

Assessment of the sculpin stock complex in the Bering Sea and Aleutian Islands

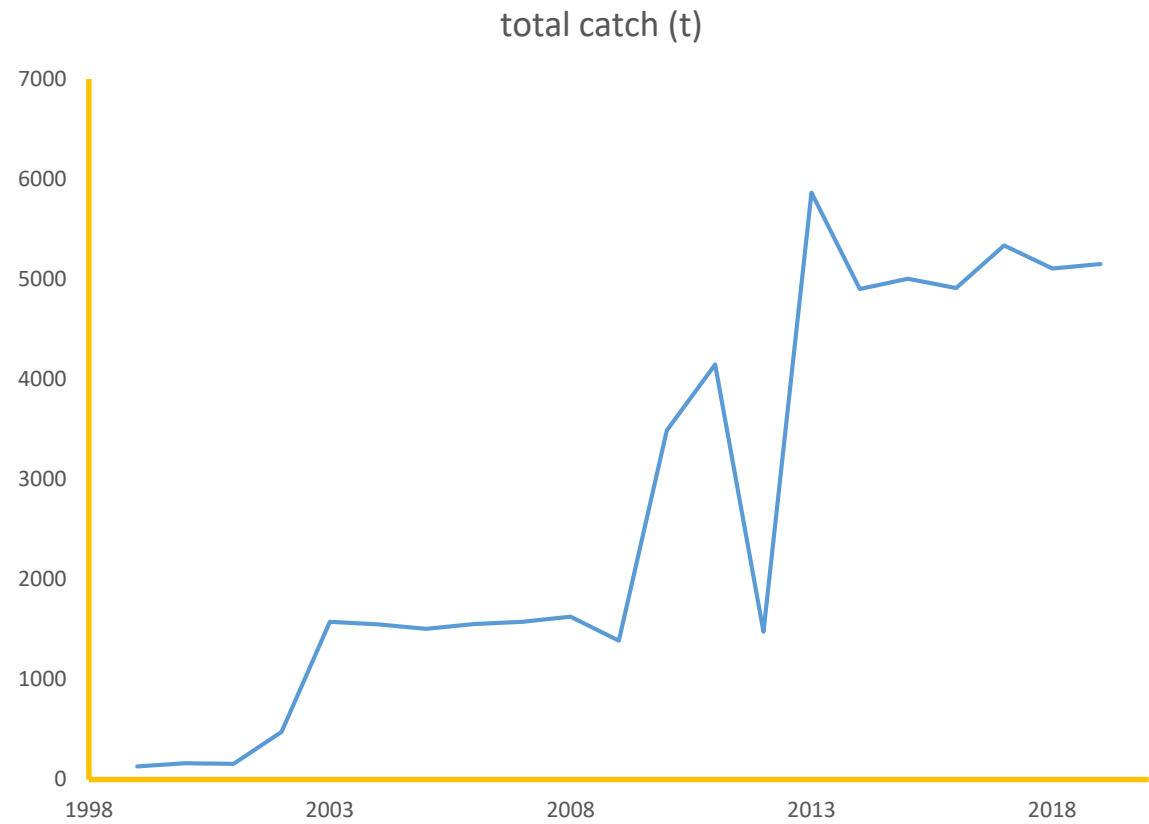
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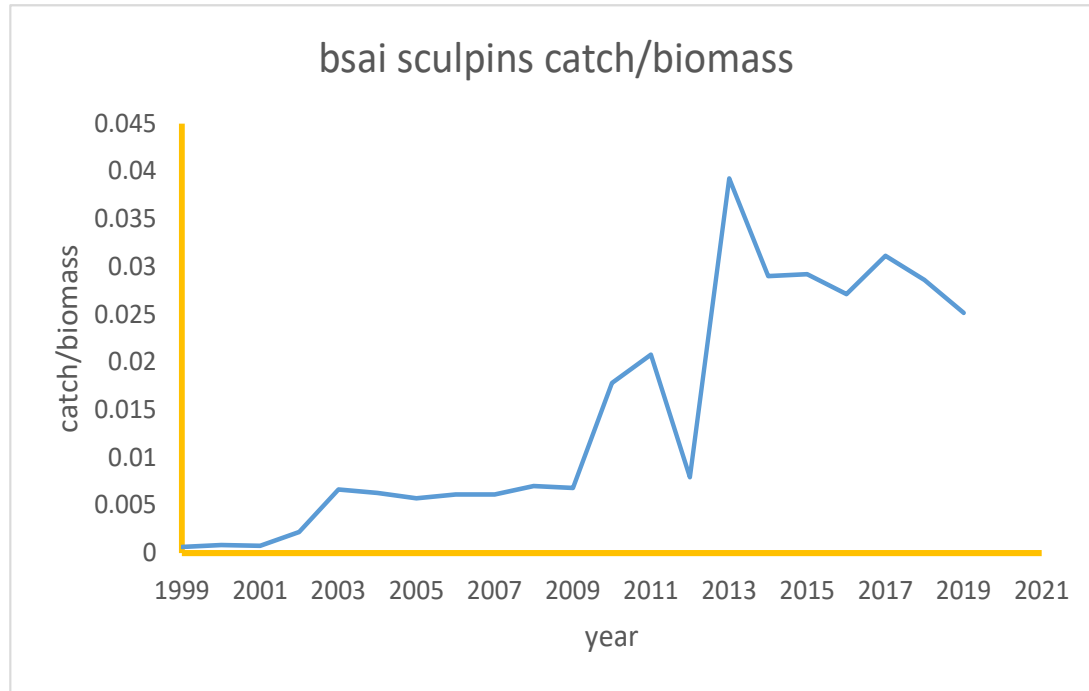
Alaska Fisheries Science Center
National Marine Fisheries Service

Shelf survey biomass estimates (t)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
bigmouth sculpin	20196	32477	31643	24080	27005	23576	29542	37766	39438	39910	35437
great sculpin	44899	49659	54177	40733	32185	44222	36000	53282	50668	54828	91875
plain sculpin	47322	55200	59306	53271	47273	69999	60641	53570	33962	37301	50402
warty sculpin	7952	6991	6472	6477	4040	7136	10436	16052	11305	7961	8795
yellow irish lord	23056	21518	20212	22155	7990	9218	28835	30743	32351	31627	41561
antlered sculpin	0	0	1	9	0	0	0	0	0	0	0
Arctic staghorn sculpin	0	0	0	0	0	0	0	0	0	0	0
armorhead sculpin	1859	1794	2102	907	909	554	1675	592	919	430	425
blackfin sculpin	0	0	0	0	0	0	0	0	0	0	0
butterfly sculpin	794	939	1948	2426	568	477	1512	1544	666	236	8
crested sculpin	5	0	0	0	0	0	0	0	0	0	0
darkfin sculpin	3	22	17	142	40	25	0	53	17	32	40
eyeshade sculpin	0	0	0	0	0	2	0	0	0	0	0
highbrow sculpin	0	0	0	0	0	0	0	0	0	0	0
hookhorn sculpin	8	17	45	9	7	3	4	3	2	3	0
purplegray sculpin	29	14	17	21	144	61	71	48	14	58	0
red Irish lord	106	0	0	85	0	0	0	0	11	0	28
ribbed sculpin	581	477	84	292	86	85	141	43	46	39	126
roughspine sculpin	64	77	56	19	12	146	52	33	45	51	45
sailfin sculpin	0	1	0	0	0	0	0	0	0	0	0
scissortail sculpin	77	9	0	0	0	0	44	0	2	0	0
spatulate sculpin	60	60	118	49	92	40	19	378	6	281	26
spectacled sculpin	224	503	648	156	269	529	675	817	446	159	219
spinyhead sculpin	1586	1277	1554	707	661	1155	963	558	882	585	855
thorny sculpin	1131	2384	1394	784	522	1177	1301	498	589	156	261
threaded sculpin	1166	1663	962	4990	1217	559	407	96	389	96	189

	total catch (t)
1999	130
2000	162
2001	157
2002	475
2003	1576
2004	1550
2005	1505
2006	1554
2007	1576
2008	1628
2009	1388
2010	3488
2011	4148
2012	1476
2013	5866
2014	4903
2015	5004
2016	4912
2017	5339
2018	5109
2019	5153





Quantity	As estimated or specified last year for:		As estimated or recommended this year for:	
	2018	2019	2019	2020
M (natural mortality rate)*	0.282	0.282	0.282	0.282
Tier	5	5	5	5
Biomass (t)	188,656	188,656	240,487	240,487
F _{OFL}	0.282	0.282	0.282	0.282
maxF _{ABC}	0.212	0.212	0.212	0.212
F _{ABC}	0.212	0.212	0.212	0.212
OFL (t)	53,201	53,201	67,817	67,817
maxABC (t)	39,995	39,995	50,863	50,863
ABC (t)	39,995	39,995	50,863	50,863
Status	As determined last year for:		As determined this year for:	
	2016	2017	2017	2018
Overfishing	No	n/a	No	n/a

Short management history for BSAI Sculpin complex

Year	OFL (t)	ABC (t)	TAC (t)	Catch (t)
2011	58,300	43,700	5,200	5,377
2012	58,300	43,700	5,200	5,798
2013	56,400	42,300	5,600	5,857
2014	56,400	42,300	5,600	4,878
2015	52,365	39,725	4,700	4,967
2016	52,365	39,725	4,500	4,892
2017	56,582	42,387	4,500	5,339
2018	53,201	39,995	5,000	5,109
2019	53,201	39,995	5,000	5153