0.0	0.0	2.6
Sculpins: family Cottidae					
Sculpins, unidentified	0.8	0.0	0.0	0.0	2.6
Snailfishes: family Liparidae					
Snailfishes, unidentified	0.8	0.0	2.2	0.0	0.0