Predator diets in Atlantis GOA

Alberto Rovellini

Bar plots refer to equilibrium diets in the model - average of the last 5 years of a simulation run. Only species that make up for >5% of the diets are shown.

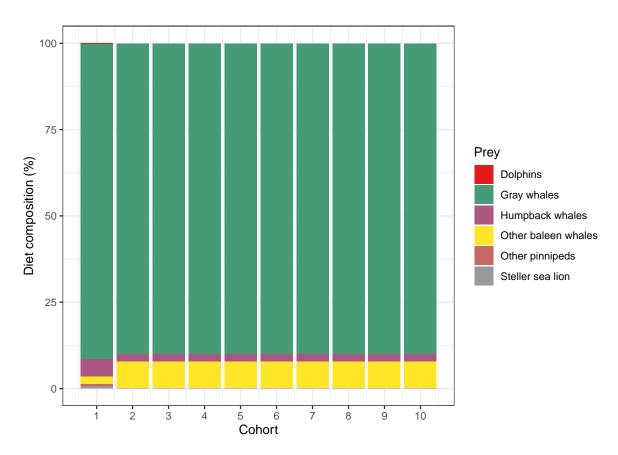
As you can tell many of these are really out of line (e.g. no salmon in resident KW diet). Some of these can be caused by issues with other species (e.g. the prey is absent) and will take some work, but many (most?) can be improved by changing the input diet matrix.

What would help are comments about what needs to be changed. Better diets that you have already prepared for Ecopath would be top.

Table 1: Species composition of the predator groups in Atlantis GOA

Main taxa	Proportion of group blomass	Atlantis biomass 1990 (mt)
Orcinus orca	1.000	1389
Sperm whale (Physeter macrocephalus)	1.000	4520
Orcinus orca	1.000	5351
		4394
Pacific white-sided dolphin (Lagenorhynchus obliquidens)	0.480	
Harbor porpoise (Phocoena phocoena)	0.220	
Dall's porpoise (Phocoenoides dalli)	0.300	
Eschrichtius robustus	1.000	254982
Megaptera novaeangliae	1.000	100540
		64268
Minke whale (Balaenoptera acutorostrata)	0.010	
Fin whale (Balaenoptera physalus)	0.980	
Right whale (Eubalaena japonica)	0.010	
Eumetopias jubatus	1.000	5804
		7299
Northern fur seal (Callorhinus ursinus)	0.010	
Elephant seal (Mirounga angustirostris)	0.020	
Harbor seal (Phoca vitulina)	0.970	
,		4420
Sooty shearwater (Ardenna grisea)	0.520	
Horned puffin (Fratercula corniculata)	0.110	
Tufted puffin (Fratercula cirrhata)	0.320	
Common murre (Uria aalge)	0.040	
(3)		83
Cassin's auklet (Ptychoramphus aleuticus)	0.680	
Parakeet auklet (Aethia psittacula)	0.180	
		290
Laysan albatross (Phoebastria immutabilis)	0.004	
Common gull (Larus brachyrhynchus)	0.004	
Black-legged kittiwake (Rissa tridactyla)	0.890	
(0.010	386
Northern fulmar (Fulmarus glacialis)	0.830	
Fork-tailed storm petrel (Hydrobates furcatus)	0.120	
Leach's storm petrel (Hydrobates leucorhous)	0.050	
	Sperm whale (Physeter macrocephalus) Orcinus orca Pacific white-sided dolphin (Lagenorhynchus obliquidens) Harbor porpoise (Phocoenoides dalli) Eschrichtius robustus Megaptera novaeangliae Minke whale (Balaenoptera acutorostrata) Fin whale (Balaenoptera physalus) Right whale (Eubalaena japonica) Eumetopias jubatus Northern fur seal (Callorhinus ursinus) Elephant seal (Mirounga angustirostris) Harbor seal (Phoca vitulina) Sooty shearwater (Ardenna grisea) Horned puffin (Fratercula corniculata) Tufted puffin (Fratercula cirrhata) Common murre (Uria aalge) Cassin's auklet (Ptychoramphus aleuticus) Parakeet auklet (Aethia psittacula) Crested auklet (Aethia cristatella) Laysan albartoss (Phoebastria immutabilis) Common gull (Larus brachyrhynchus) Black-legged kittiwake (Rissa tridactyla) Black-footed albatross (Phoebastria nigripes) Northern fulmar (Fulmarus glacialis) Fork-tailed storm petrel (Hydrobates furcatus)	Sperm whale (Physeter macrocephalus) 1.000

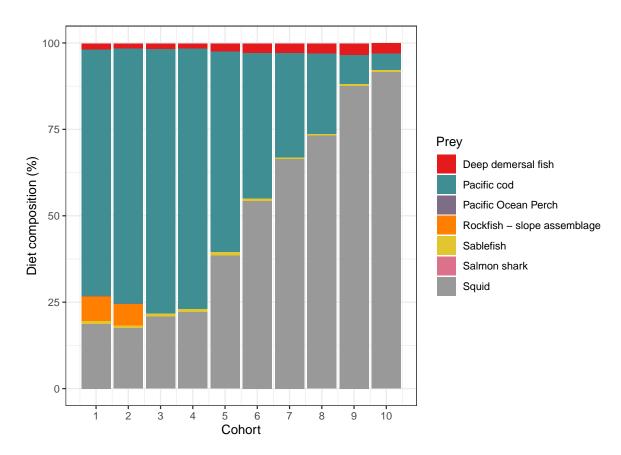
Transient killer whales



Weight at Age (kg)

Cohort	Age	Weight (kg)
1	1-5	661.88
2	6 - 10	2282.59
3	11 - 15	3585.32
4	16-20	4348.52
5	21 - 25	4745.04
6	26 - 30	4940.71
7	31 – 35	5035.03
8	36 – 40	5080.02
9	41 - 45	5101.36
10	46 - 50	5111.47

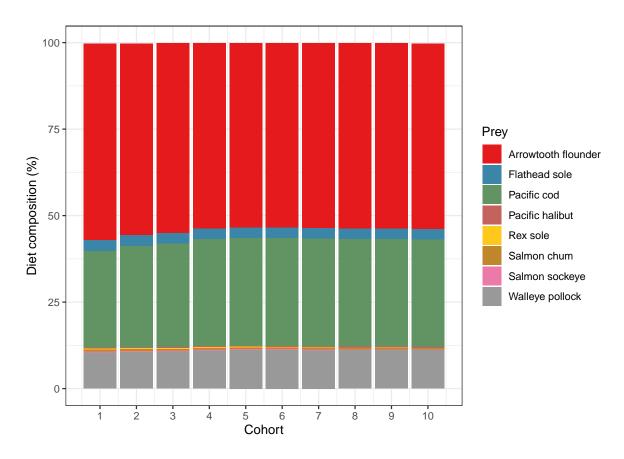
Toothed whales



Weight at Age (kg)

Cohort	Age	Weight (kg)
1	1-5	553.28
2	6 - 10	3114.07
3	11 - 15	7509.18
4	16 - 20	12912.05
5	21 - 25	18568.15
6	26 - 30	23968.47
7	31 - 35	28833.15
8	36 – 40	33047.50
9	41 - 45	36600.18
10	46 - 50	39536.92

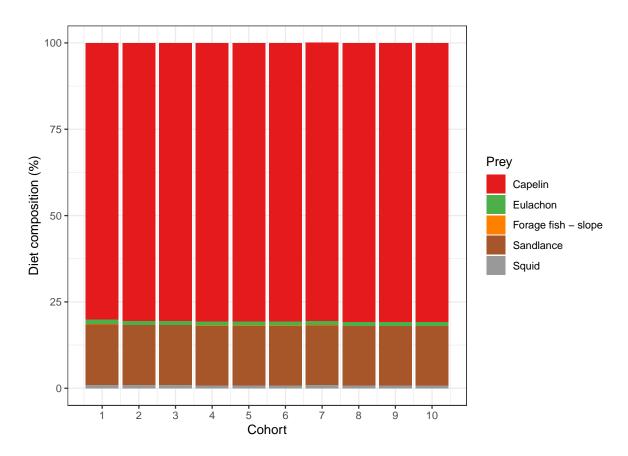
Resident killer whales



Weight at Age (kg)

Cohort	Age	Weight (kg)
1	1-5	661.88
2	6 - 10	2282.59
3	11 - 15	3585.32
4	16 - 20	4348.52
5	21 - 25	4745.04
6	26 - 30	4940.71
7	31 - 35	5035.03
8	36 – 40	5080.02
9	41 - 45	5101.36
10	46 - 50	5111.47

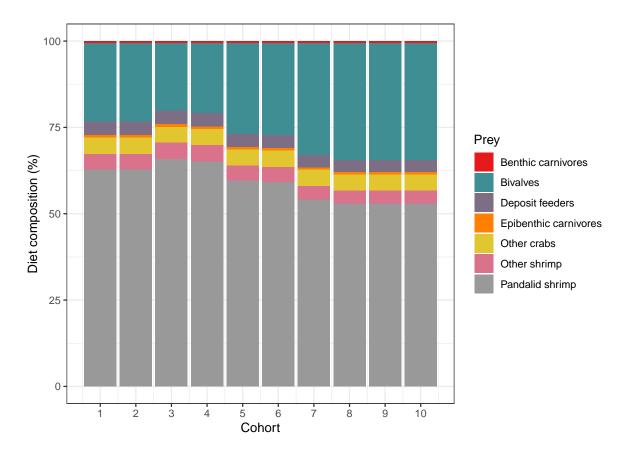
Dolphins



Weight at Age (kg)

Cohort	Age	Weight (kg)
1	1-2	43.61
2	3-4	94.81
3	5-6	117.24
4	7-8	125.22
5	9 - 10	127.90
6	11 - 12	128.78
7	13 - 14	129.07
8	15 - 16	129.16
9	17 - 18	129.19
10	19–20	129.20

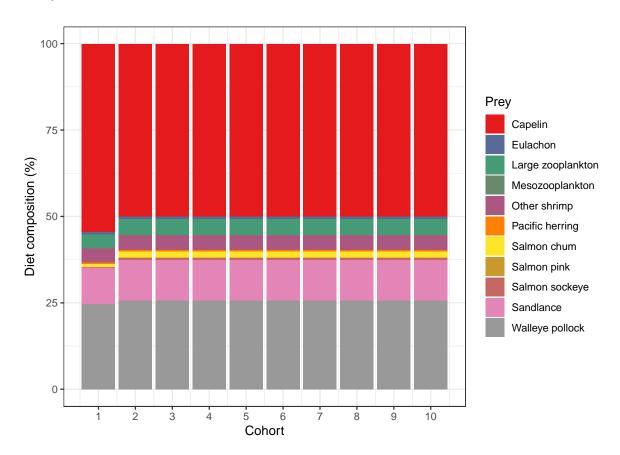
Gray whales



Weight at Age (kg)

Cohort	Age	Weight (kg)
1	1-6	5194.62
2	7 - 12	11780.93
3	13 - 18	14683.79
4	19 – 24	15703.04
5	25 - 30	16038.62
6	31 - 36	16146.94
7	37 - 42	16181.68
8	43 - 48	16192.80
9	49 - 54	16196.36
10	55 – 60	16197.50

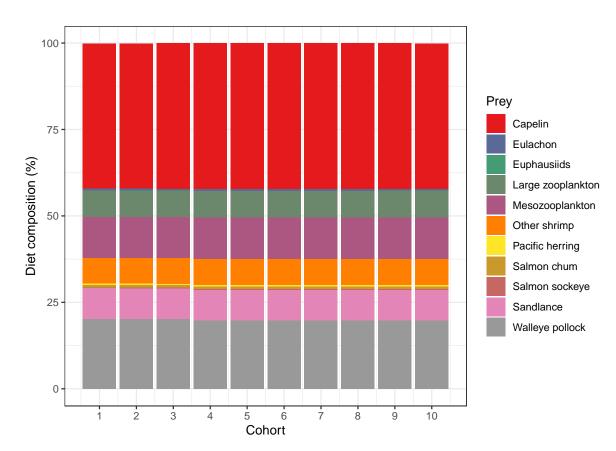
Humpback whales



Weight at Age (kg)

Cohort	Age	Weight (kg)
1	1-5	730.27
2	6 - 10	2807.24
3	11 - 15	5574.30
4	16-20	8504.47
5	21 - 25	11287.70
6	26 - 30	13772.46
7	31 - 35	15905.76
8	36 – 40	17689.98
9	41 - 45	19155.19
10	46 – 50	20342.74

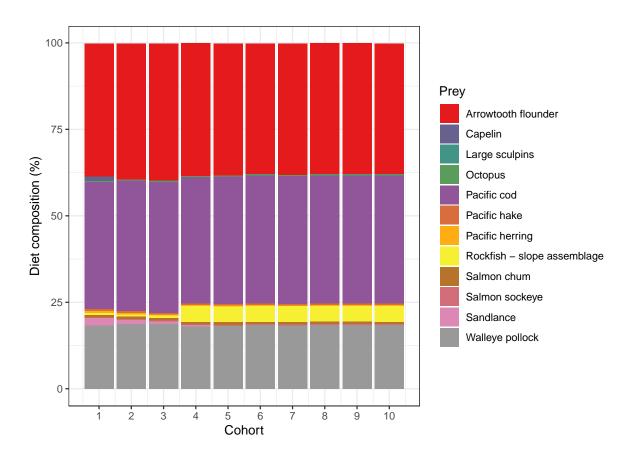
Other baleen whales



Weight at Age (kg)

Cohort	Age	Weight (kg)
1	1–5	1910.85
2	6 - 10	7493.40
3	11 - 15	13310.78
4	16 - 20	17743.67
5	21 - 25	20700.35
6	26 - 30	22546.89
7	31 – 35	23660.59
8	36 – 40	24319.51
9	41 - 45	24705.19
10	46 - 50	24929.54

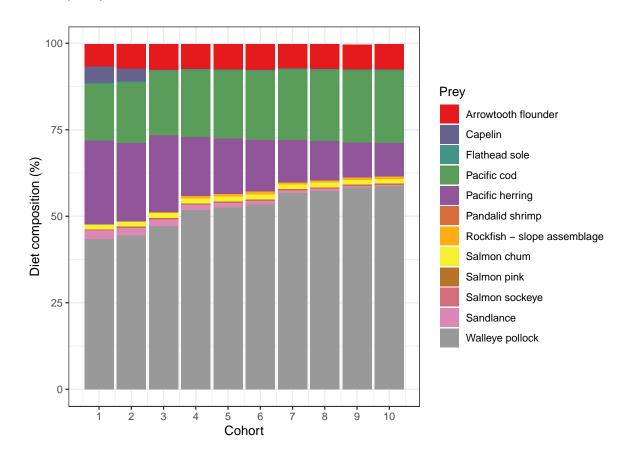
Steller sea lion



Weight at Age (kg)

Cohort	Age	Weight (kg)
1	1-2	74.69
2	3-4	234.97
3	5-6	360.24
4	7-8	434.39
5	9 - 10	473.83
6	11 - 12	493.84
7	13 - 14	503.78
8	15 - 16	508.66
9	17 - 18	511.05
10	19-20	512.22

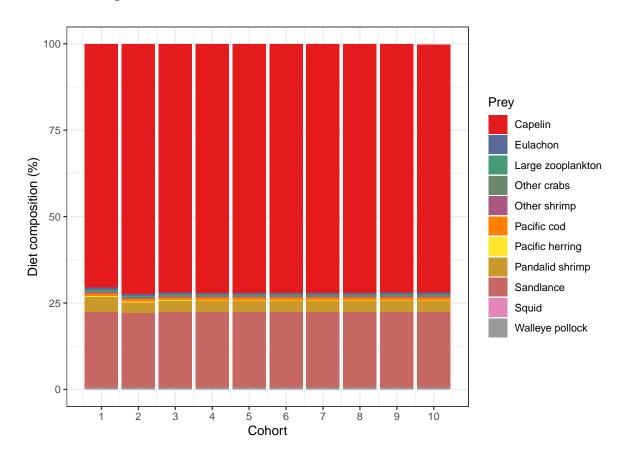
Other pinnipeds



Weight at Age (kg)

Cohort	Age	Weight (kg)
1	1-2	25.16
2	3-4	101.79
3	5-6	189.05
4	7 - 8	262.45
5	9 - 10	316.47
6	11 - 12	353.57
7	13 - 14	378.09
8	15 - 16	393.92
9	17 - 18	404.01
10	19 - 20	410.39

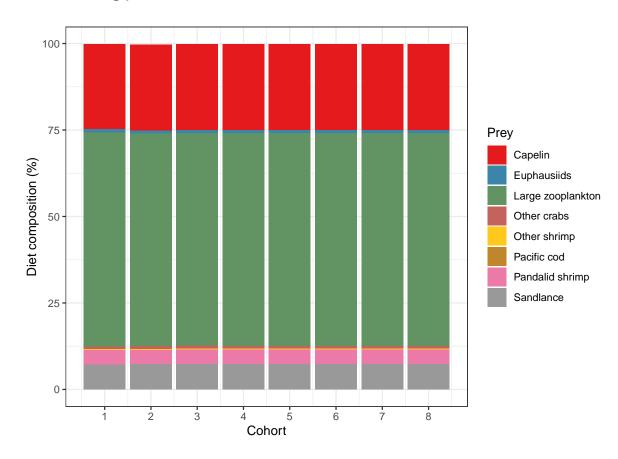
Seabirds diving fish



Weight at Age (kg)

Cohort	Age	Weight (kg)
1	1-2	0.8
2	3-4	0.8
3	5-6	0.8
4	7-8	0.8
5	9 - 10	0.8
6	11 - 12	0.8
7	13 - 14	0.8
8	15 - 16	0.8
9	17 - 18	0.8
10	19-20	0.8

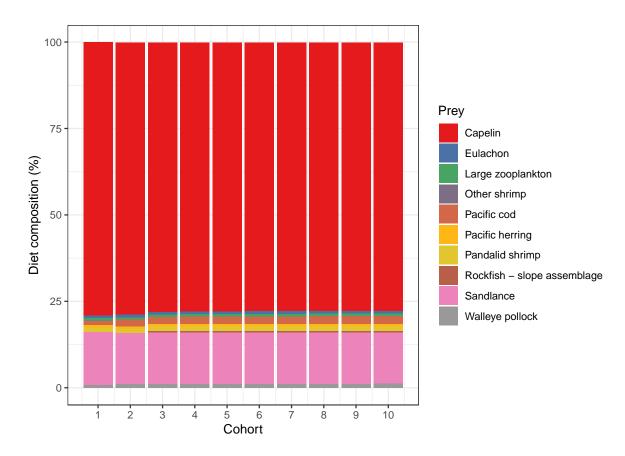
Seabirds diving plankton



Weight at Age (kg)

Cohort	Age	Weight (kg)
1	1-1	0.21
2	2-2	0.21
3	3 - 3	0.21
4	4-4	0.21
5	5-5	0.21
6	6-6	0.21
7	7 - 7	0.21
8	8–8	0.21

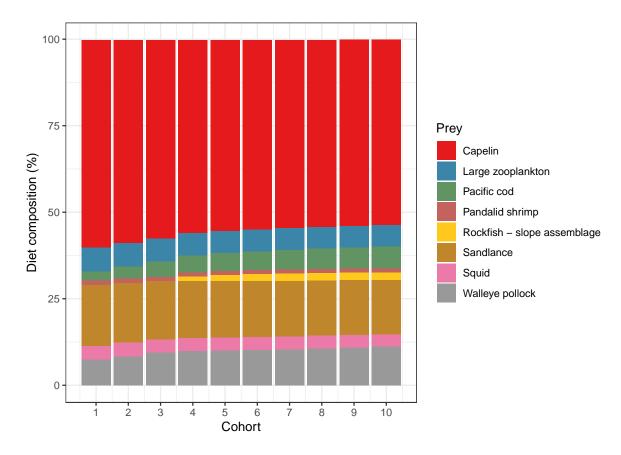
Seabirds surface fish



Weight at Age (kg)

Cohort	Age	Weight (kg)
1	1-2	0.69
2	3-4	0.69
3	5 - 6	0.69
4	7-8	0.69
5	9 - 10	0.69
6	11 - 12	0.69
7	13 - 14	0.69
8	15 - 16	0.69
9	17 - 18	0.69
10	19-20	0.69

Seabirds surface plankton



Weight at Age (kg)

Cohort	Age	Weight (kg)
1	1–3	0.61
2	4-6	0.61
3	7 - 9	0.61
4	10 - 12	0.61
5	13 - 15	0.61
6	16 - 18	0.61
7	19 - 21	0.61
8	22 - 24	0.61
9	25 - 27	0.61
10	28 – 30	0.61