

# **Partial assessment of the sculpin stock complex in the Gulf of Alaska**

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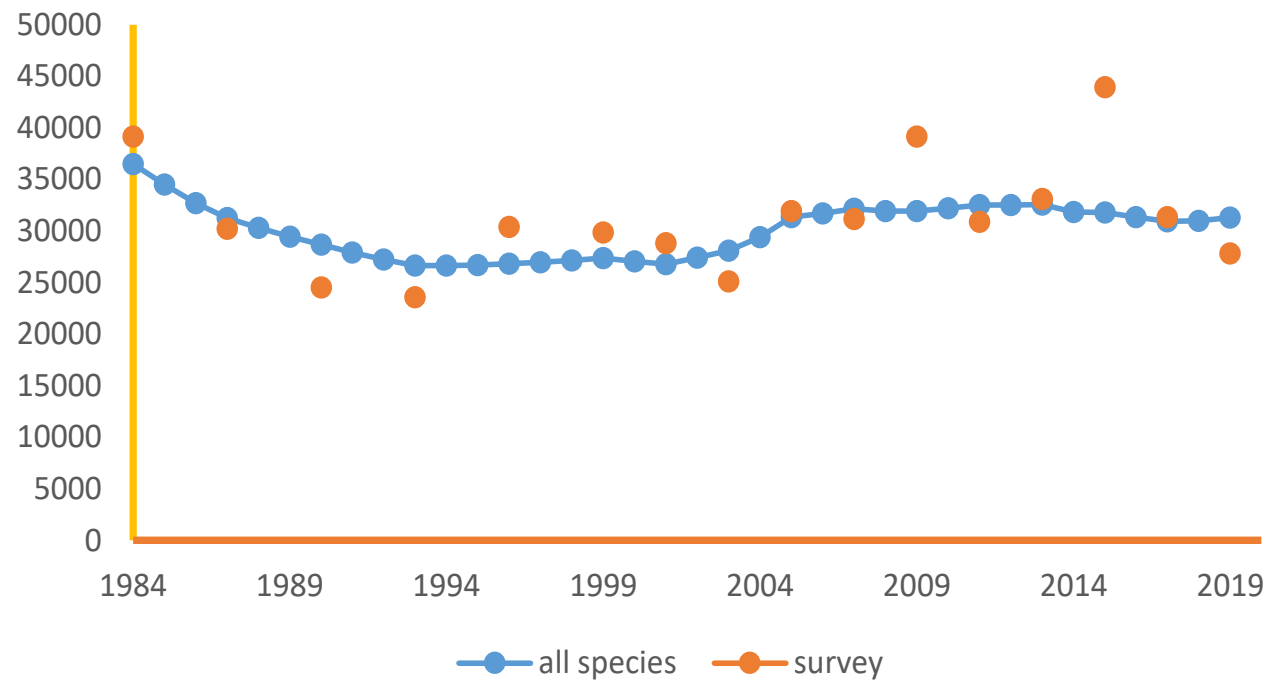
## Total catch (t)

Year	Sculpin complex
	total catch
1997	898
1998	526
1999	544
2000	940
2001	587
2002	919
2003	629
2004	701
2005	626
2006	583
2007	960
2008	1,925
2009	1,374
2010	911
2011	763
2012	795
2013	1,966
2014	1,187
2015	1,016
2016	1,330
2017	1318
2018	721
2019	563

# GOA survey biomass estimates

	plain	great	yellow irish lord	bigmouth	total
1984		8833	14439	15871	39142
1987	403	6007	13592	10196	30198
1990	433	3815	11701	8600	24550
1993	461	5846	11661	5612	23580
1996	1015	7326	17804	4246	30391
1999	1692	3913	20255	3983	29843
2001	932	3540	20900	3470	28842
2003	1220	6040	12100	5770	25130
2005	3913	6542	15943	5543	31940
2007	4550	7970	15500	3130	31150
2009	2562	8215	25219	3154	39150
2011	3160	8384	15771	3591	30906
2013	3036	6282	19841	3947	33107
2015	508	9128	29532	4783	43951
2017	451	7379	19060	4438	31328
2019	1658	5643	14964	5559	27825

random effects model fit to survey biomass (t)



	As estimated or specified last year for:		As estimated or recommended this year for:	
	2018	2019	2019	2020
<b>Quantity</b>				
<b>M (natural mortality rate)</b>	0.21	0.21	<b>0.21</b>	<b>0.21</b>
<b>Tier</b>	5	5	<b>5</b>	<b>5</b>
<b>Biomass (t)</b>	33,134	33,134	<b>33,010</b>	<b>33,010</b>
<b>F<sub>OFL</sub></b>	0.21	0.21	<b>0.21</b>	<b>0.21</b>
<b>maxF<sub>ABC</sub></b>	0.16	0.16	<b>0.16</b>	<b>0.16</b>
<b>F<sub>ABC</sub></b>	0.16	0.16	<b>0.16</b>	<b>0.16</b>
<b>OFL (t)</b>	6,958	6,958	<b>6,932</b>	<b>6,932</b>
<b>maxABC (t)</b>	5,301	5,301	<b>5,199</b>	<b>5,199</b>
<b>ABC (t)</b>	5,301	5,301	<b>5,199</b>	<b>5,199</b>
<b>Status</b>	As determined last year for:		As determined this year for:	
	2017	2018	2018	2019
<b>Overfishing</b>	No	n/a	No	n/a