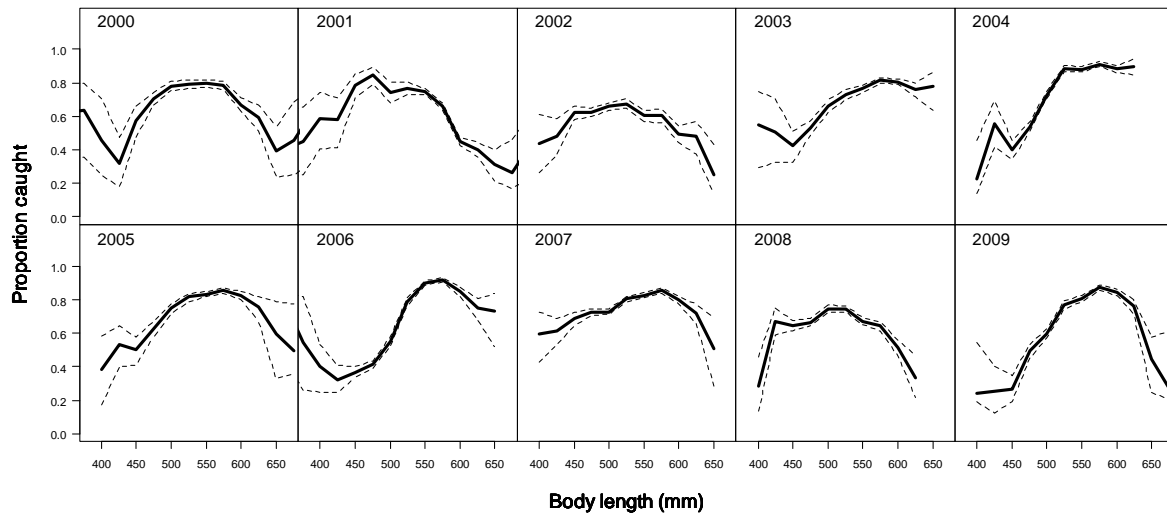


Kendall, N. W. and Quinn, T. P. 2013. Size-selective fishing affects sex ratios and the opportunity for sexual selection in Alaskan sockeye salmon *Oncorhynchus nerka*. – Oikos 122: 411–420.

## Appendix A1

## Supplementary material Appendix 1

**Figure A1.** Proportion of sockeye salmon of different lengths caught by the Nushagak District fishery of Bristol Bay, Alaska in 2000 through 2009 (updated from Kendall et al. 2009). The dashed lines represent the 95% confidence intervals of the proportion of fish caught by length.



**Table A1.** P-values from ANOVAs and Tukey HSD post-hoc tests comparing sex ratios, body length, and sexual size dimorphism (SSD) among pairs of the 13 Wood River system sockeye salmon populations. P-values less than 0.05 are highlighted in grey.

Population pair	Sex ratio		Length (mm)		SSD (mm)	
	Difference	p-value	Difference	p-value	Difference (mm)	p-value
Bear-A	0.09	0.011	51.4	<0.001	18.0	0.376
Bear-C	0.08	0.082	-46.9	<0.001	-16.0	0.566
Bear-Eagle	0.04	0.831	-75.3	<0.001	-29.3	0.007
Bear-Fenno	0.09	0.036	-36.0	<0.001	-0.8	1
Bear-Hansen	0.04	0.920	-54.3	<0.001	-17.3	0.228
Bear-Hidden Lake	0.08	0.062	-42.7	<0.001	-17.9	0.900
Bear-Ice	0.01	1	5.7	0.626	4.0	1
Bear-Lynx	0.09	0.012	-47.3	<0.001	-28.0	0.051
Bear-Mission	0.03	0.995	-76.2	<0.001	-28.2	0.049
Bear-Pick	0.02	0.999	-8.0	0.150	4.8	1
Bear-Yako	0.01	1	-26.1	<0.001	-3.4	1
C-A	0.02	1	4.6	0.795	2.0	1
C-Lynx	0.02	1	-0.4	1	-12.0	0.978
Eagle-A	0.05	0.697	-23.8	<0.001	-11.2	0.969
Eagle-C	0.03	0.973	-28.4	<0.001	-13.3	0.902
Eagle-Fenno	0.04	0.895	39.3	<0.001	28.4	0.056
Eagle-Hidden Lake	0.04	0.954	32.5	<0.001	11.4	0.998
Eagle-Lynx	0.05	0.706	28.0	<0.001	1.2	1
Fenno-A	0.01	1	15.5	<0.001	17.2	0.694
Fenno-C	-0.01	1	10.9	0.016	15.2	0.837
Fenno-Lynx	0.01	1	-11.3	0.287	-27.2	0.172
Hansen-A	0.06	0.550	-2.8	0.970	0.7	1
Hansen-C	0.04	0.926	-7.4	0.020	-1.3	1
Hansen-Eagle	0.01	1	21.0	<0.001	12.0	0.897
Hansen-Fenno	0.05	0.793	-18.3	<0.001	-16.5	0.613
Hansen-Hidden Lake	0.04	0.888	11.5	0.304	-0.6	1
Hansen-Lynx	0.05	0.560	7.0	0.798	-10.7	0.982
Hansen-Mission	-0.01	1	-21.9	<0.001	-10.9	0.980
Happy-A	0.11	0.001	52.3	<0.001	22.2	0.237
Happy-Bear	0.02	1	0.8	1	4.1	1
Happy-C	0.10	0.008	47.7	<0.001	20.2	0.377
Happy-Eagle	0.06	0.321	76.1	<0.001	33.4	0.005
Happy-Fenno	0.10	0.003	36.8	<0.001	5.0	1
Happy-Hansen	0.06	0.455	55.1	<0.001	21.5	0.147
Happy-Hidden Lake	0.10	0.005	-43.5	<0.001	-22.0	0.759
Happy-Ice	0.03	0.997	4.9	0.921	-0.1	1

Happy-Lynx	0.11	0.001	-48.1	<0.001	-32.2	0.031
Happy-Mission	0.05	0.785	-77.0	<0.001	-32.3	0.030
Happy-Pick	0.04	0.884	-8.9	0.172	0.6	1
Happy-Yako	0.03	0.983	-26.9	<0.001	-7.6	0.997
Hidden Lake-A	0.01	1	8.7	0.796	0.1	1
Hidden Lake-C	0.00	1	4.2	1	-1.9	1
Hidden Lake-Fenno	0.00	1	-6.8	0.978	-17.1	0.957
Hidden Lake-Lynx	0.01	1	-4.5	1	-10.2	1
Ice-A	0.09	0.028	57.2	<0.001	22.0	0.312
Ice-C	0.07	0.163	52.6	<0.001	20.0	0.463
Ice-Eagle	0.04	0.942	81.0	<0.001	33.3	0.010
Ice-Fenno	0.08	0.079	41.7	<0.001	4.8	1
Ice-Hansen	0.03	0.981	60.0	<0.001	21.3	0.221
Ice-Hidden Lake	0.07	0.128	48.4	<0.001	21.9	0.794
Ice-Lynx	0.09	0.029	-53.0	<0.001	-32.1	0.048
Ice-Mission	0.02	1	-81.9	<0.001	-32.2	0.045
Ice-Pick	0.02	1	-13.8	0.007	0.8	1
Ice-Yako	0.01	1	-31.8	<0.001	-7.4	0.999
Lynx-A	0.00	1	4.2	0.998	-10.0	0.995
Mission-A	0.07	0.244	-24.7	<0.001	-10.2	0.995
Mission-C	0.05	0.672	-29.3	<0.001	-12.2	0.976
Mission-Eagle	0.02	1	-0.9	1	1.1	1
Mission-Fenno	0.06	0.464	-40.2	<0.001	-27.4	0.166
Mission-Hidden Lake	0.05	0.599	-33.4	<0.001	-10.3	1
Mission-Lynx	0.07	0.251	-28.9	<0.001	-0.2	1
Pick-A	0.07	0.160	43.4	<0.001	22.8	0.263
Pick-C	0.06	0.534	38.8	<0.001	20.8	0.402
Pick-Eagle	0.02	1	67.2	<0.001	34.1	0.008
Pick-Fenno	0.06	0.337	27.9	<0.001	5.6	1
Pick-Hansen	0.02	1	46.2	<0.001	22.1	0.178
Pick-Hidden Lake	0.06	0.461	34.7	<0.001	22.7	0.754
Pick-Lynx	0.07	0.165	39.2	<0.001	32.8	0.038
Pick-Mission	0.00	1	68.1	<0.001	33.0	0.036
Yako-A	0.08	0.059	25.3	<0.001	14.6	0.700
Yako-C	0.07	0.280	20.8	<0.001	12.6	0.861
Yako-Eagle	0.03	0.985	49.1	<0.001	25.9	0.030
Yako-Fenno	0.07	0.149	9.8	0.017	-2.6	1
Yako-Hansen	0.03	0.997	28.1	<0.001	13.9	0.564
Yako-Hidden Lake	0.07	0.227	16.6	0.012	14.5	0.978
Yako-Lynx	0.08	0.061	21.1	<0.001	24.6	0.145
Yako-Mission	0.01	1	50.0	<0.001	24.8	0.139
Yako-Pick	0.01	1	-18.1	<0.001	-8.2	0.997

## **References**

Kendall, N. W. et al. 2009. Quantifying six decades of fishery selection for size and age at maturity in sockeye salmon. - *Evolutionary Applications* 2: 523-536.