

North Pacific Fishery Management Council Meeting
June 2018
Kodiak

C8 – Tanner Crab Observer/Effort in CGOA

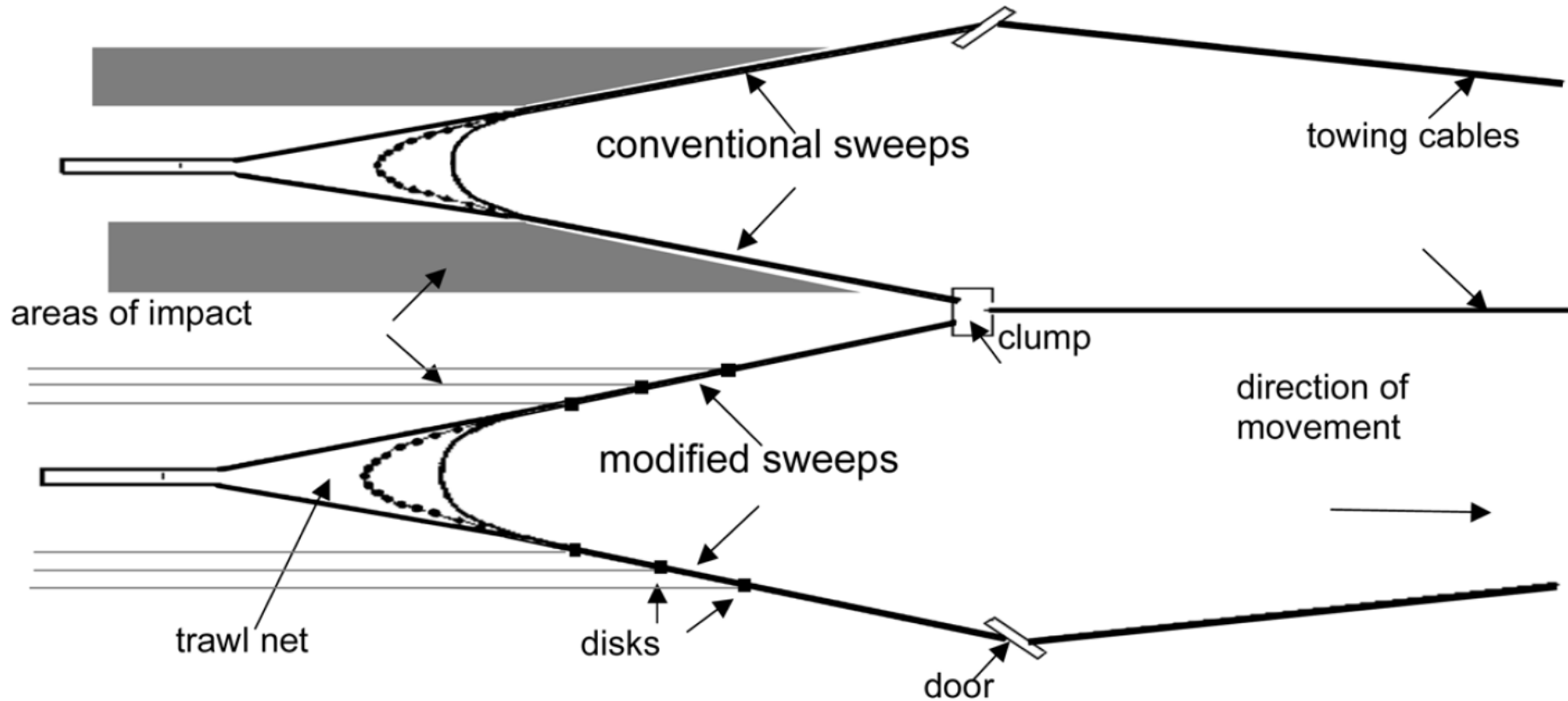
Outline

- Background
- Groundfish Effort in AOI
- Observer Coverage in AOI
- Summary/Conclusions

Background

- Am 89 to the GOA Groundfish FMP
- 2017 Discussion Paper
- 2017 Motion
 - Review the Arrowtooth / Shallow Water Flats / Rex Sole / Flathead Sole Non pelagic trawl (NPT) target fisheries and the pot cod fishing efforts in ADF&G statistical areas 525702, 525630 and the Chiniak Gully from 2006-2016. Provide a time series to understand if the fishing effort is increasing.
 - Evaluate observer coverage rates in the ADF&G statistical areas 525702, 525630 and the Chiniak Gully from 2006–2016. Break out NPT in the CV sector, the trawl CP sector, the trawl Rockfish Program and the pot cod fishery coverage rates in each area referenced above.

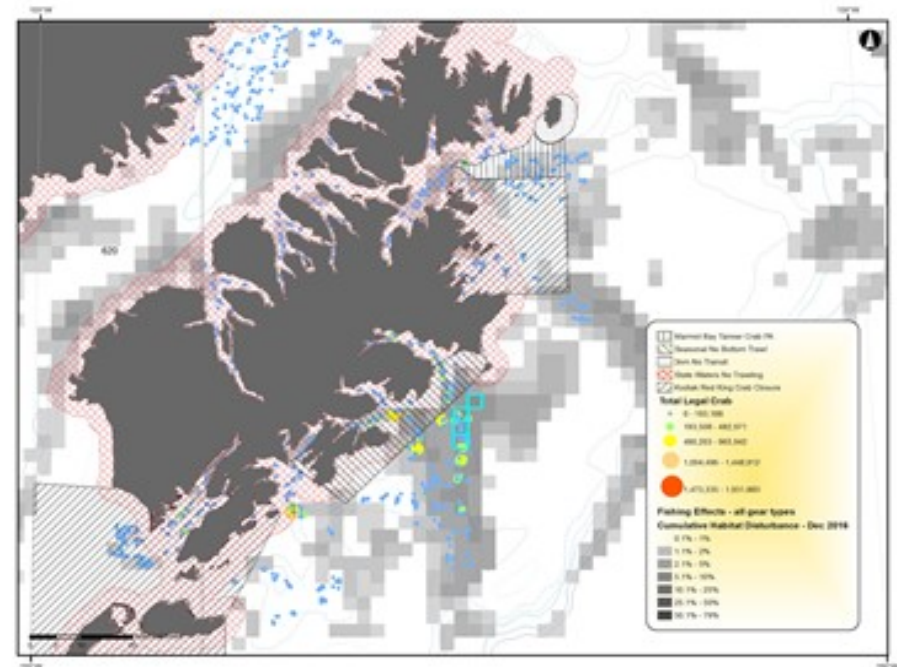
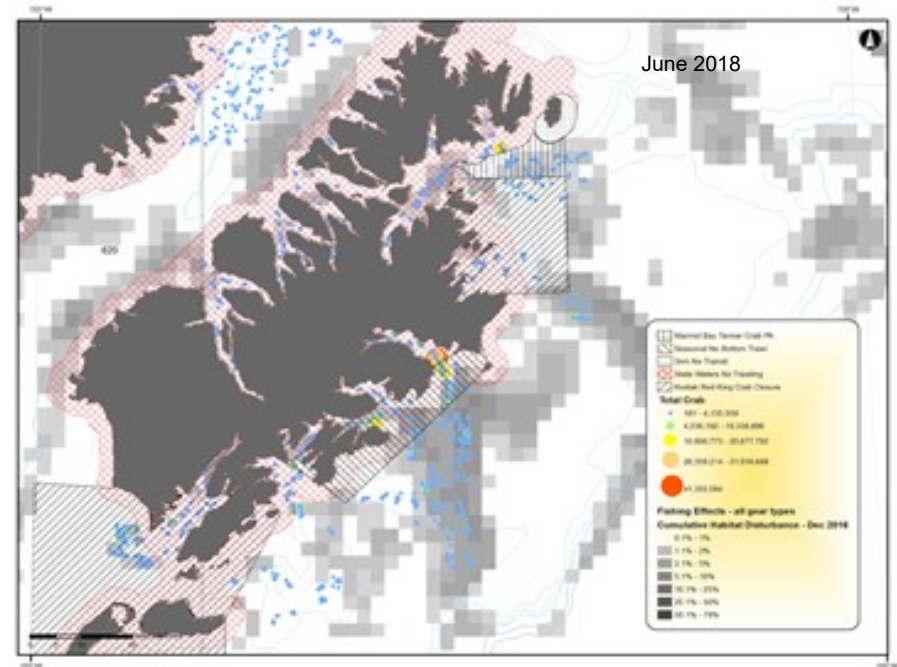
Sweep Modifications



Background

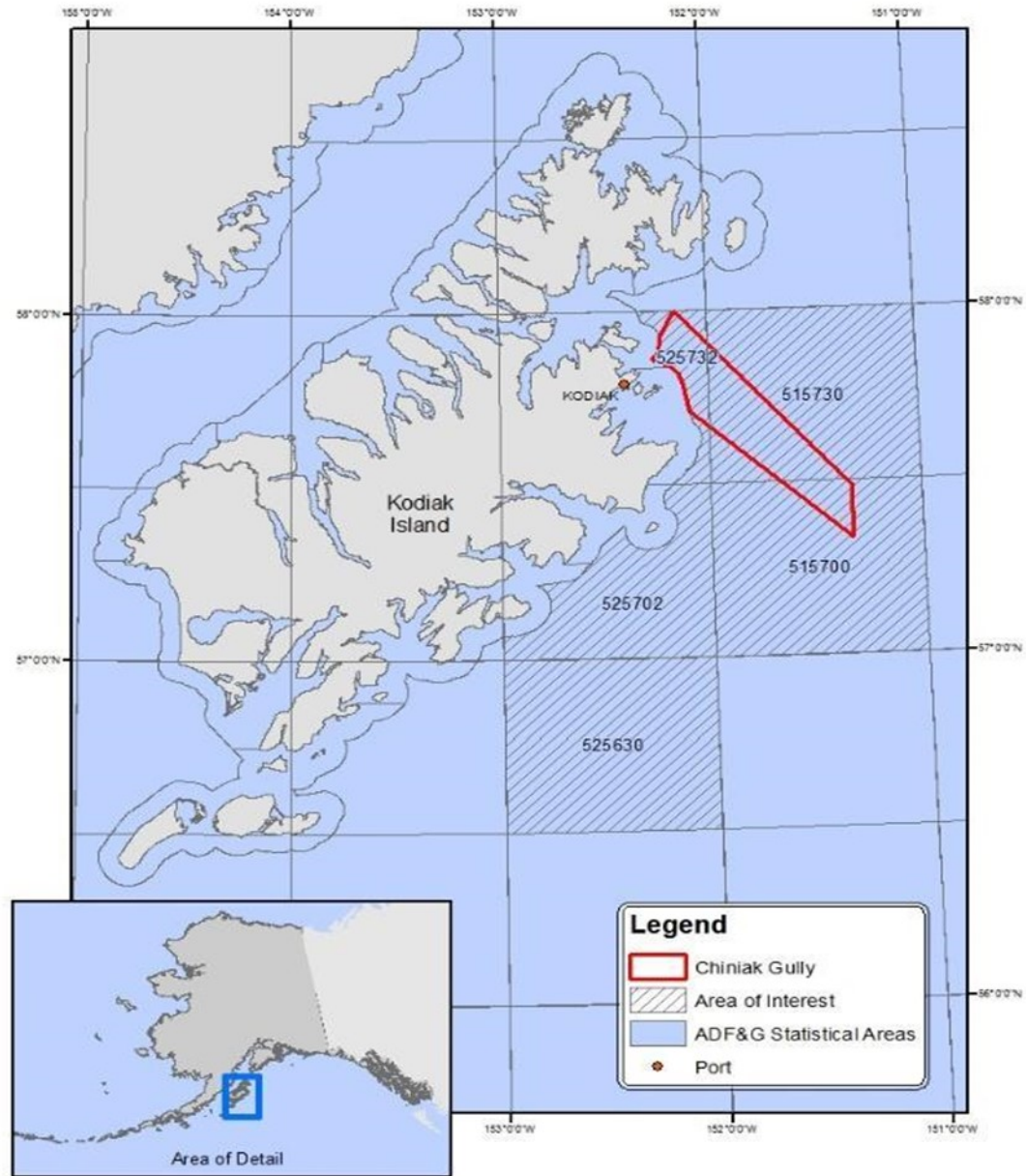
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Trawl Effort – Tanner Crab Overlap



Background

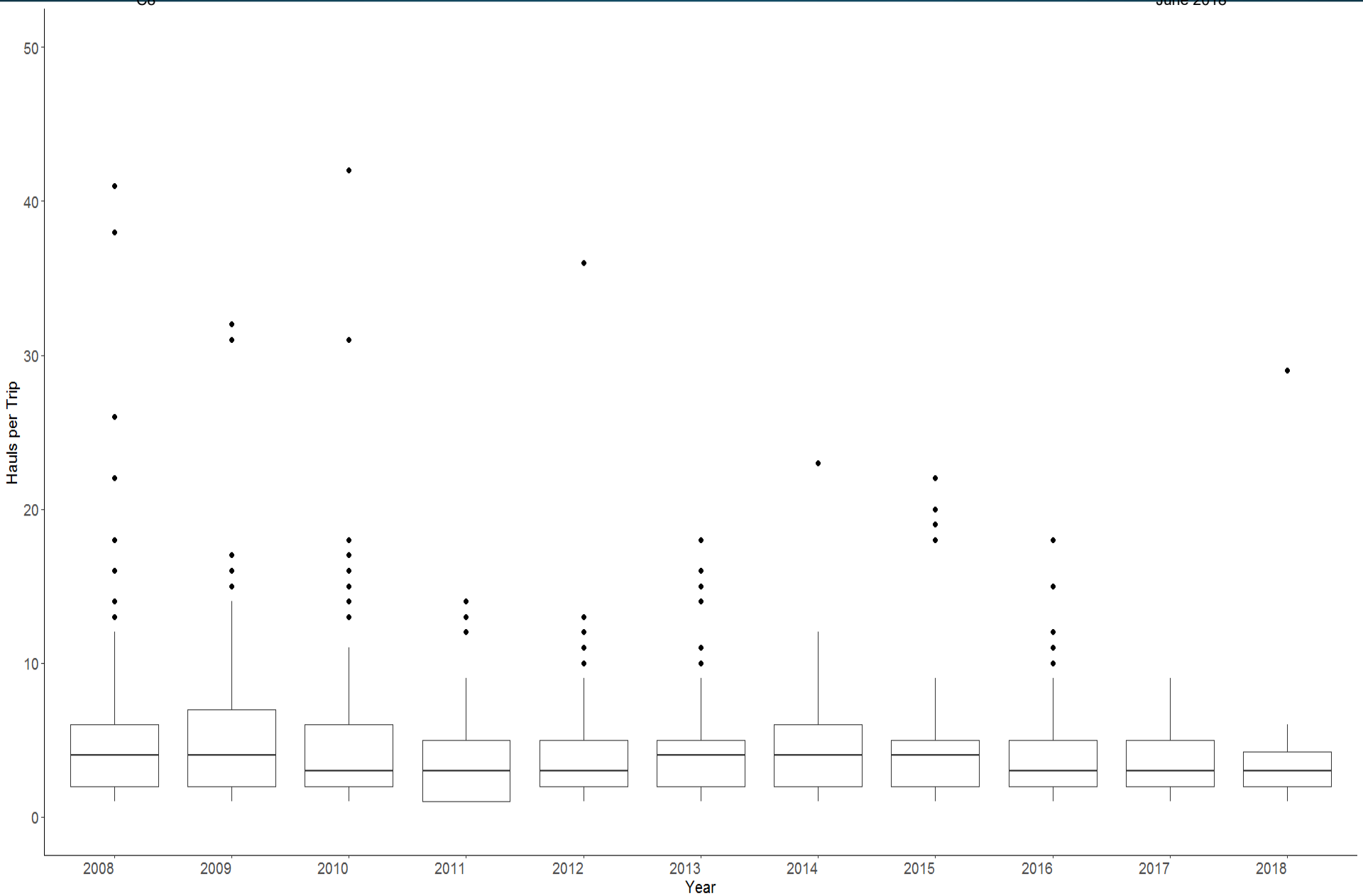
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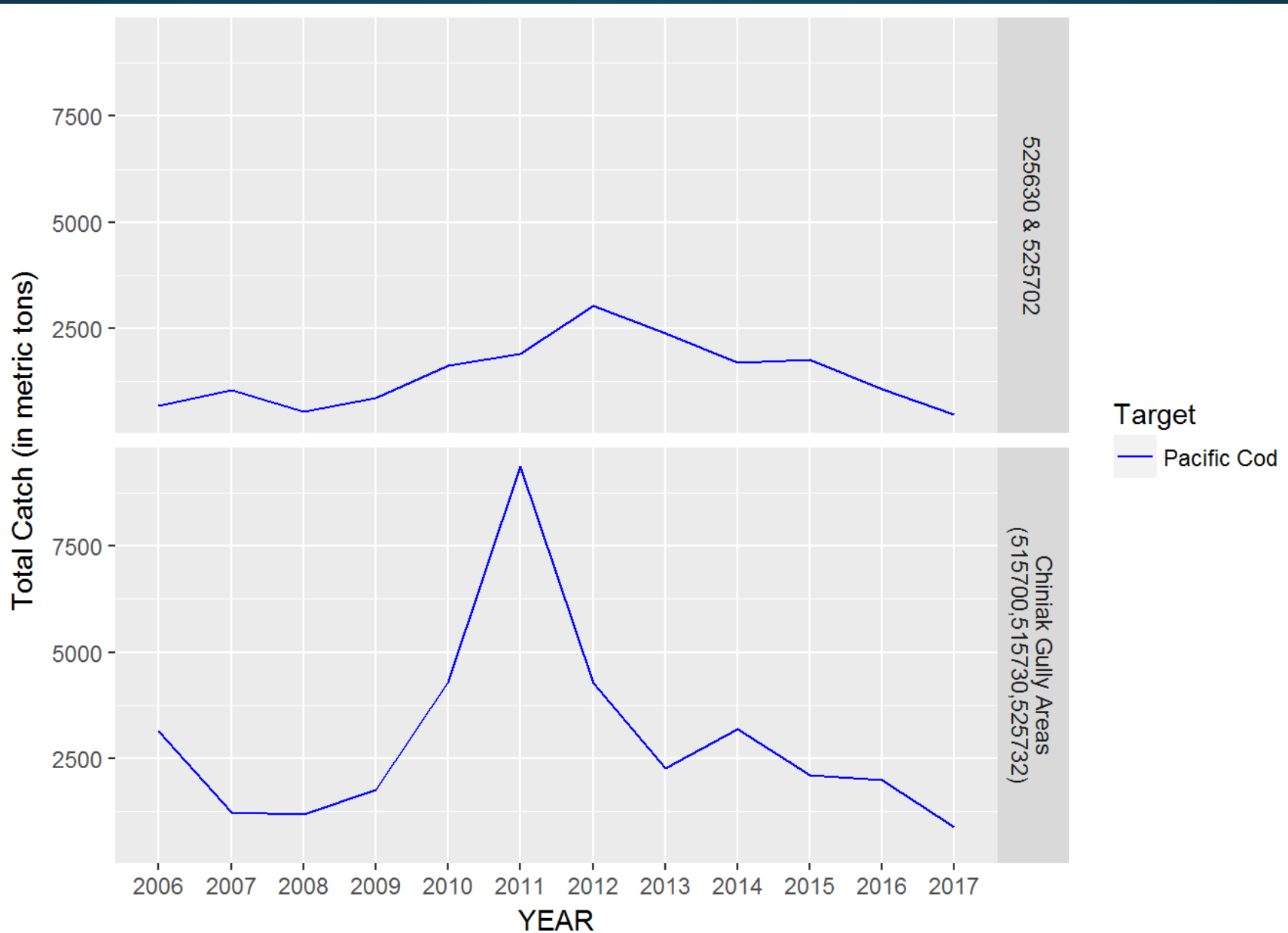
Year	^{c8} Northeast	Eastside	Southeast	Southwest	Westside	North Mainland	Kodiak District
2003	13,363,472	32,406,665	5,982,213	3,080,161	4,639,203	6,812,450	66,284,164
2004	16,518,733	24,883,473	12,162,505	3,612,221	1,862,027	10,297,226	69,336,185
2005	17,380,317	18,446,367	10,915,692	2,990,901	3,947,639	13,117,630	66,798,546
2006	21,825,756	68,127,135	32,925,645	15,235,534	9,334,218	16,632,058	164,080,346
2007	18,525,668	98,322,733	35,220,673	25,713,488	4,582,398	3,345,073	185,710,033
2008	21,040,150	50,577,476	10,651,945	23,227,580	8,397,115	4,712,180	118,606,446
2009	17,120,959	35,807,628	7,741,181	9,477,794	5,623,343	5,259,416	81,030,321
2010	14,530,442	27,870,920	13,624,521	10,456,321	3,448,153	5,439,809	75,370,166
2011	5,117,339	20,080,961	7,970,276	2,919,897	2,829,697	15,800,131	54,718,301
2012	9,970,194	12,629,005	8,573,538	3,228,498	4,212,734	5,433,472	44,047,441
2013	52,895,931	64,737,959	29,861,087	39,382,443	5,769,909	8,383,239	201,030,568
2014	18,959,208	45,978,679	22,903,125	15,298,456	4,023,534	3,723,269	110,886,271
2015	4,052,897	13,038,638	4,452,675	6,948,431	2,418,936	8,575,005	39,486,582
2016	3,755,531	25,527,085	7,605,809	4,138,564	4,005,178	12,717,601	57,749,768
2017	8,680,255	26,708,842	21,402,556	3,138,881	4,560,623	4,709,876	69,201,033

Year	c8	Northeast	Eastside	Southeast	Southwest	Westside	North Mainland	Kodiak District
2003		495,777	593,514	143,239	210,189	239,486	79,507	1,761,712
2004		1,018,239	1,452,887	311,351	1,341,858	187,762	85,402	4,397,499
2005		1,059,636	3,621,441	313,777	821,757	179,753	88,432	6,084,796
2006		242,624	2,680,581	305,893	727,392	329,622	177,417	4,463,529
2007		361,837	1,652,582	305,470	1,216,033	271,233	132,900	3,940,055
2008		315,285	1,119,393	153,204	381,686	263,184	146,447	2,379,199
2009		696,127	2,422,474	733,094	374,943	393,196	182,632	4,802,466
2010		805,717	4,670,212	1,595,485	1,215,191	293,211	86,702	8,666,518
2011		281,693	2,375,133	1,810,697	753,228	164,608	88,304	5,473,663
2012		209,087	2,655,144	909,934	562,267	138,422	286,775	4,761,629
2013		106,454	650,473	477,300	307,221	87,740	160,203	1,789,391
2014		140,348	290,233	1,226,755	126,530	105,649	73,091	1,962,606
2015		50,932	157,417	82,470	154,586	60,195	318,568	824,168
2016		55,482	489,469	184,372	87,439	64,969	92,144	973,875
2017		51,179	1,003,438	191,103	633,336	71,028	136,992	2,087,076

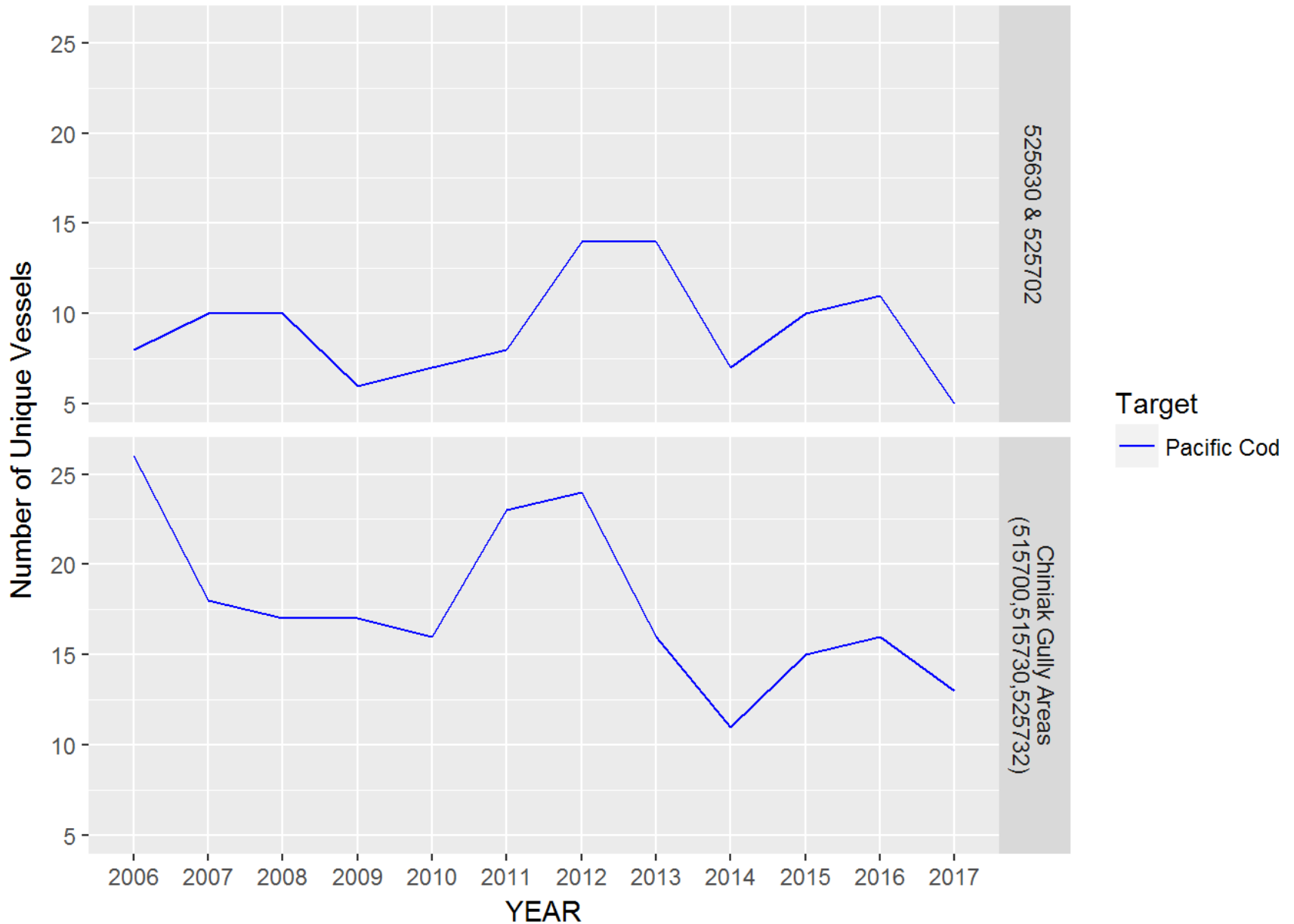
Year	NPT PSC		Pot Cod PSC		Kodiak District Crab Abundance Estimates (All Sizes)
	# Crab	% of Crab	# Crab	% of Crab	# Crab
2003	144,298	0.2%	13,036	0.0%	66,284,164
2004	62,569	0.1%	17,062	0.0%	69,336,185
2005	126,585	0.2%	116,083	0.2%	66,798,546
2006	231,571	0.1%	103,954	0.1%	164,080,346
2007	204,369	0.1%	304,761	0.2%	185,710,033
2008	136,100	0.1%	239,146	0.2%	118,606,446
2009	233,403	0.3%	34,336	0.0%	81,030,321
2010	94,122	0.1%	168,936	0.2%	75,370,166
2011	102,620	0.2%	21,237	0.0%	54,718,301
2012	85,999	0.2%	167,405	0.4%	44,047,441
2013	253,555	0.1%	568,561	0.3%	201,030,568
2014*	64,473	0.1%	133,201	0.1%	110,886,271
2015	75,824	0.2%	127,682	0.3%	39,486,582
2016	92,449	0.2%	62,744	0.1%	57,749,768
2017	124,734	0.2%	4,079	0.0%	69,201,033



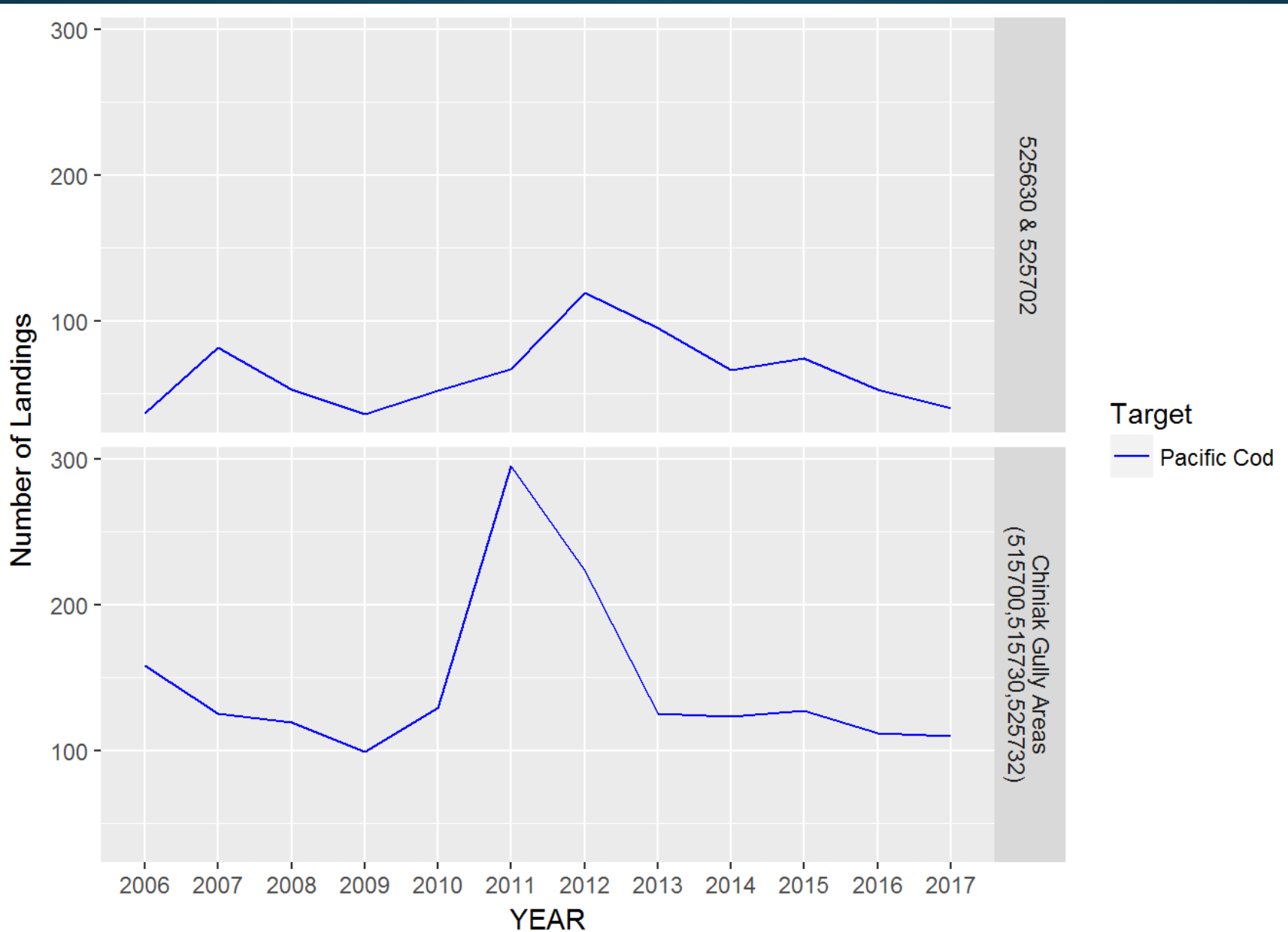
C8 Pot Cod Effort



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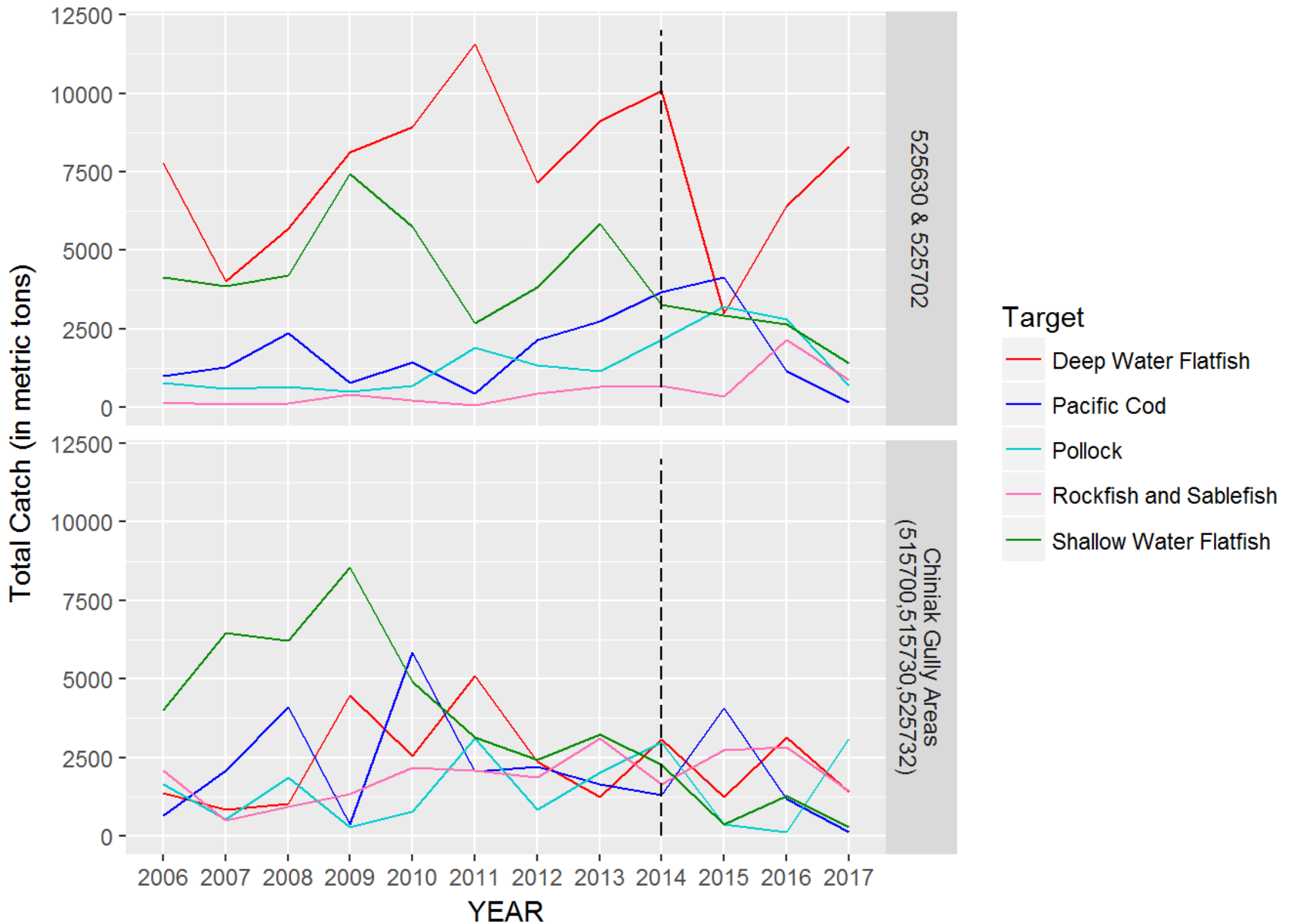


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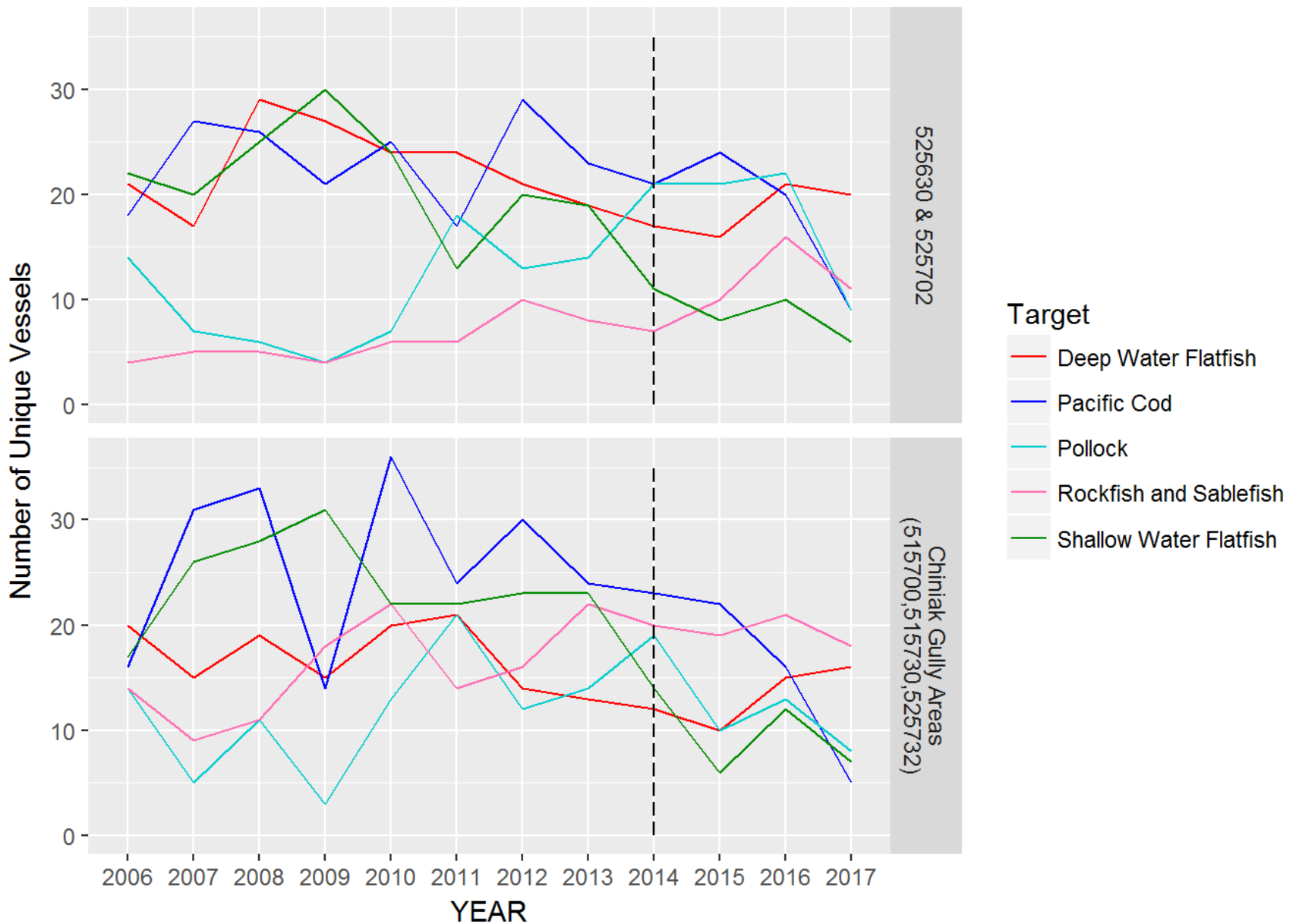


C8 NPT Effort

June 2018

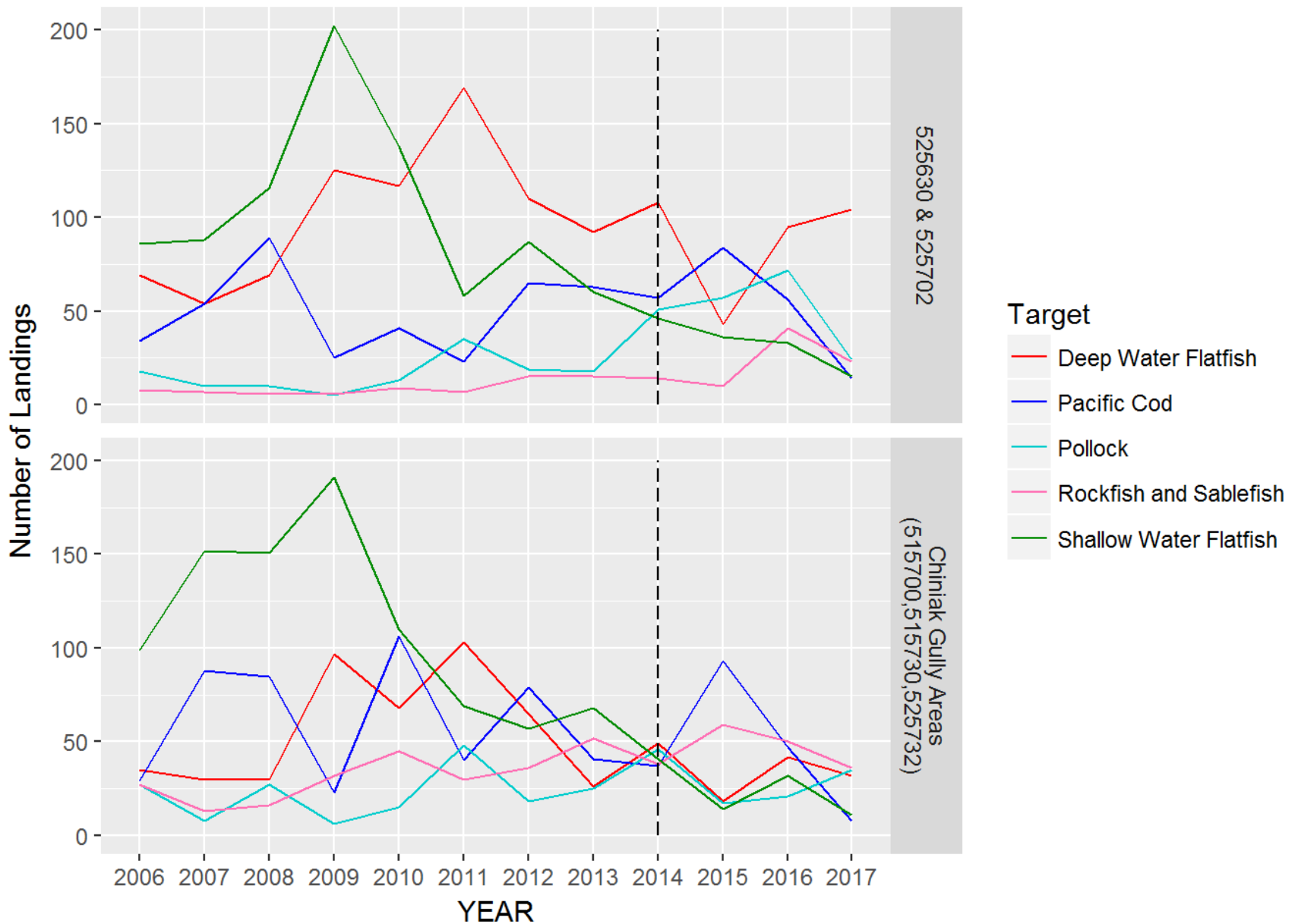


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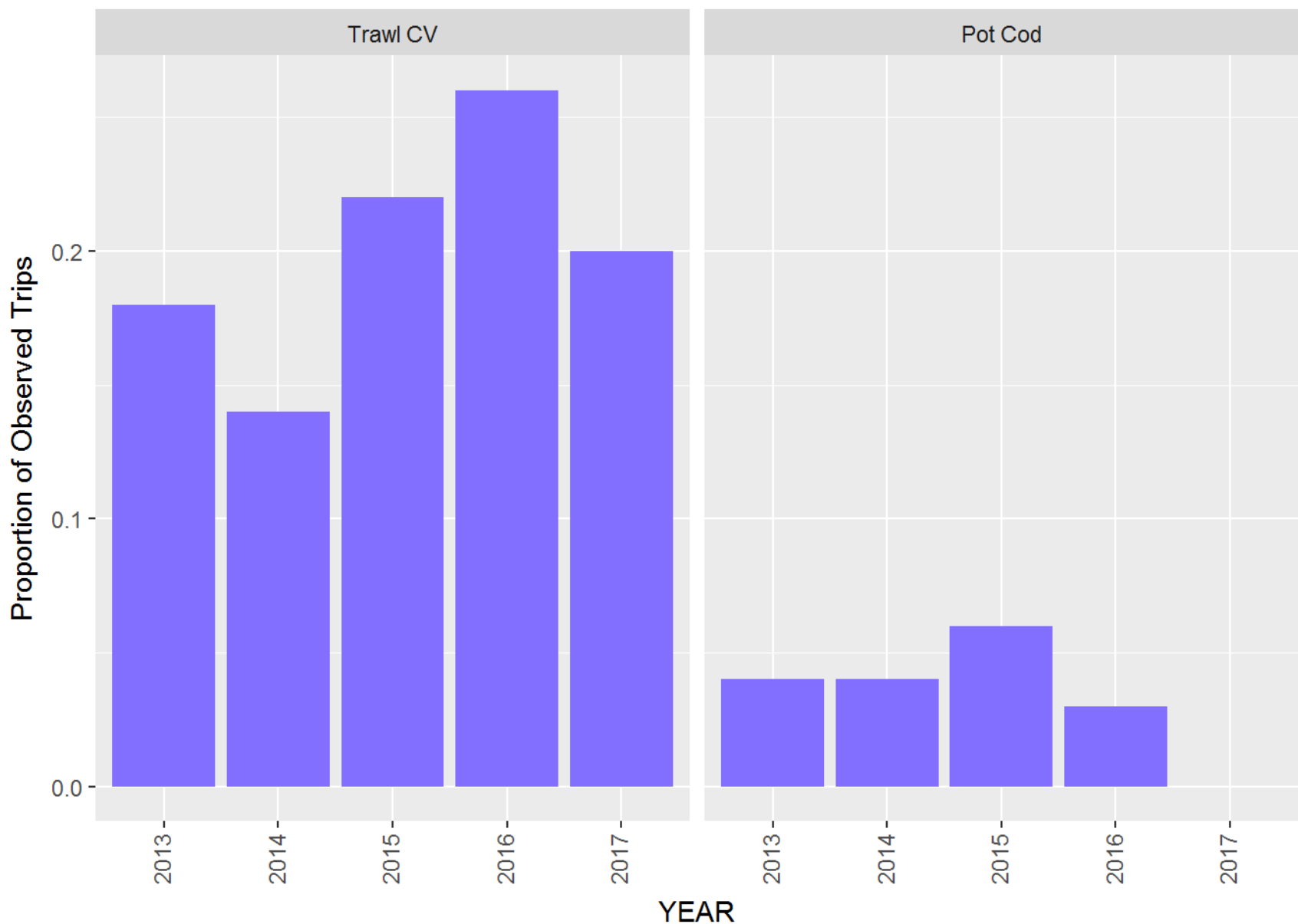


C8 NPT Effort

June 2018



C8 Observer Coverage



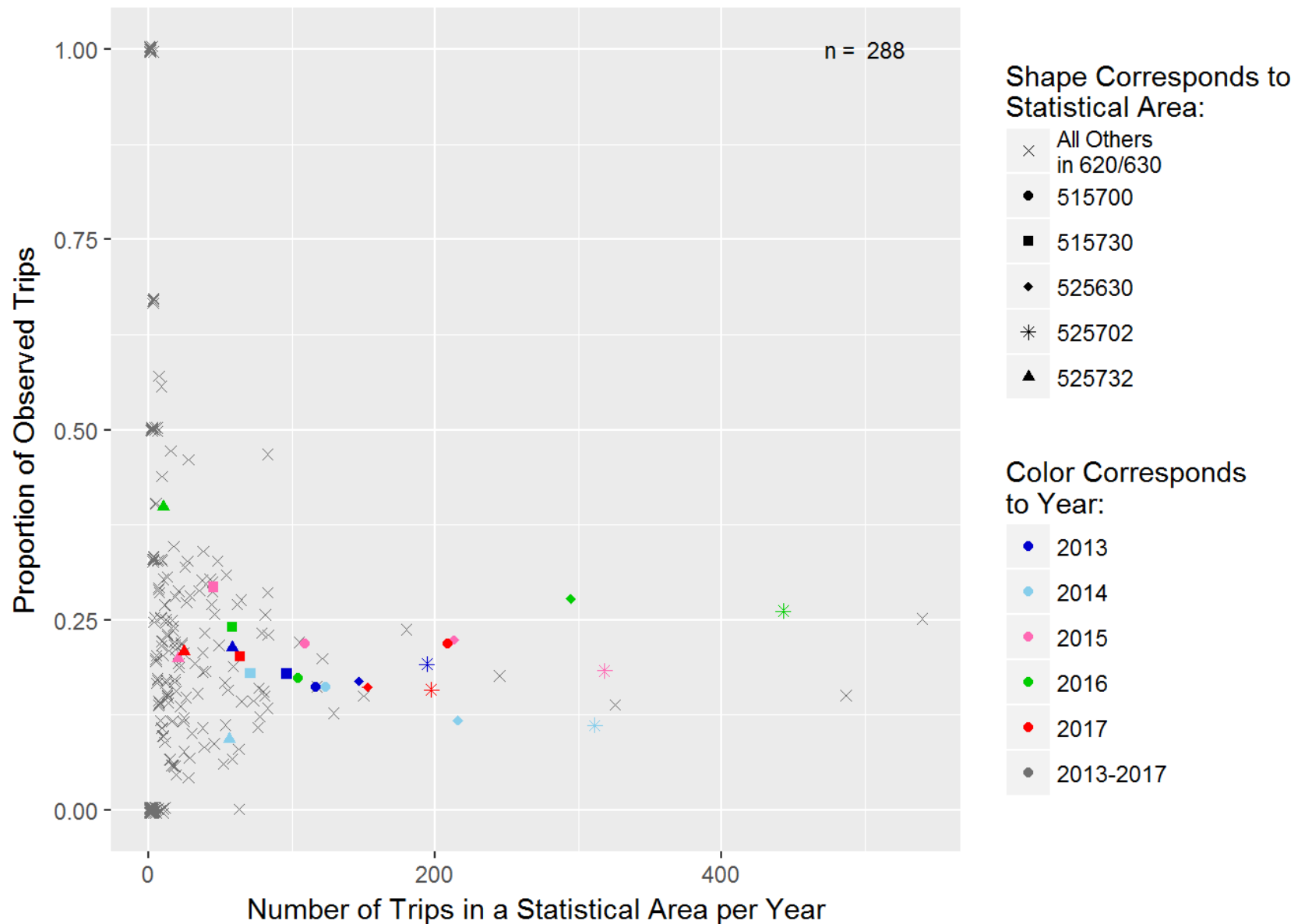
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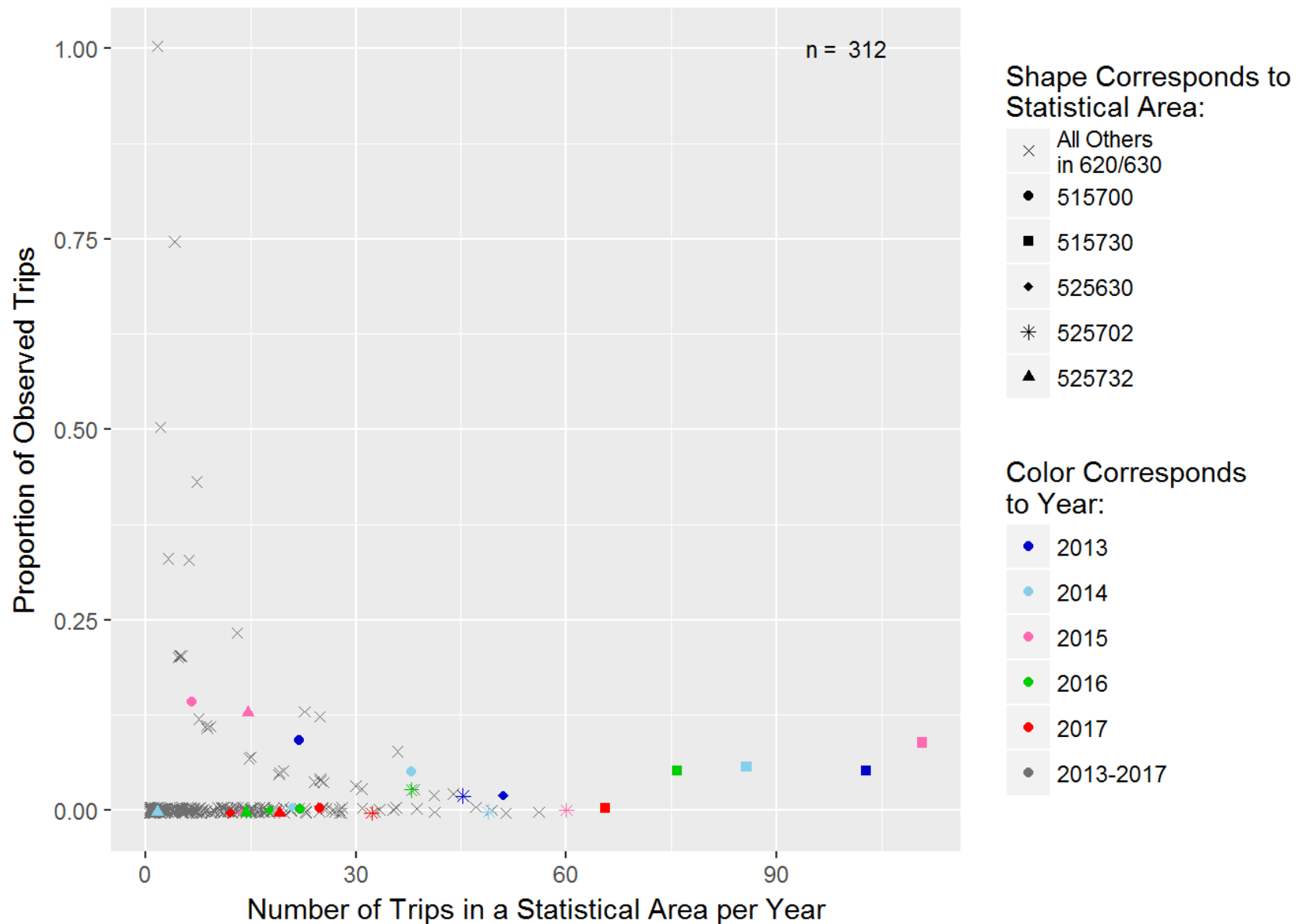
Table 6. The Proportion of Observed Trips by Category and Year, 2013-2017, in ADF&G statistical areas: 525630, 525702, and Chiniak Gully Areas (515700, 515730, and 525732)

Year	Number of Vessels	Number of Trips		Proportion of Trips Observed
		Observed	Total	
Trawl Catcher Vessels				
2013	42	88	492	0.18
2014	47	86	633	0.14
2015	41	132	596	0.22
2016	44	201	764	0.26
2017	43	111	564	0.20
Pacific Cod Pot Fishery				
2013	23	8	212	0.04
2014	15	7	183	0.04
2015	22	12	200	0.06
2016	23	5	162	0.03
2017	17	0	148	0.00

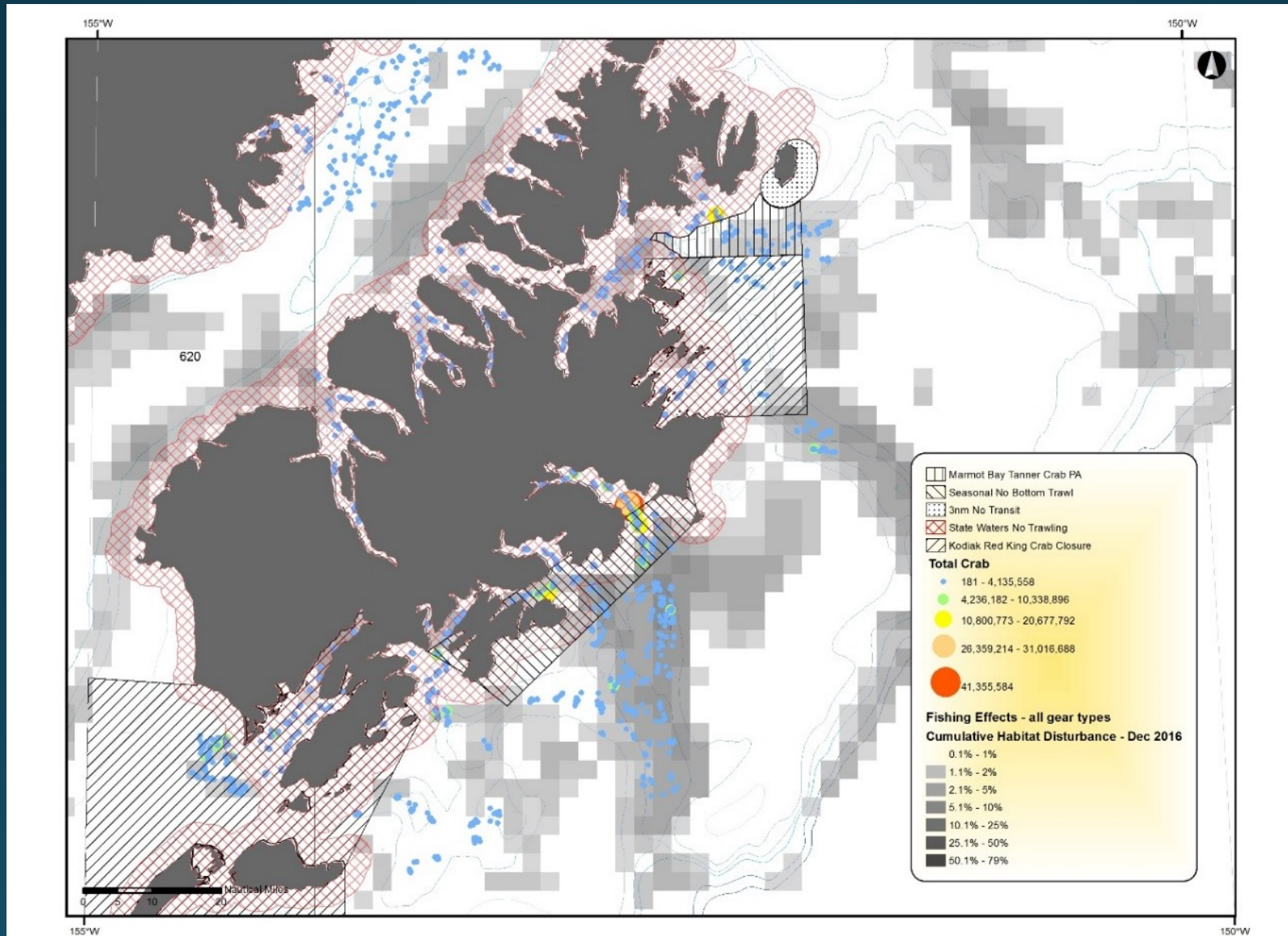
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Tanner crab and gear activity (all sizes)



Summary / Conclusions

- Overall trends, best characterized in Table A-1 in the Appendix, actually appear to show decreases in effort. An exception may have occurred in deepwater flatfish effort which appeared to increase in 2016 and 2017. The number of vessels was stable during this period, but catch and number of landings increased. This NPT target, which includes arrowtooth flounder, is associated with the largest Tanner crab PSC totals among NPT CV fisheries in the CGOA.
- Realized coverage rates are consistent with those established in the Observer Program Annual Deployment Plans for the years considered here. The ADP set NPT coverage at 14% in 2013, 16% in 2014, and 28% for 2016. Since gear specific deployment began in 2016, realized observer coverage rates in the area of interest in the trawl fishery have been within 2% of trawl deployment rates.

Arrowtooth Effort

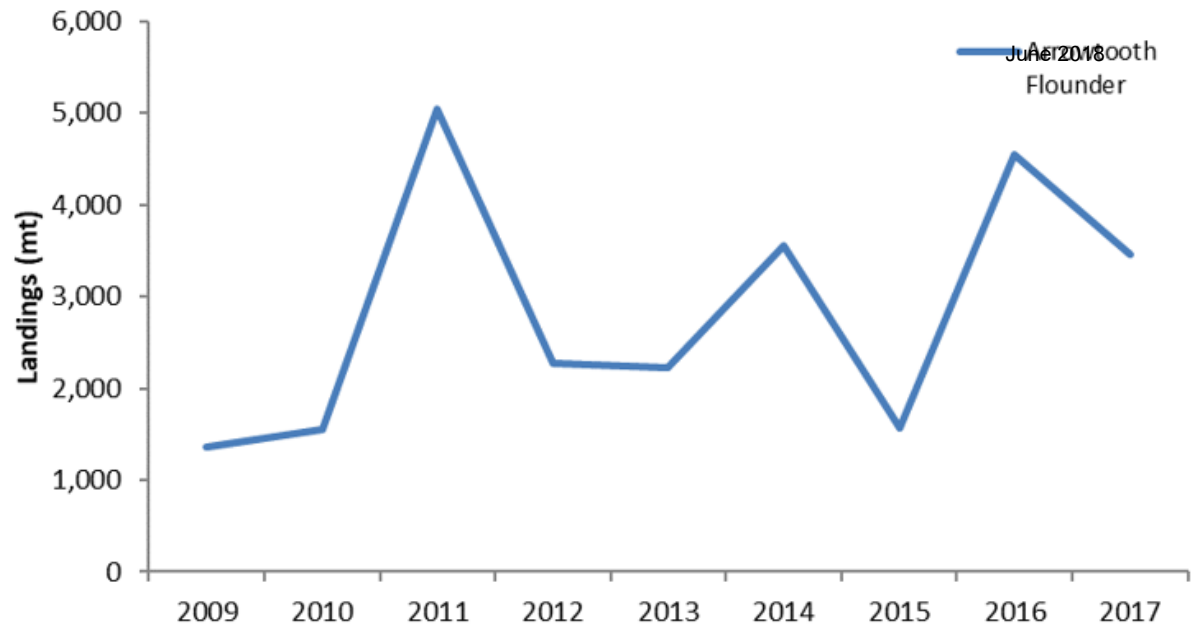
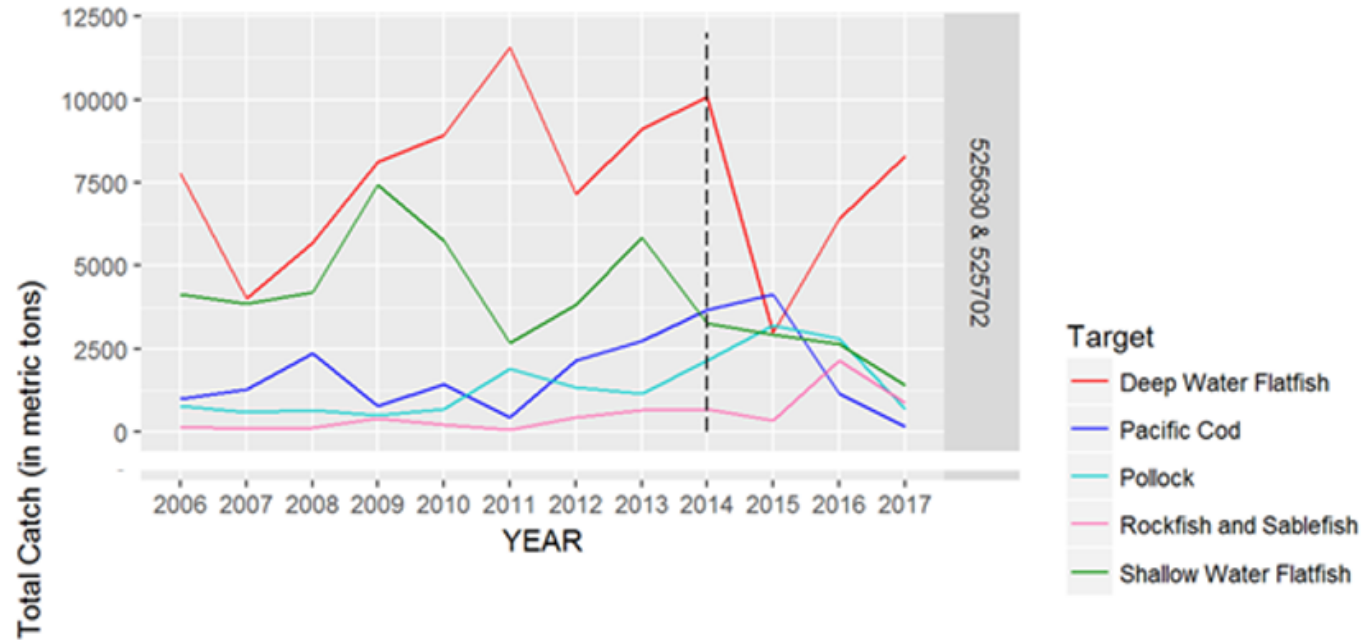
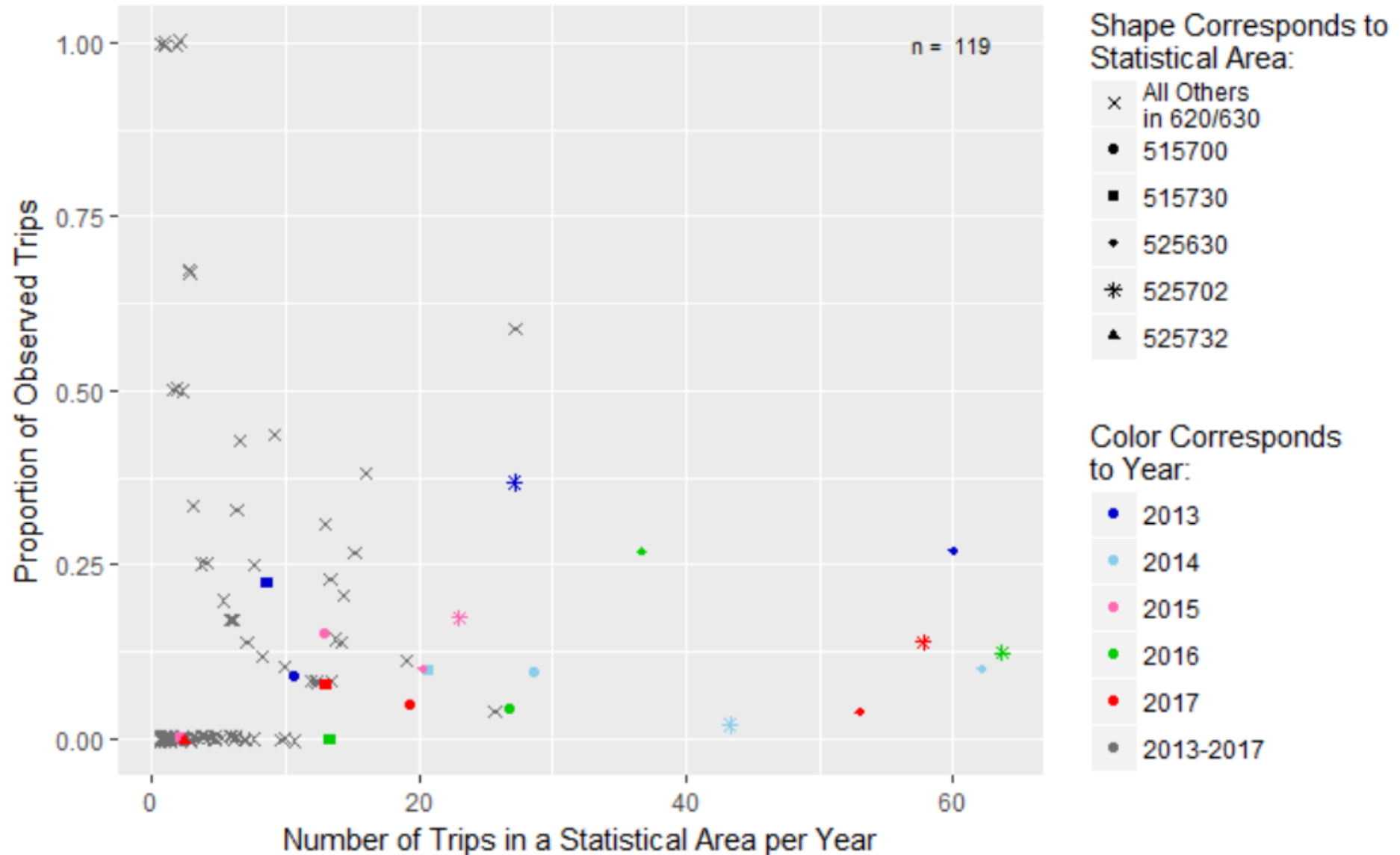


Figure S-1. Arrowtooth flounder catch in statistical area 525702 from 2009-2017.



Arrowtooth Observer Coverage



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