Data: Abundance, Age, Sex, and Size of Sockeye Salmon Catches and Escapements in Southeast Alaska in 1989

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DATA: ABUNDANCE, AGE, SEX, AND SIZE OF SOCKEYE SALMON CATCHES AND ESCAPEMENTS IN SOUTHEAST ALASKA IN 1989

by

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and

Scott A. McPherson

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TABLE OF CONTENTS

	Page
INTRODUCTION	1
STUDY AREA AND DESCRIPTION OF FISHERIES	1
SOCKEYE SALMON LIFE HISTORY	2
METHODS	3
Abundance Data	3
Catch	3
Escapement	3
Age, Sex, and Size Data	3
Scales	3
Sex Determination	4
Length Measurement	4
Catch Sampling	4
Escapement Sampling	5
Age and Sex Composition	5
Length Composition	6
Migratory Timing	6
RESULTS	7
LITERATURE CITED	8
FIGURES	11
APPENDICES	13

LIST OF FIGURES

Figure | Page

1. Average annual decade sockeye catch in Southeast Alaska, 1880-1989 11

2. Map of Southeast Alaska showing the statistical fishing districts 12

LIST OF APPENDICES

Appendix — Page

APPENDIX A: STATISTICAL WEEK AND SAMPLE SIZE INFORMATION

A.1 - Statistical weeks and inclusive dates used to report catches, 1989 15

A.2 - Sample size needed to describe the age composition of a two-, three-, four-, five-, six-, or seven-age-class population of increasing size with an accuracy of ±5% and a precision of 010 15

APPENDIX B: COMMERCIAL GILL NET CATCHES

B.1 - Age composition of sockeye salmon in the District 101 gill net catch by sex, age class, and fishing period, 1989 16

B.2 - Test for significant changes among periods in the age composition of sockeye salmon in the District 101 gill net catch by age class, 1989 20

B.3 - Length composition of sockeye salmon in the District 101 gill net catch by sex, age class, and fishing period, 1989 21

B.4 - Test for significant changes among periods in the length composition of sockeye salmon in the District 101 gill net catch by age class, 1989 24

B.5 - Age composition of sockeye salmon in the District 101 Metlakatla gillnet catch by sex, age class, and fishing period, 1989 25

B.6 - Test for significant changes among periods in the age composition ofsockeye salmon in the District 101 Metlakatla gill net catch by ageclass, 1989 27

B.7 - Length composition of sockeye salmon in the District 101 Metlakatla gillnet catch by sex, age class, and fishing period, 1989 28

B.8 - Test for significant changes among periods in the length composition ofsockeye salmon in the District 101 Metlakatla gill net catch by age class, 1989 29

B.9 - Age composition of sockeye salmon in the District 106-30 (upper Clarence Strait) gill net catch by sex, age class, and fishing period, 1989 30

B.10 - Test for significant changes among periods in the age composition of sockeye salmon in the District 106-30 (upper Clarence Strait) gill net catch by age class, 1989 34

B.11 - Length composition of sockeye salmon in the District 106-30 (upper Clarence Strait) gill net catch by sex, age class, and fishing period, 1989 35

B.12 - Test for significant changes among periods in the length composition of sockeye salmon in the District 106-30 (upper Clarence Strait) gill net catch by age class, 1989 38

LIST OF APPENDICES (Cont.)

Appendix		Page
B.13 -	Age composition of sockeye salmon in the District 106-41 (Sumner Strait) gill net catch by sex, age class, and fishing period, 1989	39
B.14 -	Test for significant changes among periods in the age composition of sockeye salmon in the District 106-41 (Sumner Strait) gill net catch by age class, 1989	42
B.15 -	Length composition of sockeye salmon in the District 106-41 (Sumner Strait) gill net catch by sex, age class, and fishing period, 1989	43
B.16 -	Test for significant changes among periods in the length composition of sockeye salmon in the District 106-41 (Sumner Strait) gill net catch by age class, 1989	46
B.17 -	Age composition of sockeye salmon in the District 108 gill net catch by sex, age class, and fishing period, 1989	47
B.18 -	Test for significant changes among periods in the age composition of sockeye salmon in the District 108 gill net catch by age class, 1989	49
B.19 -	Length composition of sockeye salmon in the District 108 gill net catch by sex, age class, and fishing period, 1989	50
B.20 -	Test for significant changes among periods in the length composition of sockeye salmon in the District 108 gill net catch by age class, 1989	51
B.21 -	Age composition of sockeye salmon in the Canadian commercial gill net catch in the Stikine River by sex, age class, and fishing period, 1989	52
B.22 -	Test for significant changes among periods in the age composition of sockeye salmon in the Canadian commercial gill net catch in the Stikine River by age class, 1989	54
B.23 -	Length composition of sockeye salmon in the Canadian commercial gill net catch in the Stikine River by sex, age class, and fishing period, 1989	55
B.24 -	Test for significant changes among periods in the length composition of sockeye salmon in the Canadian commercial gill net catch in the Stikine River by age class, 1989	56
B.25 -	Age composition of sockeye salmon in the District 111 gill net catch by sex, age class, and fishing period, 1989	57
B.26 -	Test for significant changes among periods in the age composition of sockeye salmon in the District 111 gill net catch by age class, 1989	60
B.27 -	Length composition of sockeye salmon in the District 111 gill net catch by sex, age class, and fishing period, 1989	61

LIST OF APPENDICES (Cont.)

Appendix		Page
B.28 -	Test for significant changes among periods in the length composition of sockeye salmon in the District 111 gill net catch by age class, 1989	63
B.29 -	Age composition of sockeye salmon in the Canadian commercial gill net catch in the Taku River by sex, age class, and fishing period, 1989	64
B.30 -	Test for significant changes among periods in the age composition of sockeye salmon in the Canadian commercial gill net catch in the Taku River by age class, 1989	67
B.31 -	Length composition of sockeye salmon in the Canadian commercial gill net catch in the Taku River by sex, age class, and fishing period, 1989	68
B.32 -	Test for significant changes among periods in the length composition of sockeye salmon in the Canadian commercial gill net catch in the Taku River by age class, 1989	70
B.33 -	Age composition of sockeye salmon in the District 115 gill net catch by sex, age class, and fishing period, 1989	71
B.34 -	Test for significant changes among periods in the age composition of sockeye salmon in the District 115 gill net catch by age class, 1989	74
B.35 -	Length composition of sockeye salmon in the District 115 gill net catch by sex, age class, and fishing period, 1989	75
B.36 -	Test for significant changes among periods in the length composition of sockeye salmon in the District 115 gill net catch by age class, 1989	77

APPENDIX C: COMMERCIAL PURSE SEINE CATCHES

C.1 -	Age composition of sockeye salmon in the District 101 purse seine catch by sex, age class, and fishing period, 1989	78
C.2 -	Test for significant changes among periods in the age composition of sockeye salmon in the District 101 purse seine catch by age class, 1989	80
C.3 -	Length composition of sockeye salmon in the District 101 purse seine catch by sex, age class, and fishing period, 1989	81
C.4 -	Test for significant changes among periods in the length composition of sockeye salmon in the District 101 purse seine catch by age class, 1989	83
C.5 -	Age composition of sockeye salmon in the District 101 Metlakatla purse seine catch by sex, age class, and fishing period, 1989	84
C.6 -	Test for significant changes among periods in the age composition of sockeye salmon in the District 101 Metlakatla purse seine catch by age class, 1989	86

LIST OF APPENDICES (Cont.)

Appendix		Page
C.7 -	Length composition of sockeye salmon in the District 101 Metlakatla purse seine catch by sex, age class, and fishing period, 1989	87
C.8 -	Test for significant changes among periods in the length composition of sockeye salmon in the District 101 Metlakatla purse seine catch by age class, 1989	88
C.9 -	Age composition of sockeye salmon in the District 102 purse seine catch by sex, age class, and fishing period, 1989	89
C.10 -	Test for significant changes among periods in the age composition of sockeye salmon in the District 102 purse seine catch by age class, 1989	90
C.11 -	Length composition of sockeye salmon in the District 102 purse seine catch by sex, age class, and fishing period, 1989	91
C.12 -	Test for significant changes among periods in the length composition of sockeye salmon in the District 102 purse seine catch by age class, 1989	92
C.13 -	Age composition of sockeye salmon in the District 103 purse seine catch by sex and age class, 1989	93
C.14 -	Length composition of sockeye salmon in the District 103 purse seine catch by sex and age class, 1989	93
C.15 -	Age composition of sockeye salmon in the District 104 purse seine catch by sex, age class, and fishing period, 1989	94
C.16 -	Test for significant changes in the age composition among periods of sockeye salmon in District 104 purse seine catch by age class, 1989	96
C.17 -	Length composition of sockeye salmon in the District 104 purse seine catch by sex, age class, and fishing period, 1989	97
C.18 -	Test for significant changes in the length composition among periods of sockeye salmon in District 104 purse seine catch by age class, 1989	99
C.19 -	Age composition of sockeye salmon in the District 107 purse seine catch by sex and age class, 1989	100
C.20 -	Length composition of sockeye salmon in the District 107 purse seine catch by sex and age class, 1989	100
C.21 -	Age composition of sockeye salmon in the District 109 purse seine catch by sex and age class, 1989	101
C.22 -	Length composition of sockeye salmon in the District 109 purse seine catch by sex and age class, 1989	101

LIST OF APPENDICES (Cont.)

Appendix — Page

C.23 - Age composition of sockeye salmon in the District 110 purse seine catch by sex, age class, and fishing period, 1989 102

C.24 - Test for significant changes in the age composition among periods of sockeye salmon in District 110 purse seine catch by age class, 1989 103

C.25 - Length composition of sockeye salmon in the District 110 purse seine catch by sex, age class, and fishing period, 1989 104

C.26 - Test for significant changes in the length composition among periods of sockeye salmon in District 110 purse seine catch by age class, 1989 105

C.27 - Age composition of sockeye salmon in the District 112 purse seine catch by sex, age class, and fishing period, 1989 106

C.28 - Test for signigicant changes in the age composition among periods of sockeye salmon in the District 112 purse seine catch by age class, 1989 108

C.29 - Length composition of sockeye salmon in the District 112 purse seine catch by sex, age class, and fishing period, 1989 109

C.30 - Test for significant changes in the length composition among periods of sockeye salmon in the District 112 purse seine catch by age class, 1989 111

C.31 - Age composition of sockeye salmon in the District 113 purse seine catch by sex, age class, and fishing district, 1989 112

C.32 - Test for significant changes among periods in the age composition of sockeye salmon in the District 113 purse seine catch by age class, 1989 113

C.33 - Length composition of sockeye salmon in the District 113 purse seine catch by sex, age class, and fishing period, 1989 114

C.34 - Test for significant changes among periods in the length composition of sockeye salmon in the District 113 purse seine catch by age class, 1989 115

C.35 - Age composition of sockeye salmon in the District 114 purse seine catch by sex and age class, 1989 116

C.36 - Length composition of sockeye salmon in the District 114 purse seine catch by sex and age class, 1989 116

APPENDIX D: TEST NET CATCHES

D.1 - Age composition of sockeye salmon in the District 108 test gill net catch by sex and age class, 1989 117

LIST OF APPENDICES (Cont.)

Appendix — Page

D.2 - Length composition of sockeye salmon in the District 108 test gill net catch by sex and age class, 1989 117

D.3 - Age composition of sockeye salmon in the Canadian test fishery gill net catch in the Stikine River by sex, age class, and fishing period, 1989 118

D.4 - Test for significant changes among periods in the age composition of sockeye salmon in the Canadian test fishery gill net catch in the Stikine River by age class, 1989 120

D.5 - Length composition of sockeye salmon in the Canadian test fishery gill net catch in the Stikine River by sex, age class, and fishing period, 1989 121

D.6 - Test for significant changes among periods in the length composition of sockeye salmon in the Canadian test fishery gill net catch in the Stikine River by age class, 1989 122

D.7 - Age composition of sockeye salmon in the District 112 purse seine test fishery catch by sex and age class, 1989 123

APPENDIX E: TRAP FISHERIES

E.1 - Age composition of sockeye salmon in the District 101 Metlakatla trapcatch by sex and age class, 1989 124

E.2 - Length composition of sockeye salmon in the District 101 Metlakatla trapcatch by sex and age class, 1989 124

APPENDIX F: ESCAPEMENTS

F.1 - Age composition of sockeye salmon in the Hugh Smith escapement by sex, age class, and escapement period, 1989 125

F.2 - Test for significant changes among periods in the age composition of sockeye salmon in the Hugh Smith Lake escapement by age class, 1989 128

F.3 - Length composition of sockeye salmon in the Hugh Smith Lake escapement by sex, age class, and escapement period, 1989 129

F.4 - Test for significant changes among periods in the length composition ofsockeye salmon in the Hugh Smith Lake escapement by age class, 1989 131

F.5 - Daily sockeye salmon counts and associated statistics from Hugh Smith Lake weir, 1989 . 132

F.6 - Age composition of sockeye salmon in the Bakeweil Lake fish ladder escapement by sex and age class, 1989 134

LIST OF APPENDICES (Cont.)

Appendix		Page
F.7 -	Length composition of sockeye salmon in the Bakewell Lake fish ladder escapement by sex and age class, 1989	134
F.8 -	Age composition of sockeye salmon in the McDonald Lake escapement by sexand age class, 1989	135
F.9 -	Length composition of sockeye salmon in the McDonald Lake escapement by sex and age class, 1989	135
F.10 -	Age composition of sockeye salmon in the Naha River escapement by sex and age class, 1989	136
F.11 -	Length composition of sockeye salmon in the Naha River escapement by sex and age class, 1989	136
F.12 -	Age composition of sockeye salmon in the Kegan Lake escapement by sex and age class, 1989	137
F.13 -	Length composition of sockeye salmon in the Kegan Lake escapement by sex and age class, 1989	137
F.14 -	Age composition of sockeye salmon in the Karta River escapement by sex and age class, 1989	138
F.15 -	Length composition of sockeye salmon in the Karta River escapement by sex and age class, 1989	138
F.16 -	Age composition of sockeye salmon in the Klakas Lake escapement by sex and age class, 1989	139
F.17 -	Length composition of sockeye salmon in the Klakas Lake escapement by sex and age class, 1989	139
F.18 -	Age composition of sockeye salmon in the Klawock Lake escapement by sex and age class, 1989	140
F.19 -	Length composition of sockeye salmon in the Klawock Lake escapement by sex and age class, 1989	140
F.20 -	Daily sockeye salmon counts and associated statistics from Klawock Lake weir, 1989	141
F.21 -	Age composition of sockeye salmon in the Salmon Bay Lake escapement by sex and age class, 1989	142
F.22 -	Length composition of sockeye salmon in the Salmon Bay Lake escapement by sex and age class, 1989	142

LIST OF APPENDICES (Cont.)

Appendix		Page
F.23 -	Age composition of sockeye salmon in the Red Bay Lake escapement by sex and age class, 1989	143
F.24 -	Length composition of sockeye salmon in the Red Bay Lake escapement by sex and age class, 1989	143
F.25 -	Age composition of sockeye salmon in the Petersburg Lake escapement by sex and age class, 1989	144
F.26 -	Length composition of sockeye salmon in the Petersburg Lake escapement by sex and age class, 1989	144
F.27 -	Age composition of sockeye salmon in the Thoms Lake escapement by sex and age class, 1989	145
F.28 -	Length composition of sockeye salmon in the Thoms Lake escapement by sex and age class, 1989	145
F.29 -	Age composition of sockeye salmon in the Tahltan Lake escapement by sex, age class, and escapement period, 1989	146
F.30 -	Test for significant changes among periods in the age composition of sockeye salmon in the Tahltan Lake escapement by age class, 1989	148
F.31 -	Length composition of sockeye salmon in the Tahltan Lake escapement by sex, age class, and escapement period, 1989	149
F.32 -	Test for significant changes among periods in the length composition of sockeye salmon in the Tahltan Lake escapement by age class, 1989	151
F.33 -	Daily sockeye salmon counts and associated statistics from Tahltan Lake weir, 1989	152
F.34 -	Age composition of sockeye salmon in the Falls Lake escapement by sex, ageclass, and escapement period, 1989	153
F.35 -	Test for significant changes among periods in the age composition of sockeye salmon in the Falls Lake escapement by age class, 1989	156
F.36 -	Length composition of sockeye salmon in the Falls Lake escapement by sex, age class, and escpaement period, 1989	157
F.37 -	Test for significant changes among periods in the length composition of sockeye salmon in the Falls Lake escapement by age class, 1989	159
F.38 -	Daily sockeye salmon counts and associated statistics from Falls Lake weir, 1989	160
F.39 -	Age composition of sockeye salmon in the Kutlaku Lake escapement by sex and age class, 1989	161

LIST OF APPENDICES (Cont.)

Appendix		Page
F.40 -	Length composition of sockeye salmon in the Kutlaku Lake escapement by sex and age class, 1989	161
F.41 -	Age composition of sockeye salmon in the Aleck's Lake escapement by sex and age class, 1989	162
F.42 -	Length composition of sockeye salmon in the Aleck's Lake escapement by sex and age class, 1989	162
F.43 -	Age composition of sockeye salmon in the Canyon Island (Taku River) fish wheel catch by sex, age class, and escapement period, 1989	163
F.44 -	Test for significant changes among periods in the age compositionof sockeye salmon in the Canyon Island (Taku River) escapement by age class, 1989	165
F.45 -	Length composition of sockeye salmon in the Canyon Island (Taku River) fish wheel catch by sex, age class, and escapement period, 1989	166
F.46 -	Test for significant changes among periods in the length composition of sockeye salmon in the Canyon Island (Taku River) escapement by age class, 1989	168
F.47 -	Catch and CPUE (catch/wheel hour) of sockeye salmon in fishwheels at Canyon Island (Taku River), 1989	169
F.48 -	Age composition of sockeye salmon in the Yehring Creek escapement by sex and age class, 1989	171
F.49 -	Length composition of sockeye salmon in the Yehring Creek escapement by sex and age class, 1989	171
F.50 -	Daily sockeye salmon counts and associated statistics from Yehring Creek weir, 1989	172
F.51 -	Age composition of sockeye salmon in the Tulsequah Creek (Taku River) escapement by sex and age class, 1989	173
F.52 -	Length composition of sockeye salmon in the Tulsequah Creek (Taku River) escapement by sex and age class, 1989	173
F.53 -	Age composition of sockeye salmon in the Kuthai Lake escapement by sex and age class, 1989	174
F.54 -	Length composition of sockeye salmon in the Kuthai Lake escapement by sex and age class, 1989	174
F.55 -	Age composition of sockeye salmon in the Little Trapper Lake escapement by sex, age class, and escapement period, 1989	175

LIST OF APPENDICES (Cont.)

Appendix		Page
F.56 -	Test for significant changes among periods in the age composition of sockeye salmon in the Little Trapper Lake escapement by age class, 1989	177
F.57 -	Length composition of sockeye salmon in the Little Trapper Lake escapement by sex, age class, and escapement period, 1989	178
F.58 -	Test for significant changes among periods in the length composition of sockeye salmon in the Little Trapper Lake escapement by age class, 1989	179
F.59 -	Daily sockeye salmon counts and associated statistics from Little Trapper Lake weir, 1989	180
F.60 -	Age composition of sockeye salmon in the Little Tatsamenie Lake escapement by sex, age class, and escapement period, 1989	181
F.61 -	Test for significant changes among periods in the age composition of sockeye salmon in the Little Tatsamenie Lake escapement by age class, 1989	182
F.62 -	Length composition of sockeye salmon in the Little Tatsamenie Lake escapement by sex, age class, and escapement period, 1989	183
F.63 -	Test for significant changes among periods in the length composition of sockeye salmon in the Little Tatsamenie Lake escapement by age class, 1989	184
F.64 -	Daily sockeye salmon counts and associated statistics from Little Tatsamenie Lake weir, 1989	185
F.65 -	Age composition of sockeye salmon in the Nahlin River escapement by sex and age class, 1989	187
F.66 -	Length composition of sockeye salmon in the Nahlin River escapement by sexand age class, 1989	187
F.67 -	Age composition of sockeye salmon in the Chuunk Mountain Creek (Taku River)escapement by sex and age class, 1989	188
F.68 -	Length composition of sockeye salmon in the Chuunk Mountain Creek (Taku River) escapement by sex and age class, 1989	188
F.69 -	Age composition of sockeye salmon in the Stuhini Lake (South Fork Lake; Taku River) escapement by sex and age class, 1989	189
F.70 -	Length composition of sockeye salmon in the Stuhini Lake (South Fork Lake; Taku River) escapement by sex and age class, 1989	189
F.71 -	Age composition of sockeye salmon in the Tuskwa Slough (Taku River)escapement by sex and age class, 1989	190

LIST OF APPENDICES (Cont.)

Appendix		Page
F.72 -	Length composition of sockeye salmon in the Tuskwa Slough (Taku River) escapement by sex and age class, 1989	190
F.73 -	Age composition of sockeye salmon in the Yonakina Slough (Taku River)escapement by sex and age class, 1989	191
F.74 -	Length composition of sockeye salmon in the Yonakina Slough (Taku River) escapement by sex and age class, 1989	191
F.75 -	Age composition of sockeye salmon in the Speel Lake escapement by sex, age class, and escapement period, 1989	192
F.76 -	Test for significant changes among periods in the age composition of sockeye salmon in the Speel Lake escapement by age class, 1989	194
F.77 -	Length composition of sockeye salmon in the Speel Lake escapement by sex, age class, and escapement period, 1989	195
F.78 -	Test for significant changes among periods in the length composition of sockeye salmon in the Speel Lake escapement by age class, 1989	197
F.79 -	Daily sockeye salmon counts and associated statistics from Speel Lake weir, 1989	198
F.80 -	Age composition of sockeye salmon in the Crescent Lake escapement by sex, age class, and escapement period, 1989	199
F.81 -	Test for significant changes among periods in the age composition of sockeye salmon in the Crescent Lake escapement by age class, 1989	201
F.82 -	Length composition of sockeye salmon in the Crescent Lake escapement by sex, age class, and escapement period, 1989	202
F.83 -	Test for significant changes among periods in the length composition of sockeye salmon in the Crescent Lake escapement by age class, 1989	203
F.84 -	Daily sockeye salmon counts and associated statistics from Crescent Lake weir, 1989	204
F.85 -	Age composition of sockeye salmon in the Windfall Lake escapement by sex and age class, 1989	205
F.86 -	Length composition of sockeye salmon in the Windfall Lake escapement by sex and age class, 1989	205
F.87 -	Daily sockeye salmon counts and associated statistics from Windfall Lake weir, 1989	206
F.88 -	Age composition of sockeye salmon in the Auke Lake escapement by sex and age class, 1989	207

LIST OF APPENDICES (Cont.)

Appendix		Page
F.89 -	Length composition of sockeye salmon in the Auke Lake escapement by sex and age class, 1989	207
F.90 -	Daily sockeye salmon counts and associated statistics from Auke Lake weir, 1989	208
F.91 -	Age composition of sockeye salmon in the Steep Creek escapement by sex and age class, 1989	210
F.92 -	Length composition of sockeye salmon in the Steep Creek escapement by sex and age class, 1989	210
F.93 -	Age composition of sockeye salmon in the Hasselborg River escapement by sex and age class, 1989	211
F.94 -	Length composition of sockeye salmon in the Hasselborg River escapement by sex and age class, 1989	211
F.95 -	Age composition of sockeye salmon in the Redoubt Lake escapement by sex, age class, and escapement period, 1989	212
F.96 -	Test for significant changes among periods in the age composition of sockeye salmon in the Redoubt Lake escapement, 1989	214
F.97 -	Length composition of sockeye salmon in the Redoubt Lake escapement by sex, age class, and escapement period, 1989	215
F.98 -	Test for significant changes among periods in the length composition of sockeye salmon in the Redoubt Lake escapement, 1989	217
F.99 -	Daily sockeye salmon counts and associated statistics from Redoubt Lake weir, 1989	218
F.100 -	Age composition of sockeye salmon in the Ford Arm Lake escapement by sex and age class, 1989	219
F.101 -	Length composition of sockeye salmon in the Ford Arm Lake escapement by sex and age class, 1989	219
F.102 -	Age composition of sockeye salmon in the Berners, Antler/Gilkey, and LaceRiver (Berners Bay) escapements by sex and age class, 1989	220
F.103 -	Length composition of sockeye salmon in the Berners, Antler/Gilkey, and Lace River (Berners Bay) escapements by sex and age class, 1989	220
F.104 -	Age composition of sockeye salmon in the Chilkat Lake escapement by sex, age class, and escapement period, 1989	221
F.105 -	Test for significant changes among periods in the age composition of sockeye salmon in the Chilkat Lake escapement by age class, 1989	224

LIST OF APPENDICES (Cont.)

Appendix		Page
F.106 -	Length composition of sockeye salmon in the Chilkat Lake escapement by sex, age class, and escapement period, 1989	225
F.107 -	Test for significant changes among periods in the length composition of sockeye salmon in the Chilkat Lake escapement by age class, 1989	227
F.108 -	Daily sockeye salmon counts and associated statistics from Chilkat Lake weir, 1989	228
F.109 -	Age composition of sockeye salmon in the Chilkat River mainstem escapement by sex and age class, 1989	230
F.110 -	Length composition of sockeye salmon in the Chilkat River mainstem escapement by sex and age class, 1989	230
F.111 -	Age composition of sockeye salmon in the Chilkoot Lake escapement by sex, age class, and escapement period, 1989	231
F.112 -	Test for significant changes among periods in the age composition of sockeye salmon in the Chilkoot Lake escapement by age class, 1989	234
F.113 -	Length composition of sockeye salmon in the Chilkoot Lake escapement by sex, age class, and escapement period, 1989	235
F.114 -	Test for significant changes among periods in the length composition of sockeye salmon in the Chilkoot Lake escapement by age class, 1989	237
F.115 -	Daily sockeye salmon counts and associated statistics from Chilkoot Lake weir, 1989	238

INTRODUCTION

Commercial harvesting of sockeye salmon (*Oncorhynchus nerka*) began in Southeast Alaska during the 1880's. Catches, excluding Yakutat, peaked early in the history of the fishery, averaging 2.4 million sockeye salmon annually between 1910 and 1919 (Eggers and Dean 1987). Several periods of sharp declines in catches in the region were experienced over the next 60 years (Figure 1). From 1970 through 1979 catches averaged only 642,000 fish annually. Catches have sharply increased from that level during the 1980's, averaging over 1.2 million fish.

Estimation of basic population attributes are essential to sound management. Age composition provides a baseline for stock contribution estimates, brood year returns, and exploitation rates. Size data can be used to monitor growth parameters, environmental variability, and gear selectivity. Age and size data are invaluable in forecasting future returns. Migratory timing data forms the basis for in-season forecasting of run strength and detection of interannual shifts in run timing. A comprehensive sampling program to estimate population attributes of sockeye salmon in Southeast Alaska has been operated since 1982 (McGregor 1983; McGregor et al. 1984; McGregor and McPherson 1986; McPherson and McGregor 1986; McPherson et al. 1988a, 1988b, 1988c, 1988d, 1990a, 1990b). The feasibility of this program was tested in 1981 for selected fisheries and escapements and is reported in McGregor and Van Alen (1987).

The purpose of this investigation was to tabualte the detailed data on the numbers, age, sex, and size compositions of sockeye salmon in the harvest and escapement in Southeast Alaska in 1989. This data supports concurrent studies and provides a database for future use by fishery researchers and managers. Summaries of the data presented in this report and summaries of catch and timing data are reported in Rowse and McPherson (*In press*), to which this is a companion report.

STUDY AREA AND DESCRIPTION OF FISHERIES

The study area consists of outside coastal waters of Southeast Alaska extending south from Cape Suckling to Cape Fairweather and both inside and outside waters extending south from Cape Fairweather to Dixon Entrance (Figure 2). The area is divided into 16 coastal districts (101 through 116) and 7 offshore districts (152, 154, 156, 157, 181, 189, and 191). Inshore district net fisheries and escapements in the Yakutat Management Area are not presented in this report. This information can be found in Rowse (*In press*).

Sockeye salmon are taken by both U.S. and Canadian fishermen. Canadian fishermen harvest fish in the waters of two transboundary rivers (rivers originating in Canada and emptying into saltwater in the U.S.) within the study area: the Taku River which flows from Canada into District 111, and the Stikine River which flows into District 108. Stocks in these rivers are managed separately by each government under a jointly agreed to harvest allocation for each country and an overall escapement goal. More than 100 exclusively U.S. systems (rivers or streams and associated lakes) are also known to produce sockeye salmon in Southeast Alaska.

Commercial, sport, and subsistence fisheries operate throughout the region. In 1989 U.S. commercial gill net harvests of salmon occurred in Districts 101, 106, 108, 111, and 115. Canadian gill net fisheries operated in the lower Canadian portions of the Taku and Stikine Rivers, and in the upper Stikine River. Purse seine fisheries are operated only in U.S. waters; they harvested sockeye salmon in Districts 101 through 104, 107, 109, 110, and 112 through 114 in 1989. The troll fleet operated in U.S. waters throughout the region. The Metlakatla Indian Community operated gill net, purse seine, and troll fisheries within 3,000 ft of the Annette Island shoreline in District 101 (Subdistricts 24, 26, 28, and 42), as well as a small floating fish trap fishery in Subdistrict 101-28. Sport fishing occurred throughout Southeast Alaska, primarily near population centers. Subsistence fishing was allowed at many sites in Southeast Alaska, primarily near the mouths of rivers and streams. A small personal use fishery was instituted on the Taku River in 1989.

Of the six types of gear used to harvest sockeye salmon in Southeast Alaska, commercial purse seine and gill net fleets currently account for the vast majority of the harvest. Lesser numbers of fish are harvested commercially with troll gear and fish traps. These fisheries harvest mixed sockeye stocks, as well as other species. Subsistence and sport fisheries in Southeast Alaska, although minor compared to commercial harvests, exploit some sockeye stocks at high rates.

SOCKEYE SALMON LIFE HISTORY

Two types of sockeye salmon life cycles occur in Southeast Alaska, and it is essential to understand them in order to interpret the age composition data. Most sockeye salmon in Southeast Alaska spawn in lakes, or streams which flow into lakes. The eggs are deposited in the gravel from July through December and incubate over the winter (range from 80 to 140 d; Forester 1968) and fry emerge the following spring. The fry rear in the main body of the lake where they spend most of their freshwater life. Lake rearing usually lasts 1-2 years, but may extend to 4 years. After a final spring in the lake, the fry emigrate and move downriver (usually in May). The juvenile salmon adjust to salt water in the estuarine habitat, and then migrate to marine waters. These sockeye salmon juveniles spend from 1 to 4 years in the eastern North Pacific Ocean before returning to spawn. This is the "lake-type" life cycle.

A lesser-known alternative life cycle has been observed in the Pacific Rim (Soviet Union, British Columbia, and Alaska) for a small number of sockeye salmon stocks (Forester 1968; Bugaev 1987; Birtwell et al. 1987; Wood et al. 1987; McPherson 1988d). The life cycle of these stocks does not include spawning or rearing in a lake. Spawning occurs in large rivers, typically in areas where groundwater upwells through deep gravel beds. The fry rear in sloughs, pools, and tributaries along the river. Some of these fry migrate to sea after rearing for only a few months (i.e., they outmigrate at age 0. or the same year as emergence). Most of the remaining fry migrate to sea at age-1. (i.e., after rearing in the river habitat for 1 year). The marine residence for river-type progeny is similar to that of lake-type.

The average life cycle for river-type fish is shorter because freshwater residence is usually one year less. Upwelling groundwater is warmer than inlet-stream water and emergence is probably earlier in these areas. Thus, fry hatch and begin to feed earlier than sockeye fry in a lake environment. Age-0. fry rear in river delta areas much more extensively than their age-1. siblings and lake-type fry (Birtwell et al. 1987). These areas are warmer and extremely food rich, which allows fish to grow large enough in one spring to outmigrate at age-0. Outmigration timing for age-0. fish was reported, by both Birtwell et al. (1987) for the Fraser River and Murphy et al. (1989) for the Taku River, to be about 1 month later than age-1. and -2. fish.

River-type sockeye salmon are important contributors to fisheries in some areas of Southeast Alaska. River-type spawning stocks have been well documented at various locations in the Stikine (Wood et al. 1987) and Taku Rivers (McGregor and Jones 1989), as well as for the Chilkat, Lace, and Gilkey Rivers which flow into Lynn Canal (McPherson et al. 1988d; McPherson and Jones 1986). All of these rivers are glacial. However, Hasselborg River, located on Admiralty Island, was surveyed in 1989 and found to have 83% age-0. fish returning to spawn. This is the first documentation in Southeast Alaska of such a high proportion of age-0. fish from an island, clearwater system. The river-type stocks in the Taku and Stikine Rivers comprise over 50% of the total inriver runs in some years (PSC 1990). The river-type stocks in Lynn Canal comprise 3-7% of the catch in District 115.

METHODS

Abundance Data

Catch

Alaskan commercial catch data presented in this report were compiled by the Division of Commercial Fisheries, Alaska Department of Fish and Game (ADF&G), and originated from individual fish tickets (sales receipts) tabulated as of 23 May, 1990. Catch data were edited for data entry and recording errors. Because embedded errors or additions are sometimes found at a later date, data file listings in the future may show minor differences from those given in this report. Catch data for Canadian commercial and test fisheries on the Taku and Stikine Rivers were obtained from the Canadian Department of Fisheries and Oceans (PSC 1991). Catches were assigned to a statistical week, which begins at 00:01 AM each Sunday and ends the following Saturday at midnight; statistical weeks are numbered sequentially beginning with the week encompassing the first Sunday in January. Inclusive dates for 1989 statistical weeks are shown in Appendix A.1.

Escapement

Several methods were used to estimate total escapements to Southeast Alaska systems in 1989. Weirs were operated at 11 Alaskan and 3 Canadian sites, providing total counts of sockeye salmon to these systems. A mark-recapture tagging program was used to estimate the total Taku River escapement (McGregor et al. 1991). Sockeye salmon were captured in fish wheels at Canyon Island (5 km from the Canadian border) and tagged. Tagged fish were recovered in the Canadian commercial and test gill net fisheries, and tagged to untagged ratios were used to derive an escapement estimate. An estimate of escapement for McDonald Lake was provided by Zadina (Alaska Department of Fish and Game, F.R.E.D. Division, Ketchikan, personal communication). Foot survey counts were expanded to a total estimate based on correlations between stream life, foot survey data, and final weir counts in previous years. The estimated escapement to the Stikine River was made by applying migratory time densities (Mundy 1979) from inriver test fishery CPUE data to commercial catch stock composition estimates generated by egg diameter analyses (PSC 1991). A Petersen mark-recapture estimate was made for the escapement into Ford Arm Lake (L. Shaul, Alaska Department of Fish and Game, Commercial Fisheries Division, Douglas, personal communication). Aerial, foot, and boat surveys provided the maximum daily escapement counts for most of the other important sockeye salmon systems in the region; these counts should only be considered partial or relative indicators of escapement magnitude as they do not represent total escapements.

Age, Sex, and Size Data

Sockeye salmon were sampled for scales, sex, and length. Samples were collected from both commercial catches and from selected escapements. Age, sex, and length compositions were determined for each district of catch by gear-type, and for each sampled escapement.

Scales

Scales were taken from the 'preferred area' of the fish (INPFC 1963). Scales were mounted on gummed cards and impressions made in cellulose acetate (Clutter and Whitesel 1956). Examination of scales provided age information for individual fish. Scales were magnified to 70X on a microfiche reader and ages were recorded in European notation (numerals preceding the decimal refer to the numbers of freshwater annuli, numerals following the decimal

are the numbers of marine annuli, and the total age is the sum of these two numbers plus one). Ageing criteria followed from those described by Mosher (1968).

Sex Determination

Sex determination was based on examination of either gonads or external morphological features such as kipe development, belly shape, trunk depth, and jaw shape. Accuracy of sex determination was evaluated in 1987 by examining 4,923 sockeye salmon from commercial catches throughout the region and season (K. Pahlke, Alaska Department of Fish and Game, Commercial Fisheries Division, Douglas, personal communication). Fish were first sexed by examining external morphological characteristics. Gonads were then examined by slitting open the belly cavity. Accuracy was 94% for the entire sample. It is believed that the accuracy of sex determination at weirs or on the spawning grounds is even higher because of further development of secondary maturation characteristics at these locations compared to commercial catches.

Length Measurement

Fish length was measured from the middle of the eye to the fork of the tail and was recorded to the nearest 1 mm, except that post-orbit to hypural plate measurements were taken for escapements to Little Trapper and Little Tatsamenie Lakes in the Taku River drainage; and to Tahltan Lake in the Stikine River drainage. Length measurements from the Taku River fish were converted to middle of the eye to fork of the tail (MEF) measurements according to the following equation developed from lengths taken from 209 sockeye salmon caught in the Canadian commercial fishery in the Taku River in 1989:

$$MEF = 1.109 * (POH) + 13.330 \text{ mm} \quad (1)$$

Length measurements from Stikine River fish were converted to MEF measurements according to equation (2) which is one of seven length relationships developed from 820 sockeye salmon commercially caught in Southeast Alaska in 1985 (Pahlke 1989).

$$MEF = 1.097 * (POH) + 19.50277 \quad (2)$$

Catch Sampling

All districts were sampled in which gill net catches occurred, except District 107 (only 16 fish harvested). Purse seine catches were sampled in all districts that recorded catches, except District 106. Sport fish, subsistence, and personal use harvests were not sampled because of the small magnitude of the harvests and the logistic difficulties involved in obtaining samples.

Age and sex compositions of salmon in the catches were computed for each fishery sampled. Sampling goals were to collect sufficient samples to estimate the proportion of each age class to within ± 5 percentage points 90% of the time in each stratum based on the standard binomial formulae (Cochran 1977; Appendix A.2). A general goal of 700 fish per week (of which 560 were expected to be ageable) was met each week in most of the major districts. Sampling was structured by subdistricts in District 106 because catches were made in widely separated geographic areas and at different times of the season.

Escapement Sampling

Escapement samples were collected either in weir traps or with dip nets, beach seines, and from carcasses. Fish wheels were used to collect Taku River escapement samples at Canyon Island. The variety of collection methods used to sample escapements may have introduced some bias into age composition estimates. Escapement sampling goals included taking scales and recording sex and length measurements from 600 sockeye salmon in unweired systems and up to 2000 sockeye salmon in weired systems.

Age and sex compositions of the salmon were also computed for each escapement area that was sampled. Most escapement locations were sampled over short periods of time, and these data were pooled into a single stratum. Some escapement areas were sampled throughout the season (e.g., weir locations) and were stratified by time to reflect more than one sampling period. This enabled us to analyze temporal trends in age and length composition.

Age and Sex Composition

Totals from each sample period were summed to represent the age and sex composition over the entire season for each fishery and each escapement having accurate abundance data. When only partial escapement counts were available, a percentage breakdown of each sample by age and sex was tabulated. Standard errors of the age class proportions were calculated by standard binomial formulae, and standard errors for estimates expanded to abundance data were calculated to reflect finite population size (Cochran 1977) as follows:

$$\hat{SE}_{ij} = \sqrt{\left[\frac{(\hat{P}_{ij})(1-\hat{P}_{ij})}{n_j - 1}\right] \cdot \left[1 - \frac{n_j}{C_j}\right]} \qquad (3)$$

where: i = age class,
j = stratum,
P_{ij} = proportion of fish of age i in stratum j, and
n_j = sample size for stratum j.

The standard errors for the total season commercial catch or escapement were estimated by weighting the standard error for each sampling period by the total commercial catch (or escapement) during the same sample period as follows:

$$\hat{SE}_{i.} = \sqrt{\frac{\sum_{1}^{j} (\hat{SE}_{ij})^2 \; C_j^2}{C_.^2}} \qquad (4)$$

where: C_j = catch or escapement in stratum j, and
$C_.$ = total-season catch or escapement.

Changes in age composition among strata were tested for significance using a test to compare two proportions described in Zar (1984).

Length Composition

For each fishery and escapement from which we collected fish length data, mean lengths and their standard errors were calculated for each sex and age class within sampling periods. Sampling goals from the catch were to collect sufficient numbers from each stratum to estimate the average length of each major (greater than 10% of the catch) age class to within ± 5 percentage points 90% of the time. A general sampling goal of 180 lengths per week was established for all districts, except in District 115 gill net fishery where stock-specific length composition estimates were desired and 300 lengths were taken. Weighted mean length and standard error for the entire season were calculated for each age class. A Z-test was used to identify significant changes in average length within age classes among strata (Zar 1984). All escapement samples included length measurements; these measurements are valuable during scale ageing because scales from escapement samples are often resorbed.

Migratory Timing

Migratory timing (abundance as a function of time) is the driving force behind management decisions which selectively regulate time and areas open to fishing. Sockeye salmon migratory timing statistics for weired escapements and major net fisheries provided an index of relative timing.

The means and standard deviations of migratory timing, and associated migratory time density functions of sockeye salmon for weired escapements and net fisheries were derived using methodology described by Mundy (1979, 1982). The empirical migratory time density is defined as the time series of daily or weekly proportions, P_t:

$$P_t = n_t / N \tag{5}$$

where: n_t = abundance during time interval t, and
N = total annual abundance.

For a migration over a space of m days, the mean of t is estimated by

$$\bar{t} = \sum_{t=1}^{m} t \, P_t \tag{6}$$

and its standard deviation is estimated by

$$\hat{S}_t = \sqrt{\sum_{t=1}^{m} (t-\bar{t})^2 \, P_t} \tag{7}$$

The mean time of arrival ($\bar{t}$) for weired escapements is expressed in days (central day).

RESULTS

Detailed age and length compositions of sockeye salmon and tests for significant changes among strata in age and length compositions in gill net fisheries are presented in Appendices B.1 through B.36. Organization is by ascending fishing district number.

Detailed age and length compositions of sockeye salmon and tests for significant changes among strata in age and length compositions in purse seine fisheries are presented in Appendices C.1 through C.36. Organization is by ascending fishing district number.

Detailed age and length compositions of sockeye salmon and tests for significant changes among strata in age and length compositions in test fisheries conducted in Districts 108 and 112, and on the Stikine River are presented in Appendices D.1 through D.7. Organization is by ascending fishing district number.

Detailed age and length compositions of sockeye salmon caught in the District 101 Metlakatla trap fishery are presented in Appendices E.1 and E.2.

Detailed age and length compositions of sockeye salmon, daily weir counts, and tests for significant changes among strata in age and length compositions in escapements are presented in Appendices F.1 through F.115. Organization is by ascending stream number.

Summaries of catches, escapements, age, sex, size, and migratory timing data are presented in Rowse and McPherson (*In press*).

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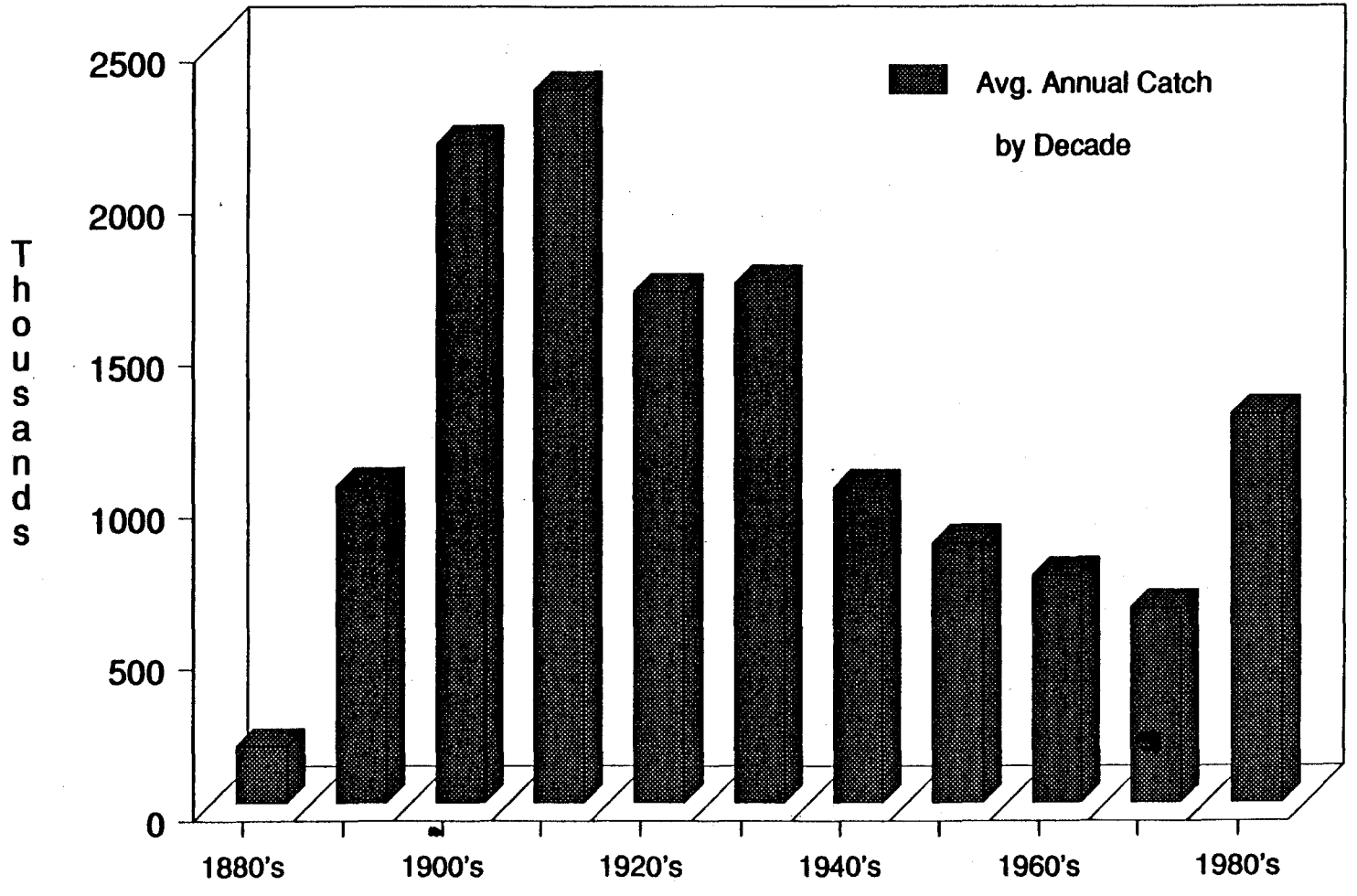

Figure 1. Average annual decade sockeye catch in Southeast Alaska, 1880-1989.

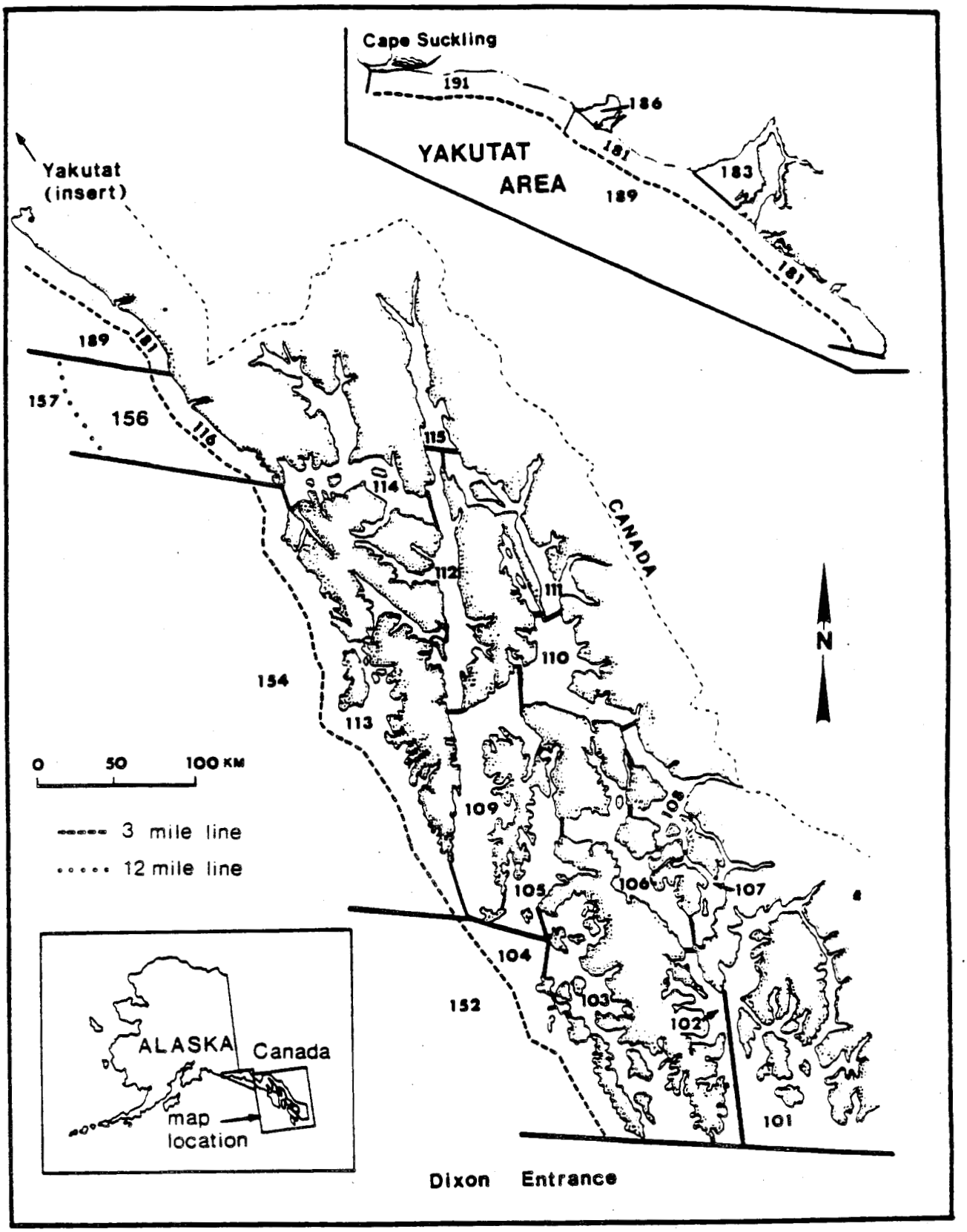

Figure 2. Map of Southeast Alaska showing the statistical fishing districts.

APPENDICES

Appendix A.1 Numbered statistical weeks used to report commercial catches, 1989.

Stat Week Number	From	To	Stat Week Number	From	To
1	Jan 1	Jan 7	28	Jul 9	Jul 15
2	Jan 8	Jan 14	29	Jul 16	Jul 22
3	Jan 15	Jan 21	30	Jul 23	Jul 29
4	Jan 22	Jan 28	31	Jul 30	Aug 5
5	Jan 29	Feb 4	32	Aug 6	Aug 12
6	Feb 5	Feb 11	33	Aug 13	Aug 19
7	Feb 12	Feb 18	34	Aug 20	Aug 26
8	Feb 19	Feb 25	35	Aug 27	Sep 2
9	Feb 26	Mar 4	36	Sep 3	Sep 9
10	Mar 5	Mar 11	37	Sep 10	Sep 16
11	Mar 12	Mar 18	38	Sep 17	Sep 23
12	Mar 19	Mar 25	39	Sep 24	Sep 30
13	Mar 26	Apr 1	40	Oct 1	Oct 7
14	Apr 2	Apr 8	41	Oct 8	Oct 14
15	Apr 9	Apr 15	42	Oct 15	Oct 21
16	Apr 16	Apr 22	43	Oct 22	Oct 28
17	Apr 23	Apr 29	44	Oct 29	Nov 4
18	Apr 30	May 6	45	Nov 5	Nov 11
19	May 7	May 13	46	Nov 12	Nov 18
20	May 14	May 20	47	Nov 19	Nov 25
21	May 21	May 27	48	Nov 26	Dec 2
22	May 28	Jun 3	49	Dec 3	Dec 9
23	Jun 4	Jun 10	50	Dec 10	Dec 16
24	Jun 11	Jun 17	51	Dec 17	Dec 23
25	Jun 18	Jun 24	52	Dec 24	Dec 30
26	Jun 25	Jul 1	53	Dec 31	Dec 31
27	Jul 2	Jul 8			

Appendix A.2. Sample size needed to describe the age composition of a two, three, four, five, six, or seven-age class population of increasing size with a precision of ± 5% and a probability of 0.10.

	Sample Size Needed With The Following Number of Groups[a]					
Population Size	2	3	4	5	6	7
500	218	238	251	261	267	273
1,000	278	312	334	352	364	376
1,500	307	349	376	399	414	429
2,000	323	370	401	427	445	462
2,500	334	384	418	446	466	485
3,000	341	394	430	460	481	501
3,500	347	402	439	470	492	513
4,000	351	408	446	478	501	523
4,500	355	412	452	485	508	530
5,000	358	416	456	490	513	537
6,000	362	422	463	498	522	546
7,000	365	426	468	504	529	554
8,000	367	430	472	509	534	559
9,000	369	432	476	512	538	563
10,000	371	434	478	515	541	567
15,000	375	441	486	524	551	578
20,000	378	444	490	529	556	583
25,000	379	446	492	531	559	587
30,000	380	447	494	533	561	589
35,000	381	448	495	535	563	591
40,000	381	449	496	536	564	592
45,000	382	449	496	537	565	593
50,000	382	450	497	537	566	594
60,000	383	451	498	538	567	595
70,000	383	451	498	539	567	596
80,000	383	451	499	539	568	597
90,000	383	452	499	540	568	597
100,000	384	452	499	540	569	597
infinite	385	454	502	543	572	601

[a] Based on Cochran (1977) using the following formula:

$$n' = \frac{n_o}{1 + \frac{(n_o - 1)}{N}}$$

Where: n' = adjusted sample size
n_o = sample size needed for an infinitely large population
N = population size

Appendix B.1. Age composition of sockeye salmon in the District 101 gill net catch by sex, age class, and fishing period, 1989.

	Brood Year and Age Class										
	1986		1985			1984		1983		1982	
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	2.4	Total
Statistical Week 25 (June 18 - 24)											
Male											
Sample Size			17	18		80	16		47		178
Percent			3.3	3.5		15.4	3.1		9.1		34.4
Std. Error			0.8	0.8		1.6	0.7		1.2		2.1
Number			480	508		2,258	451		1,327		5,024
Female											
Sample Size	1		32	41		155	30		81		340
Percent	0.2		6.2	7.9		29.9	5.8		15.6		65.6
Std. Error	0.2		1.0	1.2		2.0	1.0		1.6		2.1
Number	28		903	1,157		4,375	848		2,286		9,597
All Fish											
Sample Size	1		49	59		235	46		128		518
Percent	0.2		9.5	11.4		45.3	8.9		24.7		100.0
Std. Error	0.2		1.3	1.4		2.2	1.2		1.9		
Number	28		1,383	1,665		6,633	1,299		3,613		14,621
Statistical Week 26 (June 25 - July 1)											
Male											
Sample Size			7	31		78	28	1	51		196
Percent			1.3	5.7		14.3	5.1	0.2	9.4		36.0
Std. Error			0.5	1.0		1.5	0.9	0.2	1.2		2.0
Number			153	678		1,706	612	22	1,115		4,286
Female											
Sample Size	2		6	68		170	42		61		349
Percent	0.4		1.1	12.5		31.1	7.7		11.2		64.0
Std. Error	0.3		0.4	1.4		1.9	1.1		1.3		2.0
Number	44		131	1,487		3,717	918		1,334		7,631
All Fish											
Sample Size	2		13	99		248	70	1	112		545
Percent	0.4		2.4	18.2		45.4	12.8	0.2	20.6		100.0
Std. Error	0.3		0.6	1.6		2.1	1.4	0.2	1.7		
Number	44		284	2,165		5,423	1,530	22	2,449		11,917
Statistical Week 27 (July 2 - 8)											
Male											
Sample Size	1		4	68		93	31		54		251
Percent	0.2		0.8	14.4		19.9	6.6		11.4		53.3
Std. Error	0.2		0.4	1.6		1.8	1.1		1.4		2.3
Number	26		104	1,773		2,425	808		1,408		6,544
Female											
Sample Size			5	59		107	27		22		220
Percent			1.1	12.5		22.7	5.7		4.7		46.7
Std. Error			0.5	1.5		1.9	1.1		1.0		2.3
Number			130	1,538		2,789	704		574		5,735
All Fish											
Sample Size	1		9	127		201	58		76		472
Percent	0.2		1.9	26.9		42.6	12.3		16.1		100.0
Std. Error	0.2		0.6	2.0		2.2	1.5		1.7		
Number	26		235	3,311		5,240	1,512		1,981		12,305
Statistical Week 28 (July 9 - 15)											
Male											
Sample Size			1	31	1	83	10		14		140
Percent			0.4	12.4	0.4	33.2	4.0		5.6		56.0
Std. Error			0.4	2.1	0.4	3.0	1.2		1.4		3.1
Number			66	2,051	66	5,492	662		926		9,263
Female											
Sample Size				16		79	7		8		110
Percent				6.4		31.6	2.8		3.2		44.0
Std. Error				1.5		2.9	1.0		1.1		3.1
Number				1,059		5,227	463		529		7,278
All Fish											
Sample Size			1	47	1	162	17		22		250
Percent			0.4	18.8	0.4	64.8	6.8		8.8		100.0
Std. Error			0.4	2.5	0.4	3.0	1.6		1.8		
Number			66	3,110	66	10,719	1,125		1,455		16,541

-continued-

Appendix B.1. (page 2 of 4).

	Brood Year and Age Class										
	1986		1985			1984		1983		1982	
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	2.4	Total
Statistical Week 29 (July 16 - 22)											
Male											
Sample Size				21		55	8		11		95
Percent				7.7		20.3	3.0		4.1		35.1
Std. Error				1.6		2.4	1.0		1.2		2.9
Number				1,501		3,931	572		786		6,790
Female											
Sample Size				28		122	9	1	16		176
Percent				10.3		45.0	3.3	0.4	5.9		64.9
Std. Error				1.8		3.0	1.1	0.4	1.4		2.9
Number				2,001		8,720	643	71	1,144		12,579
All Fish											
Sample Size				49		177	17	1	27		271
Percent				18.0		65.3	6.3	0.4	10.0		100.0
Std. Error				2.3		2.9	1.5	0.4	1.8		
Number				3,502		12,651	1,215	71	1,930		19,369
Statistical Week 30 (July 23 - 29)											
Male											
Sample Size				21		62	12		14		109
Percent				7.3		21.5	4.1		4.9		37.8
Std. Error				1.5		2.4	1.2		1.3		2.8
Number				1,961		5,788	1,120		1,307		10,176
Female											
Sample Size				26		130	10		13		179
Percent				9.0		45.2	3.5		4.5		62.2
Std. Error				1.7		2.9	1.1		1.2		2.8
Number				2,426		12,136	934		1,214		16,710
All Fish											
Sample Size				47		192	22		27		288
Percent				16.3		66.7	7.6		9.4		100.0
Std. Error				2.2		2.8	1.6		1.7		
Number				4,387		17,924	2,054		2,521		26,886
Statistical Week 31 (July 30 - August 5)											
Male											
Sample Size				51	1	129	20		22	1	224
Percent				9.8	0.2	24.9	3.8		4.2	0.2	43.1
Std. Error				1.3	0.2	1.9	0.8		0.9	0.2	2.2
Number				2,609	51	6,599	1,023		1,125	51	11,458
Female											
Sample Size				67		196	14		19		296
Percent				12.9		37.6	2.7		3.7		56.9
Std. Error				1.5		2.1	0.7		0.8		2.2
Number				3,427		10,027	716		972		15,142
All Fish											
Sample Size				118	1	325	34		41	1	520
Percent				22.7	0.2	62.5	6.5		7.9	0.2	100.0
Std. Error				1.8	0.2	2.1	1.1		1.2	0.2	
Number				6,036	51	16,626	1,739		2,097	51	26,600
Statistical Week 32 (August 6 - 12)											
Male											
Sample Size		1		64		132	25		34		256
Percent		0.2		11.9		24.6	4.7		6.3		47.7
Std. Error		0.2		1.4		1.8	0.9		1.0		2.1
Number		17		1,120		2,309	437		595		4,478
Female											
Sample Size				95		165	9		12		281
Percent				17.7		30.7	1.7		2.2		52.3
Std. Error				1.6		1.9	0.5		0.6		2.1
Number				1,661		2,887	158		210		4,916
All Fish											
Sample Size		1		159		297	34		46		537
Percent		0.2		29.6		55.3	6.4		8.5		100.0
Std. Error		0.2		1.9		2.1	1.0		1.2		
Number		17		2,781		5,196	595		805		9,394

-continued-

Appendix B.1. (page 3 of 4).

	Brood Year and Age Class										
	1986		1985			1984		1983		1982	
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	2.4	Total
Statistical Week 33 (August 13 - 19)											
Male											
Sample Size				26		113	17		56		212
Percent				5.0		21.5	3.2		10.7		40.4
Std. Error				0.9		1.7	0.7		1.3		2.0
Number				194		842	127		417		1,580
Female											
Sample Size				57		171	24		61		313
Percent				10.8		32.6	4.6		11.6		59.6
Std. Error				1.3		1.9	0.8		1.3		2.0
Number				425		1,274	179		455		2,333
All Fish											
Sample Size				83		285	41		117		526
Percent				15.8		54.1	7.8		22.3		100.0
Std. Error				1.5		2.0	1.1		1.7		
Number				619		2,123	306		872		3,920
Statistical Week 34 (August 20 - 26)											
Male											
Sample Size		1		11	1	42	11		28		94
Percent		0.4		4.2	0.4	16.2	4.2		10.8		36.2
Std. Error		0.4		1.2	0.4	2.1	1.2		1.8		2.8
Number		8		87	8	335	88		223		749
Female											
Sample Size				40		81	12		33		166
Percent				15.4		31.1	4.6		12.7		63.8
Std. Error				2.1		2.7	1.2		1.9		2.8
Number				319		645	95		263		1,322
All Fish											
Sample Size		1		51	1	123	23		61		260
Percent		0.4		19.6	0.4	47.3	8.8		23.5		100.0
Std. Error		0.4		2.3	0.4	2.9	1.7		2.5		
Number		8		406	8	980	183		486		2,071
Statistical Week 35 (August 27 - Sept. 2)											
Male											
Sample Size				10		45	7		31		93
Percent				5.3		24.1	3.7		16.6		49.7
Std. Error				1.5		2.8	1.3		2.5		3.3
Number				55		246	38		169		508
Female											
Sample Size				24		44	3		23		94
Percent				12.9		23.5	1.6		12.3		50.3
Std. Error				2.2		2.8	0.8		2.2		3.3
Number				131		240	16		126		513
All Fish											
Sample Size				34		89	10		54		187
Percent				18.2		47.6	5.3		28.9		100.0
Std. Error				2.6		3.3	1.5		3.0		
Number				186		486	54		295		1,021
Statistical Weeks 36 - 38 (Sept. 3 - Sept. 23)											
Male											
Sample Size				5		15	6		17		43
Percent				5.4		16.1	6.5		18.2		46.2
Std. Error				1.9		3.2	2.1		3.3		4.3
Number				16		47	19		53		135
Female											
Sample Size				3		14	4		29		50
Percent				3.2		15.1	4.3		31.2		53.8
Std. Error				1.5		3.1	1.7		4.0		4.3
Number				9		44	12		91		156
All Fish											
Sample Size				8		29	10		46		93
Percent				8.6		31.2	10.8		49.4		100.0
Std. Error				2.4		4.0	2.7		4.3		
Number				25		91	31		144		291

-continued-

Appendix B.1. (page 4 of 4).

	Brood Year and Age Class										
	1986		1985			1984		1983		1982	
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	2.4	Total
Combined Periods (Percentages are weighted by period catches)											
Male											
Sample Size	1	2	29	357	3	927	191	1	379	1	1,891
Percent	<0.1	<0.1	0.6	8.7	0.1	22.1	4.1	<0.1	6.5	<0.1	42.1
Std. Error	<0.1	<0.1	0.1	0.5	0.1	0.8	0.4	<0.1	0.4	<0.1	0.9
Number	26	25	803	12,553	125	31,978	5,957	22	9,451	51	60,991
Female											
Sample Size	3		43	524		1,434	191	1	378		2,574
Percent	<0.1		0.8	10.8		35.9	3.9	<0.1	6.3		57.9
Std. Error	<0.1		0.1	0.6		0.9	0.3	<0.1	0.4		0.9
Number	72		1,164	15,640		52,081	5,686	71	9,198		83,912
All Fish											
Sample Size	4	2	72	881	3	2,363	382	2	757	1	4,467
Percent	0.1	<0.1	1.4	19.5	0.1	58.0	8.0	0.1	12.9	<0.1	100.0
Std. Error	<0.1	<0.1	0.2	0.7	0.1	0.9	0.5	0.1	0.6	<0.1	
Number	98	25	1,968	28,193	125	84,092	11,643	93	18,648	51	144,936

Appendix B.2. Test for significant changes among periods in the age composition of sockeye salmon in the District 101 gill net catch by age class, 1989.

	Brood Year and Age Class									
	1986		1985			1984		1983		1982
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	2.4
Periods Compared										
1 , 2			S**	S**			S*			
1 , 3			S**	S**					S**	
1 , 4			S**	S**		S**			S**	
1 , 5			S**	S**		S**			S**	
1 , 6			S**	S		S**			S**	
1 , 7			S**	S**		S**			S**	
1 , 8			S**	S**		S**			S**	
1 , 9			S**	S*		S**				
1 , 10.			S**	S**						
1 , 11			S**	S*						
1 , 12			S**			S**			S**	
2 , 3				S**					S	
2 , 4			S			S**	S**		S**	
2 , 5			S*			S**	S**		S**	
2 , 6			S**			S**	S*		S**	
2 , 7			S**	S		S**	S**		S**	
2 , 8			S**	S**		S**	S**		S**	
2 , 9			S**			S**	S**			
2 , 10			S*							
2 , 11			S				S**		S*	
2 , 12				S*		S**			S**	
3 , 4				S**		S**	S*		S**	
3 , 5			S	S**		S**	S**		S*	
3 , 6			S*	S**		S**	S		S**	
3 , 7			S**			S**	S**		S**	
3 , 8			S**			S**	S**		S**	
3 , 9			S**	S**		S**	S*		S**	
3 , 10			S	S*					S**	
3 , 11				S*			S**		S**	
3 , 12				S**		S			S**	
4 , 5										
4 , 6										
4 , 7										
4 , 8				S**		S**				
4 , 9						S**			S**	
4 , 10						S**			S**	
4 , 11						S**			S**	
4 , 12				S*		S**			S**	
5 , 6										
5 , 7										
5 , 8				S**		S**				
5 , 9						S**			S**	
5 , 10						S**			S**	
5 , 11						S**			S**	
5 , 12				S*		S**			S**	
6 , 7				S*						
6 , 8				S**		S**				
6 , 9						S**			S**	
6 , 10						S**			S*	
6 , 11						S**			S**	
6 , 12				S		S**			S**	
7 , 8				S**		S*				
7 , 9				S**		S**			S**	
7 , 10						S**			S**	
7 , 11						S**			S**	
7 , 12				S**		S**			S**	
8 , 9				S**					S**	
8 , 10				S**		S*			S**	
8 , 11				S**		S			S**	
8 , 12				S**		S**			S**	
9 , 10						S				
9 , 11									S	
9 , 12						S**			S**	
10 , 11										
10 , 12				S*		S**			S**	
11 , 12				S		S**			S**	

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix B.3. Length composition of sockeye salmon in the District 101 gill net catch by sex, age class, and fishing period, 1989.

		Brood Year and Age Class						
		1985			1984		1983	
		0.3	1.2	2.1	1.3	2.2	2.3	Total
Statistical Week 25 (June 18 - 24)								
Male	Avg. Length	582	556		607	566	628	594
	Std. Error	13.5	4.3		6.4	24.9	6.1	6.0
	Sample Size	4	7		12	4	8	35
Female	Avg. Length	546	545		591	545	617	583
	Std. Error	10.7	7.8		4.4	8.3	8.5	4.3
	Sample Size	3	13		43	8	17	84
All Fish	Avg. Length	566	549		595	552	620	586
	Std. Error	11.0	5.4		3.8	9.7	6.1	3.5
	Sample Size	7	20		55	12	25	119
Statistical Week 26 (June 25 - July 1)								
Male	Avg. Length	563	557		608	553	628	590
	Std. Error	12.5	6.1		4.7	12.2	9.3	5.3
	Sample Size	2	10		22	7	7	48
Female	Avg. Length	570	529		587	544	595	571
	Std. Error	10.0	4.5		4.0	6.6	5.4	4.0
	Sample Size	2	11		34	10	9	66
All Fish	Avg. Length	566	542		595	547	609	579
	Std. Error	6.9	4.8		3.3	6.2	6.5	3.3
	Sample Size	4	21		56	17	16	114
Statistical Week 27 (July 2 - 8)								
Male	Avg. Length	559	529		594	553	609	577
	Std. Error	16.0	5.8		7.4	5.9	10.1	5.9
	Sample Size	2	10		20	5	10	47
Female	Avg. Length	538	534		582	537	593	566
	Std. Error	12.5	3.8		4.0	8.4	14.9	4.1
	Sample Size	2	15		32	6	6	61
All Fish	Avg. Length	548	532		587	545	603	571
	Std. Error	10.4	3.2		3.8	5.7	8.3	3.5
	Sample Size	4	25		52	11	16	108
Statistical Week 28 (July 9 - 15)								
Male	Avg. Length	550	532	530	615	548	628	585
	Std. Error		4.1		12.6	2.5	23.3	10.7
	Sample Size	1	5	1	10	2	3	22
Female	Avg. Length		534		584	540	625	575
	Std. Error		8.7		4.2		7.6	5.0
	Sample Size		10		34	1	3	48
All Fish	Avg. Length	550	533	530	591	545	627	578
	Std. Error		5.9		4.7	2.9	11.0	4.8
	Sample Size	1	15	1	44	3	6	70

-continued-

Appendix B.3. (page 2 of 3).

		Brood Year and Age Class						
		1985			1984		1983	
		0.3	1.2	2.1	1.3	2.2	2.3	Total
Statistical Week 29 (July 16 - 22)								
Male	Avg. Length		521		595	522	630	565
	Std. Error		4.4		8.9	14.2	30.0	9.3
	Sample Size		9		13	3	2	27
Female	Avg. Length		520		584	545	603	574
	Std. Error		6.9		5.6	35.0	14.9	6.0
	Sample Size		7		29	2	5	43
All Fish	Avg. Length		521		588	531	611	571
	Std. Error		3.8		4.8	14.7	13.2	5.1
	Sample Size		16		42	5	7	70
Statistical Week 30 (July 23 - 29)								
Male	Avg. Length		512		594	520	593	574
	Std. Error		13.3		5.5		14.5	8.3
	Sample Size		5		16	1	3	25
Female	Avg. Length		501		568	522	583	551
	Std. Error		6.4		4.0	10.4	24.0	5.3
	Sample Size		9		30	6	3	48
All Fish	Avg. Length		505		577	521	588	559
	Std. Error		6.1		3.7	8.8	12.8	4.7
	Sample Size		14		46	7	6	73
Statistical Week 31 (July 30 - August 5)								
Male	Avg. Length		552		604	568	637	597
	Std. Error		11.5		4.4	27.5	9.5	5.3
	Sample Size		10		31	2	7	50
Female	Avg. Length		535		582	561	576	570
	Std. Error		7.4		3.7	5.2	22.6	3.8
	Sample Size		16		50	5	4	75
All Fish	Avg. Length		541		591	563	615	581
	Std. Error		6.4		3.0	7.1	13.2	3.3
	Sample Size		26		81	7	11	125
Statistical Week 32 (August 6 - 12)								
Male	Avg. Length		536		607		639	596
	Std. Error		6.8		4.7		22.0	6.9
	Sample Size		10		28		7	45
Female	Avg. Length		516		585	535	633	559
	Std. Error		4.6		3.5	25.5		4.9
	Sample Size		26		43	2	1	72
All Fish	Avg. Length		521		594	535	638	573
	Std. Error		4.1		3.1	25.5	19.1	4.3
	Sample Size		36		71	2	8	117

-continued-

Appendix B.3. (page 3 of 3).

		Brood Year and Age Class						
		1985			1984		1983	
		0.3	1.2	2.1	1.3	2.2	2.3	Total
Statistical Week 33 (August 13 - 19)								
Male	Avg. Length		532		597	527	627	593
	Std. Error		18.0		4.1	6.7	8.8	5.6
	Sample Size		6		33	4	14	57
Female	Avg. Length		521		581	544	619	568
	Std. Error		6.7		5.1	10.5	11.2	5.3
	Sample Size		15		35	6	8	64
All Fish	Avg. Length		524		589	537	624	580
	Std. Error		6.9		3.4	7.2	6.8	4.0
	Sample Size		21		68	10	22	121
Statistical Week 34 (August 20 - 26)								
Male	Avg. Length		565	410	587	607	616	593
	Std. Error		45.0		7.3	31.8	8.4	7.5
	Sample Size		2	1	20	3	13	39
Female	Avg. Length		538		576	548	565	563
	Std. Error		10.8		6.1	42.5	8.0	5.0
	Sample Size		12		23	2	11	48
All Fish	Avg. Length		541	410	581	583	592	576
	Std. Error		10.7		4.7	26.3	7.8	4.6
	Sample Size		14	1	43	5	24	87
Statistical Week 35 (August 27 - Sept. 2)								
Male	Avg. Length		555		601	565	593	594
	Std. Error		5.0		4.8		5.4	3.7
	Sample Size		2		19	1	17	39
Female	Avg. Length		533		567		591	567
	Std. Error		17.9		7.0		8.2	6.3
	Sample Size		5		16		8	29
All Fish	Avg. Length		539		585	565	592	583
	Std. Error		13.0		5.0		4.4	3.8
	Sample Size		7		35	1	25	68
Statistical Weeks 36 - 38 (Sept. 3 - 23)								
Male	Avg. Length		519		597	535	608	586
	Std. Error		22.5		10.8		6.9	8.6
	Sample Size		5		10	1	13	29
Female	Avg. Length		545		583	517	577	570
	Std. Error		13.2		7.3	33.2	5.0	5.5
	Sample Size		3		9	3	18	33
All Fish	Avg. Length		529		590	521	590	578
	Std. Error		14.9		6.7	23.9	4.9	5.1
	Sample Size		8		19	4	31	62
Combined Periods (Lengths weighted by period catches)								
Male	Avg. Length	563	536	517	602	546	622	584
	Std. Error	7.7	3.3	60.0	1.8	6.2	3.2	1.9
	Sample Size	9	81	2	234	33	104	463
Female	Avg. Length	551	525		581	542	598	568
	Std. Error	7.5	2.3		1.4	3.8	3.5	1.4
	Sample Size	7	142		378	51	93	671
All Fish	Avg. Length	557	529	517	588	543	611	574
	Std. Error	5.8	1.9	60.0	1.1	3.4	2.5	1.2
	Sample Size	16	223	2	612	84	197	1,134

Appendix B.4. Test for significant changes among periods in the length composition of sockeye salmon in the District 101 gill net catch by age class, 1989.

	Brood Year and Age Class					
	1985			1984		1983
	0.3	1.2	2.1	1.3	2.2	2.3
Periods Compared						
1 , 2						
1 , 3		S**				S
1 , 4		S*				
1 , 5		S**				
1 , 6		S**		S**	S*	S*
1 , 7						
1 , 8		S**				
1 , 9		S**				
1 , 10				S*		S**
1 , 11						S**
1 , 12						S**
2 , 3		S		S		
2 , 4						
2 , 5		S**				
2 , 6		S**		S**	S**	
2 , 7					S	
2 , 8		S**				
2 , 9		S*				
2 , 10				S**		S
2 , 11				S		S*
2 , 12						S**
3 , 4						S
3 , 5		S*				
3 , 6		S**		S	S*	
3 , 7					S*	
3 , 8		S*				S
3 , 9						S*
3 , 10						
3 , 11						
3 , 12						
4 , 5		S				
4 , 6		S**		S*	S**	S*
4 , 7					S**	
4 , 8						
4 , 9						
4 , 10						S**
4 , 11						S**
4 , 12						S**
5 , 6		S*		S		
5 , 7		S**			S*	
5 , 8						
5 , 9						
5 , 10		S			S	
5 , 11						
5 , 12						
6 , 7		S**		S**	S**	
6 , 8		S*		S**		S*
6 , 9		S*		S**		S**
6 , 10		S**			S*	
6 , 11		S**				
6 , 12				S		
7 , 8		S**				
7 , 9		S			S**	
7 , 10				S		
7 , 11						
7 , 12					S	S
8 , 9						
8 , 10		S		S*		S*
8 , 11						S*
8 , 12						S**
9 , 10					S	S**
9 , 11						S**
9 , 12						S**
10 , 11						
10 , 12					S	
11 , 12						

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix B.5. Age composition of sockeye salmon in the District 101 Metlakatla gill net catch by sex, age class, and fishing period, 1989.

	Brood Year and Age Class									
	1986		1985			1984		1983		
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	Total
Statistical Weeks 25 - 28 (June 18 - July 15)										
Male										
Sample Size	1		1	18		76	19	1	14	130
Percent	0.4		0.4	6.4		27.2	6.8	0.4	5.0	46.6
Std. Error	0.4		0.4	1.5		2.6	1.5	0.4	1.3	3.0
Number	53		52	948		4,002	1,001	53	737	6,846
Female										
Sample Size			1	18		106	8		16	149
Percent			0.3	6.5		38.0	2.9		5.7	53.4
Std. Error			0.4	1.5		2.9	1.0		1.4	3.0
Number			52	948		5,582	421		843	7,846
All Fish										
Sample Size	1		2	36		182	27	1	30	279
Percent	0.4		0.7	12.9		65.2	9.7	0.4	10.7	100.0
Std. Error	0.4		0.5	2.0		2.8	1.8	0.4	1.8	
Number	53		104	1,896		9,584	1,422	53	1,580	14,692
Statistical Week 29 (July 16 - 22)										
Male										
Sample Size				20		48	6		7	81
Percent				9.1		21.9	2.8		3.2	37.0
Std. Error				1.9		2.8	1.1		1.2	3.2
Number				569		1,367	171		199	2,306
Female										
Sample Size				19		97	6		16	138
Percent				8.7		44.3	2.7		7.3	63.0
Std. Error				1.9		3.3	1.1		1.7	3.2
Number				541		2,761	171		455	3,928
All Fish										
Sample Size				39		145	12		23	219
Percent				17.8		66.2	5.5		10.5	100.0
Std. Error				2.5		3.1	1.5		2.0	
Number				1,110		4,128	342		654	6,234
Statistical Week 30 (July 23 - 29)										
Male										
Sample Size				34		91	6		16	147
Percent				14.4		38.8	2.6		6.8	62.6
Std. Error				2.3		3.1	1.0		1.6	3.1
Number				977		2,614	171		460	4,222
Female										
Sample Size				7		76	2		3	88
Percent				3.0		32.3	0.8		1.3	37.4
Std. Error				1.1		3.0	0.6		0.7	3.1
Number				201		2,183	58		86	2,528
All Fish										
Sample Size				41		167	8		19	235
Percent				17.4		71.1	3.4		8.1	100.0
Std. Error				2.4		2.9	1.2		1.8	
Number				1,178		4,797	229		546	6,750

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Appendix B.5. (page 2 of 2).

	Brood Year and Age Class									
	1986		1985			1984		1983		
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	Total
Statistical Week 31 (July 30 - August 5)										
Male										
Sample Size				18		42	6		9	75
Percent				14.4		33.6	4.8		7.2	60.0
Std. Error				3.1		4.1	1.9		2.2	4.3
Number				281		657	94		141	1,173
Female										
Sample Size				9		39			2	50
Percent				7.2		31.2			1.6	40.0
Std. Error				2.2		4.0			1.1	4.3
Number				141		610			31	782
All Fish										
Sample Size				27		81	6		11	125
Percent				21.6		64.8	4.8		8.8	100.0
Std. Error				3.6		4.1	1.9		2.5	
Number				422		1,267	94		172	1,955
Statistical Weeks 32 - 38 (August 6 - Sept. 23)										
Male										
Sample Size				16	2	67	10		12	107
Percent				7.3	0.9	30.6	4.6		5.5	48.9
Std. Error				1.7	0.6	3.0	1.4		1.5	3.3
Number				260	33	1,090	163		195	1,741
Female										
Sample Size		2		11		66	9		24	112
Percent		0.9		5.0		30.1	4.1		11.0	51.1
Std. Error		0.6		1.4		3.0	1.3		2.0	3.3
Number		33		179		1,074	146		390	1,822
All Fish										
Sample Size		2		27	2	133	19		36	219
Percent		0.9		12.3	0.9	60.7	8.7		16.5	100.0
Std. Error		0.6		2.2	0.6	3.2	1.8		2.4	
Number		33		439	33	2,164	309		585	3,563
Combined Periods (Percentages are weighted by period catches)										
Male										
Sample Size	1		1	106	2	324	47	1	58	540
Percent	0.2		0.2	9.1	0.1	29.3	4.8	0.2	5.2	49.1
Std. Error	0.2		0.2	0.9	0.1	1.5	0.7	0.2	0.7	1.6
Number	53		52	3,035	33	9,730	1,600	53	1,732	16,288
Female										
Sample Size		2	1	64		384	25		61	537
Percent		0.1	0.2	6.1		36.8	2.4		5.4	50.9
Std. Error		0.1	0.2	0.8		1.6	0.5		0.7	1.6
Number		33	52	2,010		12,210	796		1,805	16,906
All Fish										
Sample Size	1	2	2	170	2	708	72	1	119	1,077
Percent	0.2	0.1	0.3	15.2	0.1	66.1	7.2	0.2	10.7	100.0
Std. Error	0.2	0.1	0.2	1.2	0.1	1.6	0.9	0.2	1.0	
Number	53	33	104	5,045	33	21,940	2,396	53	3,537	33,194

Appendix B.6. Test for significant changes among periods in the age composition of sockeye salmon in the District 101 Metlakatla gill net catch by age class, 1989.

	Brood Year and Age Class								
	1986		1985			1984		1983	
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3
Periods Compared									
1 , 2									
1 , 3							S**		
1 , 4				S*					
1 , 5									S
2 , 3									
2 , 4									
2 , 5									S
3 , 4									
3 , 5						S*	S*		S**
4 , 5				S*					S

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix B.7. Length composition of sockeye salmon in the District 101 Metlakatla gill net catch by sex, age class, and fishing period, 1989.

		Brood Year and Age Class							
		1986		1985		1984		1983	
		0.2	1.1	1.2	2.1	1.3	2.2	2.3	Total
Statistical Weeks 25 - 28 (June 18 - July 15)									
Male	Avg. Length	470		546		595	549	599	581
	Std. Error			9.5		3.7	9.1	12.7	4.0
	Sample Size	1		14		57	11	10	93
Female	Avg. Length			546		591	554	560	581
	Std. Error			8.8		3.7	14.2	9.2	3.6
	Sample Size			10		73	8	7	98
All Fish	Avg. Length	470		546		592	551	583	581
	Std. Error			6.5		2.6	7.8	9.4	2.7
	Sample Size	1		24		130	19	17	191
Statistical Week 29 (July 16 - 22)									
Male	Avg. Length			531		594	539	583	573
	Std. Error			4.1		4.7	14.0	26.7	4.9
	Sample Size			19		47	6	6	78
Female	Avg. Length			530		580	535	585	572
	Std. Error			5.7		2.9	3.4	8.6	3.0
	Sample Size			16		86	6	15	123
All Fish	Avg. Length			530		585	537	584	572
	Std. Error			3.4		2.6	6.9	9.4	2.6
	Sample Size			35		133	12	21	201
Statistical Week 30 (July 23 - 29)									
Male	Avg. Length			533		592	553	600	579
	Std. Error			8.6		3.8	20.3	11.3	4.2
	Sample Size			21		62	3	13	99
Female	Avg. Length			512		579	520	620	573
	Std. Error			3.7		3.0			3.7
	Sample Size			5		54	1	1	61
All Fish	Avg. Length			529		586	545	602	577
	Std. Error			7.1		2.5	16.6	10.6	3.0
	Sample Size			26		116	4	14	160
Statistical Week 31 (July 30 - August 5)									
Male	Avg. Length			530		604	537	573	575
	Std. Error			7.5		5.9	13.9	27.3	6.9
	Sample Size			10		23	5	3	41
Female	Avg. Length			525		578			567
	Std. Error			4.5		5.0			5.7
	Sample Size			6		23			29
All Fish	Avg. Length			528		591	537	573	572
	Std. Error			4.9		4.3	13.9	27.3	4.7
	Sample Size			16		46	5	3	70
Statistical Weeks 32 - 38 (August 6 - Sept. 23)									
Male	Avg. Length			502	360	589	469	588	561
	Std. Error			41.7		5.1	70.6	7.5	11.2
	Sample Size			12	1	46	7	8	74
Female	Avg. Length		400	447		581	425	579	547
	Std. Error		50.0	57.7		3.2	71.1	3.5	11.2
	Sample Size		2	8		48	9	19	86
All Fish	Avg. Length		400	480	360	585	444	582	553
	Std. Error		50.0	33.7		3.0	49.2	3.3	7.9
	Sample Size		2	20	1	94	16	27	160
Combined Periods (Lengths weighted by period catches)									
Male	Avg. Length	470		535	360	594	539	593	577
	Std. Error			7.3		2.0	16.3	6.5	2.9
	Sample Size	1		76	1	235	32	40	385
Female	Avg. Length		400	524		585	528	580	573
	Std. Error		50.0	11.3		1.6	28.8	4.0	2.9
	Sample Size		2	45		284	24	42	397
All Fish	Avg. Length	470	400	531	360	589	535	586	575
	Std. Error		50.0	6.2		1.3	15.4	3.9	2.0
	Sample Size	1	2	121	1	519	56	82	782

Appendix B.8. Test for significant changes among periods in the length composition of sockeye salmon in the District 101 Metlakatla gill net catch by age class, 1989.

	Brood Year and Age Class						
	1986		1985		1984		1983
	0.2	1.1	1.2	2.1	1.3	2.2	2.3
Periods Compared							
1 , 2			S*		S*		
1 , 3			S		S		
1 , 4			S*				
1 , 5			S		S	S*	
2 , 3							
2 , 4							
2 , 5						S	
3 , 4							
3 , 5						S	S
4 , 5						S	

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix B.9. Age composition of sockeye salmon in the District 106-30 (upper Clarence Strait) gill net catch by sex, age class, and fishing period, 1989.

	Brood Year and Age Class								
	1986	1985		1984		1983			
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2	Total
Statistical Week 25 (June 18 - 24)									
Male									
Sample Size		4	14	69	14		18	1	120
Percent		1.2	4.3	21.3	4.3		5.5	0.3	36.9
Std. Error		0.5	1.0	1.9	1.0		1.1	0.3	2.3
Number		15	51	252	51		66	4	439
Female									
Sample Size	1	6	9	137	23	1	28		205
Percent	0.3	1.8	2.8	42.2	7.1	0.3	8.6		63.1
Std. Error	0.3	0.6	0.8	2.3	1.2	0.3	1.3		2.3
Number	4	22	33	500	84	4	102		749
All Fish									
Sample Size	1	10	23	206	37	1	46	1	325
Percent	0.3	3.0	7.1	63.5	11.4	0.3	14.1	0.3	100.0
Std. Error	0.3	0.8	1.2	2.3	1.5	0.3	1.7	0.3	
Number	4	37	84	752	135	4	168	4	1,188
Statistical Week 26 (June 25 - July 1)									
Male									
Sample Size			15	66	9		11		101
Percent			5.0	21.8	3.0		3.6		33.4
Std. Error			1.1	2.2	0.9		1.0		2.5
Number			88	387	53		65		593
Female									
Sample Size		3	18	135	20	2	23		201
Percent		1.0	6.0	44.7	6.6	0.7	7.6		66.6
Std. Error		0.5	1.2	2.6	1.3	0.4	1.4		2.5
Number		18	106	793	117	12	135		1,181
All Fish									
Sample Size		3	33	201	29	2	34		302
Percent		1.0	11.0	66.5	9.6	0.7	11.2		100.0
Std. Error		0.5	1.6	2.5	1.5	0.4	1.7		
Number		18	194	1,180	170	12	200		1,774
Statistical Week 27 (July 2 - 8)									
Male									
Sample Size		1	15	59	12		18		105
Percent		0.3	5.2	20.6	4.2		6.3		36.6
Std. Error		0.3	1.2	2.2	1.1		1.3		2.7
Number		9	131	513	105		157		915
Female									
Sample Size		1	12	133	13		23		182
Percent		0.4	4.2	46.3	4.5		8.0		63.4
Std. Error		0.3	1.1	2.8	1.2		1.5		2.7
Number		8	105	1,159	113		200		1,585
All Fish									
Sample Size		2	27	192	25		41		287
Percent		0.7	9.4	66.9	8.7		14.3		100.0
Std. Error		0.5	1.6	2.6	1.6		1.9		
Number		17	236	1,672	218		357		2,500

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Appendix B.9. (page 2 of 4).

	Brood Year and Age Class								
	1986	1985		1984		1983			
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2	Total
Statistical Week 28 (July 9 - 15)									
Male									
Sample Size		1	14	110	12		10		147
Percent		0.3	4.9	38.1	4.2		3.5		51.0
Std. Error		0.3	1.3	2.8	1.2		1.1		2.9
Number		61	855	6,720	733		611		8,980
Female									
Sample Size			11	110	9		11		141
Percent			3.8	38.3	3.1		3.8		49.0
Std. Error			1.1	2.8	1.0		1.1		2.9
Number			672	6,719	550		672		8,613
All Fish									
Sample Size		1	25	220	21		21		288
Percent		0.3	8.7	76.4	7.3		7.3		100.0
Std. Error		0.3	1.6	2.5	1.5		1.5		
Number		61	1,527	13,439	1,283		1,283		17,593
Statistical Week 29 (July 16 - 22)									
Male									
Sample Size			8	105	9		17		139
Percent			2.8	37.1	3.2		6.0		49.1
Std. Error			1.0	2.9	1.0		1.4		3.0
Number			561	7,357	631		1,191		9,740
Female									
Sample Size			5	121	4		14		144
Percent			1.8	42.8	1.4		4.9		50.9
Std. Error			0.8	2.9	0.7		1.3		3.0
Number			350	8,479	280		981		10,090
All Fish									
Sample Size			14	226	13		31		284
Percent			4.9	79.6	4.6		10.9		100.0
Std. Error			1.3	2.4	1.2		1.8		
Number			981	15,836	911		2,172		19,900
Statistical Week 30 (July 23 - 29)									
Male									
Sample Size		1	15	104	16		12		148
Percent		0.3	4.5	31.0	4.8		3.6		44.2
Std. Error		0.3	1.1	2.5	1.2		1.0		2.7
Number		55	830	5,753	885		664		8,187
Female									
Sample Size			7	160	6		14		187
Percent			2.1	47.8	1.8		4.1		55.8
Std. Error			0.8	2.7	0.7		1.1		2.7
Number			387	8,851	332		774		10,344
All Fish									
Sample Size		1	22	267	23		26		339
Percent		0.3	6.6	78.8	6.6		7.7		100.0
Std. Error		0.3	1.3	2.2	1.4		1.4		
Number		55	1,217	14,769	1,273		1,438		18,752

-continued-

Appendix B.9. (page 3 of 4).

	Brood Year and Age Class								
	1986	1985		1984		1983			
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2	Total
Statistical Week 31 (July 30 - August 5)									
Male									
Sample Size			17	108	14		20		159
Percent			5.8	36.6	4.8		6.7		53.9
Std. Error			1.3	2.8	1.2		1.4		2.9
Number			632	4,018	521		744		5,915
Female									
Sample Size			10	98	6		22		136
Percent			3.4	33.2	2.0		7.5		46.1
Std. Error			1.0	2.7	0.8		1.5		2.9
Number			372	3,646	223		818		5,059
All Fish									
Sample Size			27	206	20		42		295
Percent			9.2	69.8	6.8		14.2		100.0
Std. Error			1.7	2.6	1.4		2.0		
Number			1,004	7,664	744		1,562		10,974
Statistical Week 32 (August 6 - 12)									
Male									
Sample Size			22	78	19		18	1	138
Percent			7.6	27.1	6.6		6.3	0.3	47.9
Std. Error			1.5	2.6	1.4		1.4	0.3	2.9
Number			502	1,779	433		410	23	3,147
Female									
Sample Size		1	14	103	10	2	20		150
Percent		0.3	4.9	35.8	3.5	0.7	6.9		52.1
Std. Error		0.3	1.2	2.8	1.1	0.5	1.5		2.9
Number		23	319	2,348	228	46	456		3,420
All Fish									
Sample Size		1	36	181	29	2	38	1	288
Percent		0.3	12.5	62.9	10.1	0.7	13.2	0.3	100.0
Std. Error		0.3	1.9	2.8	1.7	0.5	2.0	0.3	
Number		23	821	4,127	661	46	866	23	6,567
Statistical Weeks 33 - 38 (August 13 - Sept. 23)									
Male									
Sample Size			31	90	24		28		173
Percent			8.8	25.7	6.9		8.0		49.4
Std. Error			1.5	2.3	1.3		1.4		2.6
Number			496	1,440	384		448		2,768
Female									
Sample Size			15	114	12	1	35		177
Percent			4.3	32.6	3.4	0.3	10.0		50.6
Std. Error			1.0	2.4	0.9	0.3	1.6		2.6
Number			240	1,824	192	16	560		2,832
All Fish									
Sample Size			46	204	36	1	63		350
Percent			13.1	58.3	10.3	0.3	18.0		100.0
Std. Error			1.8	2.6	1.6	0.3	2.0		
Number			736	3,264	576	16	1,008		5,600

-continued-

Appendix B.9. (page 4 of 4).

	Brood Year and Age Class								
	1986	1985		1984		1983			
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2	Total
Combined Periods (Percentages are weighted by period catches)									
Male									
Sample Size		7	151	789	129		152	2	1,230
Percent		0.2	4.9	33.4	4.5		5.1	<0.1	48.1
Std. Error		0.1	0.5	1.1	0.5		0.5	<0.1	1.2
Number		140	4,146	28,219	3,796		4,356	27	40,684
Female									
Sample Size	1	11	101	1,111	103	6	190		1,523
Percent	<0.1	0.1	3.1	40.5	2.5	0.1	5.6		51.9
Std. Error	<0.1	<0.1	0.4	1.2	0.3	<0.1	0.5		1.2
Number	4	71	2,584	34,319	2,119	78	4,698		43,873
All Fish									
Sample Size	1	18	253	1,903	233	6	342	2	2,758
Percent	<0.1	0.2	8.0	73.9	7.0	0.1	10.7	<0.1	100.0
Std. Error	<0.1	0.1	0.6	1.0	0.6	<0.1	0.7	<0.1	
Number	4	211	6,800	62,703	5,971	78	9,054	27	84,848

Appendix B.10. Test for significant changes among periods in the age composition of sockeye salmon in the District 106-30 (upper Clarence Strait) gill net catch by age class, 1989.

	Brood Year and Age Class							
	1986	1985		1984		1983		
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	3.2
Periods Compared								
1 , 2								
1 , 3		S						
1 , 4		S*		S**			S**	
1 , 5		S**		S**	S**			
1 , 6		S**		S**	S		S**	
1 , 7		S**			S			
1 , 8		S*	S*					
1 , 9		S**	S**					
2 , 3								
2 , 4				S**				
2 , 5			S**	S**	S*			
2 , 6			S	S**				
2 , 7								
2 , 8								
2 , 9				S*			S*	
3 , 4				S**			S**	
3 , 5			S	S**	S			
3 , 6				S**			S**	
3 , 7								
3 , 8								
3 , 9				S*				
4 , 5								
4 , 6								
4 , 7				S			S**	
4 , 8				S**			S*	
4 , 9			S	S**			S**	
5 , 6								
5 , 7			S	S**				
5 , 8			S**	S**	S**			
5 , 9			S**	S**	S**		S**	
6 , 7				S**			S**	
6 , 8			S**	S**			S*	
6 , 9			S**	S**			S**	
7 , 8				S				
7 , 9				S**				
8 , 9								

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix B.11. Length composition of sockeye salmon in the District 106-30 (upper Clarence Strait) gill net catch by sex, age class, and fishing period, 1989.

		Brood Year and Age Class						
		1985		1984		1983		
		0.3	1.2	1.3	2.2	1.4	2.3	Total
Statistical Week 25 (June 18 - 24)								
Male	Avg. Length	578	531	591	528		583	579
	Std. Error	19.5	5.0	4.9	29.6			6.3
	Sample Size	2	2	20	3		1	28
Female	Avg. Length		518	571	533	576	566	564
	Std. Error			3.7	12.9		7.9	3.8
	Sample Size		1	24	4	1	9	39
All Fish	Avg. Length	578	527	580	531	576	568	570
	Std. Error	19.5	5.2	3.3	13.2		7.2	3.5
	Sample Size	2	3	44	7	1	10	67
Statistical Week 26 (June 25 - July 1)								
Male	Avg. Length		623	595	559		570	589
	Std. Error		11.0	12.7	22.5		46.5	10.9
	Sample Size		2	6	2		2	12
Female	Avg. Length			569	560		580	568
	Std. Error			11.8	16.6		23.7	8.7
	Sample Size			13	5		3	21
All Fish	Avg. Length		623	577	559		576	576
	Std. Error		11.0	9.3	12.4		19.8	6.9
	Sample Size		2	19	7		5	33
Statistical Week 27 (July 2 - 8)								
Male	Avg. Length	600	515	593	526		579	569
	Std. Error		6.0	7.3	12.0		10.8	6.8
	Sample Size	1	7	18	4		9	39
Female	Avg. Length		526	583	522		567	574
	Std. Error		11.2	2.9	7.2		9.5	3.5
	Sample Size		5	56	5		7	73
All Fish	Avg. Length	600	519	586	524		574	572
	Std. Error		5.7	2.8	6.2		7.3	3.3
	Sample Size	1	12	74	9		16	112
Statistical Week 28 (July 9 - 15)								
Male	Avg. Length	578	542	603	550		587	587
	Std. Error		8.3	5.1	6.2		4.4	5.1
	Sample Size	1	6	27	4		4	42
Female	Avg. Length		536	595	529		585	583
	Std. Error		4.9	4.7	7.6		17.1	5.4
	Sample Size		3	28	4		4	39
All Fish	Avg. Length	578	540	599	540		586	585
	Std. Error		5.6	3.5	6.0		8.2	3.7
	Sample Size	1	9	55	8		8	81

-continued-

Appendix B.11. (page 2 of 3).

		Brood Year and Age Class						
		1985		1984		1983		
		0.3	1.2	1.3	2.2	1.4	2.3	Total
Statistical Week 29 (July 16 - 22)								
Male	Avg. Length		531	604	538		591	594
	Std. Error		5.5	4.0	8.1		20.4	4.8
	Sample Size		3	43	4		5	55
Female	Avg. Length		552	584	569		597	583
	Std. Error		10.5	3.7	10.5		6.5	3.4
	Sample Size		2	44	2		2	50
All Fish	Avg. Length		539	594	548		593	589
	Std. Error		6.7	2.9	8.7		14.2	3.0
	Sample Size		5	87	6		7	105
Statistical Week 30 (July 23 - 29)								
Male	Avg. Length		593	599	536		602	591
	Std. Error		28.9	5.7	4.8		12.7	5.7
	Sample Size		4	26	5		6	41
Female	Avg. Length		537	589	549		580	585
	Std. Error		27.0	3.3	39.8		15.0	3.8
	Sample Size		2	52	3		2	59
All Fish	Avg. Length		574	593	541		597	588
	Std. Error		22.8	2.9	13.5		10.4	3.2
	Sample Size		6	78	8		8	100
Statistical Week 31 (July 30 - August 5)								
Male	Avg. Length		525	587	540		589	577
	Std. Error		4.7	3.9	5.6		8.6	3.9
	Sample Size		6	49	8		9	72
Female	Avg. Length		523	588	536		588	581
	Std. Error		11.6	3.8	22.3		5.3	4.0
	Sample Size		3	33	3		11	50
All Fish	Avg. Length		524	588	539		588	579
	Std. Error		4.5	2.8	6.6		4.7	2.8
	Sample Size		9	82	11		20	122
Statistical Week 32 (August 6 - 12)								
Male	Avg. Length		516	608	529		571	577
	Std. Error		8.9	4.7	5.0		10.3	6.3
	Sample Size		10	31	6		7	54
Female	Avg. Length		531	591	539	623	554	578
	Std. Error		15.2	2.9	26.3		6.5	4.6
	Sample Size		7	39	4	1	4	55
All Fish	Avg. Length		522	598	533	623	565	577
	Std. Error		8.1	2.8	10.2		7.2	3.9
	Sample Size		17	70	10	1	11	109

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Appendix B.11. (page 3 of 3).

		Brood Year and Age Class						
		1985		1984		1983		
		0.3	1.2	1.3	2.2	1.4	2.3	Total
Statistical Weeks 33 - 38 (August 13 - Sept. 23)								
Male	Avg. Length		521	597	526		581	566
	Std. Error		6.4	6.7	8.7		9.5	6.2
	Sample Size		14	21	5		11	51
Female	Avg. Length		537	577	503		583	566
	Std. Error		13.9	4.0	14.4		5.3	4.9
	Sample Size		6	24	5		14	49
All Fish	Avg. Length		526	586	514		582	566
	Std. Error		6.1	4.1	8.8		5.0	3.9
	Sample Size		20	45	10		25	100
Combined Periods (Lengths weighted by period catches)								
Male	Avg. Length	581	546	600	539		589	586
	Std. Error	9.7	4.9	1.8	3.2		4.2	2.0
	Sample Size	4	54	241	41		54	394
Female	Avg. Length		537	588	543	616	584	581
	Std. Error		5.2	1.3	6.3	23.5	3.2	1.5
	Sample Size		29	313	35	2	56	435
All Fish	Avg. Length	581	544	593	539	616	588	583
	Std. Error	9.7	3.6	1.1	3.3	23.5	2.6	1.2
	Sample Size	4	83	554	76	2	110	829

Appendix B.12. Test for significant changes among periods in the length composition of sockeye salmon in the District 106-30 (upper Clarence Strait) gill net catch by age class, 1989.

	Brood Year and Age Class					
	1985		1984		1983	
Periods Compared	0.3	1.2	1.3	2.2	1.4	2.3
1 , 2		S**				
1 , 3						
1 , 4		S	S**			S
1 , 5			S**			
1 , 6		S*	S**			S*
1 , 7			S			S**
1 , 8			S**			
1 , 9						
2 , 3		S**		S**		
2 , 4		S**	S*			
2 , 5		S**	S			
2 , 6		S				
2 , 7		S**				
2 , 8		S**	S*	S		
2 , 9		S**		S**		
3 , 4		S**	S**	S		
3 , 5		S*	S*	S*		
3 , 6		S*	S			S
3 , 7				S		
3 , 8			S**			
3 , 9						
4 , 5						
4 , 6						
4 , 7		S*	S**			
4 , 8		S				S*
4 , 9		S	S**	S**		
5 , 6						
5 , 7		S	S			
5 , 8						S
5 , 9				S**		
6 , 7		S*				
6 , 8		S*				S**
6 , 9		S*				
7 , 8			S**			S**
7 , 9				S*		
8 , 9			S**			S

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix B.13. Age composition of sockeye salmon in the District 106-41 (Sumner Strait) gill net catch by sex, age class, and fishing period, 1989.

	Brood Year and Age Class									
	1986	1985		1984		1983			1982	
	1.1	0.3	1.2	1.3	2.2	1.4	2.3	3.2	3.3	Total
Statistical Week 25 (June 18 - 24)										
Male										
Sample Size		2	13	82	9		10			116
Percent		0.7	4.3	27.2	3.0		3.3			38.5
Std. Error		0.5	1.1	2.5	1.0		1.0			2.7
Number		34	218	1,375	151		168			1,946
Female										
Sample Size			13	140	15	2	15			185
Percent			4.3	46.5	5.0	0.7	5.0			61.5
Std. Error			1.1	2.8	1.2	0.5	1.2			2.7
Number			218	2,348	252	34	251			3,103
All Fish										
Sample Size		2	26	222	24	2	25			301
Percent		0.7	8.6	73.7	8.0	0.7	8.3			100.0
Std. Error		0.5	1.6	2.5	1.5	0.5	1.5			
Number		34	436	3,723	403	34	419			5,049
Statistical Week 26 (June 25 - July 1)										
Male										
Sample Size		3	16	109	4		13	1		146
Percent		1.0	5.5	37.3	1.4		4.5	0.3		50.0
Std. Error		0.6	1.3	2.8	0.7		1.2	0.3		2.9
Number		71	381	2,596	95		309	24		3,476
Female										
Sample Size		1	10	111	17		7			146
Percent		0.4	3.4	38.0	5.8		2.4			50.0
Std. Error		0.3	1.0	2.8	1.3		0.9			2.9
Number		24	238	2,643	405		167			3,477
All Fish										
Sample Size		4	26	220	21		20	1		292
Percent		1.4	8.9	75.3	7.2		6.9	0.3		100.0
Std. Error		0.7	1.6	2.5	1.5		1.4	0.3		
Number		95	619	5,239	500		476	24		6,953
Statistical Week 27 (July 2 - 8)										
Male										
Sample Size		2	17	79	10		15			123
Percent		0.7	5.5	25.9	3.2		4.8			40.1
Std. Error		0.5	1.3	2.4	1.0		1.2			2.7
Number		48	409	1,899	240		360			2,956
Female										
Sample Size		3	14	133	15		19			184
Percent		1.9	4.6	43.3	4.9		6.2			59.9
Std. Error		0.6	1.2	2.8	1.2		1.3			2.7
Number		72	336	3,196	361		457			4,422
All Fish										
Sample Size		5	31	213	25		34			308
Percent		1.6	10.1	69.2	8.1		11.0			100.0
Std. Error		0.7	1.7	2.6	1.5		1.8			
Number		120	745	5,119	601		817			7,402
Statistical Week 28 (July 9 - 15)										
Male										
Sample Size		3	16	98	10		8		1	136
Percent		1.0	5.4	33.1	3.4		2.7		0.3	45.9
Std. Error		0.6	1.3	2.7	1.0		0.9		0.3	2.9
Number		242	1,288	7,888	805		644		80	10,947
Female										
Sample Size		3	5	130	10		12			160
Percent		1.0	1.7	43.9	3.4		4.1			54.1
Std. Error		0.6	0.7	2.9	1.0		1.1			2.9
Number		241	402	10,464	805		966			12,878
All Fish										
Sample Size		6	21	228	20		20		1	296
Percent		2.0	7.1	77.0	6.8		6.8		0.3	100.0
Std. Error		0.8	1.5	2.4	1.5		1.5		0.3	
Number		483	1,690	18,352	1,610		1,610		80	23,825

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Appendix B.13. (page 2 of 3).

	Brood Year and Age Class									
	1986	1985		1984		1983			1982	
	1.1	0.3	1.2	1.3	2.2	1.4	2.3	3.2	3.3	Total
Statistical Week 29 (July 16 - 22)										
Male										
Sample Size	1		20	162	12		16			211
Percent	0.2		4.5	36.2	2.7		3.6			47.2
Std. Error	0.2		1.0	2.3	0.8		0.9			2.3
Number	46		925	7,493	555		740			9,759
Female										
Sample Size			18	198	13		7			236
Percent			4.0	44.3	2.9		1.6			52.8
Std. Error			0.9	2.3	0.8		0.6			2.3
Number			833	9,158	601		324			10,916
All Fish										
Sample Size	1		38	360	25		23			447
Percent	0.2		8.5	80.5	5.6		5.2			100.0
Std. Error	0.2		1.3	1.9	1.1		1.0			
Number	46		1,758	16,651	1,156		1,064			20,675
Statistical Week 30 (July 23 - 29)										
Male										
Sample Size			10	109	12		11			142
Percent			3.3	35.5	3.9		3.6			46.3
Std. Error			1.0	2.7	1.1		1.1			2.8
Number			515	5,617	618		567			7,317
Female										
Sample Size			7	130	3		25			165
Percent			2.2	42.4	1.0		8.1			53.7
Std. Error			0.8	2.8	0.6		1.5			2.8
Number			361	6,698	155		1,288			8,502
All Fish										
Sample Size			17	239	15		36			307
Percent			5.5	77.9	4.9		11.7			100.0
Std. Error			1.3	2.4	1.2		1.8			
Number			876	12,315	773		1,855			15,819
Statistical Week 31 (July 30 - August 5)										
Male										
Sample Size			16	97	12		15			140
Percent			5.0	30.1	3.7		4.7			43.5
Std. Error			1.2	2.5	1.0		1.2			2.7
Number			891	5,404	669		836			7,800
Female										
Sample Size			19	139	5	1	18			182
Percent			5.9	43.2	1.6	0.3	5.5			56.5
Std. Error			1.3	2.7	0.7	0.3	1.3			2.7
Number			1,059	7,744	278	56	1,002			10,139
All Fish										
Sample Size			35	236	17	1	33			322
Percent			10.9	73.3	5.3	0.3	10.2			100.0
Std. Error			1.7	2.4	1.2	0.3	1.7			
Number			1,950	13,148	947	56	1,838			17,939
Statistical Week 32 (August 6 - 12)										
Male										
Sample Size			21	66	15		19			121
Percent			6.7	20.9	4.8		6.1			38.5
Std. Error			1.4	2.2	1.2		1.3			2.6
Number			268	845	192		243			1,548
Female										
Sample Size			17	135	13		28			193
Percent			5.4	43.1	4.1		8.9			61.5
Std. Error			1.2	2.7	1.1		1.5			2.6
Number			218	1,728	166		358			2,470
All Fish										
Sample Size			38	201	28		47			314
Percent			12.1	64.0	8.9		15.0			100.0
Std. Error			1.8	2.6	1.5		1.9			
Number			486	2,573	358		601			4,018

-continued-

Appendix B.13. (page 3 of 3).

	Brood Year and Age Class									
	1986	1985		1984		1983			1982	
	1.1	0.3	1.2	1.3	2.2	1.4	2.3	3.2	3.3	Total
Statistical Week 33 (August 13 - 19)										
Male										
Sample Size			18	85	13	1	26			143
Percent			6.0	28.6	4.4	0.3	8.7			48.0
Std. Error			1.3	2.5	1.1	0.3	1.6			2.8
Number			267	1,263	193	15	386			2,124
Female										
Sample Size			24	105	5	1	20			155
Percent			8.1	35.2	1.6	0.4	6.7			52.0
Std. Error			1.5	2.7	0.7	0.3	1.4			2.8
Number			357	1,560	74	15	297			2,303
All Fish										
Sample Size			42	190	18	2	46			298
Percent			14.1	63.8	6.0	0.7	15.4			100.0
Std. Error			1.9	2.7	1.3	0.5	2.0			
Number			624	2,823	267	30	683			4,427
Statistical Weeks 34 - 38 (August 20 - Sept. 23)										
Male										
Sample Size			6	24	5		9			44
Percent			7.1	28.6	6.0		10.7			52.4
Std. Error			2.8	4.8	2.5		3.3			5.4
Number			127	508	106		191			932
Female										
Sample Size			3	28	1		8			40
Percent			3.6	33.3	1.2		9.5			47.6
Std. Error			2.0	5.1	1.2		3.1			5.4
Number			64	593	21		169			847
All Fish										
Sample Size			9	52	6		17			84
Percent			10.7	61.9	7.2		20.2			100.0
Std. Error			3.3	5.2	2.8		4.3			
Number			191	1,101	127		360			1,779
Combined Periods (Percentages are weighted by period catches)										
Male										
Sample Size	1	10	153	911	102	1	142	1	1	1,322
Percent	<0.1	0.4	4.9	32.3	3.4	<0.1	4.1	<0.1	0.1	45.2
Std. Error	<0.1	0.1	0.5	1.0	0.4	<0.1	0.4	<0.1	0.1	1.0
Number	46	395	5,289	34,888	3,624	15	4,444	24	80	48,805
Female										
Sample Size		7	130	1,249	97	4	159			1,646
Percent		0.3	3.8	42.8	2.9	0.1	4.9			54.8
Std. Error		0.1	0.4	1.0	0.3	0.1	0.4			1.0
Number		337	4,086	46,132	3,118	105	5,279			59,057
All Fish										
Sample Size	1	17	283	2,161	199	5	301	1	1	2,969
Percent	<0.1	0.7	8.7	75.1	6.2	0.1	9.0	<0.1	0.1	100.0
Std. Error	<0.1	0.2	0.6	0.9	0.5	0.1	0.6	<0.1	0.1	
Number	46	732	9,375	81,044	6,742	120	9,723	24	80	107,886

Appendix B.14. Test for significant changes among periods in the age composition of sockeye salmon in the District 106-41 (Sumner Strait) gill net catch by age class, 1989.

	Brood Year and Age Class								
	1986	1985		1984		1983			1982
	1.1	0.3	1.2	1.3	2.2	1.4	2.3	3.2	3.3
Periods Compared									
1 , 2									
1 , 3									
1 , 4									
1 , 5				S*					
1 , 6									
1 , 7									
1 , 8				S**			S**		
1 , 9			S*	S**			S**		
1 , 10				S*			S**		
2 , 3							S		
2 , 4									
2 , 5		S*							
2 , 6							S		
2 , 7									
2 , 8				S**			S**		
2 , 9			S	S**			S**		
2 , 10				S*			S**		
3 , 4				S*			S		
3 , 5		S*		S**			S**		
3 , 6		S	S	S**					
3 , 7		S							
3 , 8		S							
3 , 9		S							
3 , 10							S*		
4 , 5		S**							
4 , 6		S*					S*		
4 , 7		S*							
4 , 8		S*	S	S**			S**		
4 , 9		S*	S**	S**			S**		
4 , 10				S**			S**		
5 , 6							S**		
5 , 7				S*			S**		
5 , 8				S**			S**		
5 , 9			S*	S**			S**		
5 , 10				S**			S**		
6 , 7			S*						
6 , 8			S**	S**	S				
6 , 9			S**	S**					
6 , 10				S**			S		
7 , 8				S**			S		
7 , 9				S**			S		
7 , 10				S			S*		
8 , 9									
8 , 10									
9 , 10									

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix B.15. Length composition of sockeye salmon in the District 106-41 (Sumner Strait) gill net catch by sex, age class, and fishing period, 1989.

		Brood Year and Age Class							
		1985		1984		1983		1982	
		0.3	1.2	1.3	2.2	1.4	2.3	3.3	Total
Statistical Week 25 (June 18 - 24)									
Male	Avg. Length	596	538	596	541		591		585
	Std. Error		6.3	4.4	22.6		14.6		4.6
	Sample Size	1	6	38	3		5		53
Female	Avg. Length		524	577	554		567		571
	Std. Error		15.7	2.9	4.5		7.6		2.9
	Sample Size		5	66	6		5		82
All Fish	Avg. Length	596	531	584	549		579		577
	Std. Error		7.7	2.6	7.5		8.7		2.6
	Sample Size	1	11	104	9		10		135
Statistical Week 26 (June 25 - July 1)									
Male	Avg. Length	590	527	593	534		609		588
	Std. Error	10.4	13.2	3.4			21.2		4.0
	Sample Size	3	3	41	1		3		51
Female	Avg. Length		514	574	527		619		565
	Std. Error		7.1	3.7	8.1		15.5		4.4
	Sample Size		5	42	6		2		55
All Fish	Avg. Length	590	519	583	528		613		576
	Std. Error	10.4	6.5	2.7	6.9		12.8		3.2
	Sample Size	3	8	83	7		5		106
Statistical Week 27 (July 2 - 8)									
Male	Avg. Length	580	525	601	523		573		579
	Std. Error		4.9	3.8	11.3		12.1		5.4
	Sample Size	1	9	31	3		6		50
Female	Avg. Length	557	515	573	533		572		566
	Std. Error		6.5	3.1	8.2		7.5		3.2
	Sample Size	1	5	59	6		7		78
All Fish	Avg. Length	569	521	583	530		572		571
	Std. Error	11.5	4.0	2.8	6.4		6.6		2.9
	Sample Size	2	14	90	9		13		128
Statistical Week 28 (July 9 - 15)									
Male	Avg. Length	589	531	598	539		581	534	580
	Std. Error		7.6	3.2	14.6		17.5		4.8
	Sample Size	1	7	38	8		5	1	60
Female	Avg. Length			577	540		588		575
	Std. Error			3.4	8.8		8.1		3.4
	Sample Size			41	4		5		50
All Fish	Avg. Length	589	531	587	540		585	534	578
	Std. Error		7.6	2.6	9.9		9.2		3.0
	Sample Size	1	7	79	12		10	1	110

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Appendix B.15. (page 2 of 3).

		Brood Year and Age Class							
		1985		1984		1983		1982	
		0.3	1.2	1.3	2.2	1.4	2.3	3.3	Total
Statistical Week 29 (July 16 - 22)									
Male	Avg. Length		525	592	520		589		580
	Std. Error		7.3	5.4	16.0		15.4		6.2
	Sample Size		3	27	4		8		42
Female	Avg. Length		531	574	532		589		570
	Std. Error		21.1	3.3	6.1		3.0		3.4
	Sample Size		3	53	3		2		61
All Fish	Avg. Length		528	580	525		589		574
	Std. Error		10.1	3.0	9.2		12.2		3.3
	Sample Size		6	80	7		10		103
Statistical Week 30 (July 23 - 29)									
Male	Avg. Length		544	605	499		602		595
	Std. Error		18.5	4.3	16.1		11.6		5.2
	Sample Size		2	46	4		8		60
Female	Avg. Length		530	580			582		576
	Std. Error		8.5	2.6			7.0		2.8
	Sample Size		5	57			8		70
All Fish	Avg. Length		534	591	499		592		585
	Std. Error		7.6	2.7	16.1		7.0		3.0
	Sample Size		7	103	4		16		130
Statistical Week 31 (July 30 - August 5)									
Male	Avg. Length		567	585	540		591		578
	Std. Error		15.3	7.0	36.4		19.5		6.6
	Sample Size		8	32	5		5		50
Female	Avg. Length		556	572	523	543	577		570
	Std. Error		19.7	4.1			4.9		3.7
	Sample Size		5	37	1	1	8		52
All Fish	Avg. Length		562	578	537	543	583		574
	Std. Error		11.7	4.0	29.9		7.8		3.8
	Sample Size		13	69	6	1	13		102
Statistical Week 32 (August 6 - 12)									
Male	Avg. Length		514	587	521		586		562
	Std. Error		8.8	5.2	7.5		12.4		6.1
	Sample Size		7	22	10		9		48
Female	Avg. Length		519	567	525		573		560
	Std. Error		4.5	2.8	6.7		7.7		3.2
	Sample Size		6	44	6		14		70
All Fish	Avg. Length		516	574	522		578		561
	Std. Error		5.0	2.8	5.2		6.7		3.1
	Sample Size		13	66	16		23		118

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Appendix B.15. (page 3 of 3).

		Brood Year and Age Class							
		1985		1984		1983		1982	
		0.3	1.2	1.3	2.2	1.4	2.3	3.3	Total
Statistical Week 33 (August 13 - 19)									
Male	Avg. Length		541	601	529	636	572		588
	Std. Error		5.6	3.5	8.2		18.8		4.4
	Sample Size		8	45	3	1	5		62
Female	Avg. Length		539	582	535		566		571
	Std. Error		6.6	3.4	5.0		8.7		3.6
	Sample Size		8	33	2		8		51
All Fish	Avg. Length		540	593	531	636	568		580
	Std. Error		4.2	2.7	5.0		8.5		3.0
	Sample Size		16	78	5	1	13		113
Statistical Weeks 34 - 38 (August 20 - 26) Sept. 17 - 23									
Male	Avg. Length		520	573	523		618		561
	Std. Error		20.5	9.1			19.5		14.0
	Sample Size		3	4	1		2		10
Female	Avg. Length			561	525		561		556
	Std. Error			7.7			26.5		8.1
	Sample Size			5	1		2		8
All Fish	Avg. Length		520	566	524		589		559
	Std. Error		20.5	5.9	1.0		21.2		8.4
	Sample Size		3	9	2		4		18
Combined Periods (Lengths weighted by period catches)									
Male	Avg. Length	588	537	595	527	636	589	534	582
	Std. Error	5.1	3.7	1.5	5.9		4.8		1.8
	Sample Size	6	56	324	42	1	56	1	486
Female	Avg. Length	557	533	575	533	543	584		571
	Std. Error		4.1	1.1	3.0		3.0		1.1
	Sample Size	1	42	437	35	1	61		577
All Fish	Avg. Length	587	534	584	528	561	586	534	576
	Std. Error	6.3	2.7	1.0	3.5	46.5	2.8		1.0
	Sample Size	7	98	761	77	2	117	1	1063

Appendix B.16. Test for significant changes among periods in the length composition of sockeye salmon in the District 106-41 (Sumner Strait) gill net catch by age class, 1989.

	Brood Year and Age Class						
	1985		1984		1983		1982
	0.3	1.2	1.3	2.2	1.4	2.3	3.3
Periods Compared							
1 , 2				S*		S*	
1 , 3				S*			
1 , 4							
1 , 5				S*			
1 , 6			S	S**			
1 , 7		S*					
1 , 8			S**	S**			
1 , 9			S**	S*			
1 , 10			S**	S**			
2 , 3						S**	
2 , 4						S	
2 , 5							
2 , 6			S*	S			
2 , 7		S**				S*	
2 , 8			S**			S**	
2 , 9		S**	S**			S**	
2 , 10			S**				
3 , 4							
3 , 5							
3 , 6			S*	S		S*	
3 , 7		S**					
3 , 8			S*				
3 , 9		S**	S**				
3 , 10			S**				
4 , 5			S				
4 , 6				S*			
4 , 7		S*	S				
4 , 8			S**				
4 , 9							
4 , 10			S**				
5 , 6			S**				
5 , 7		S*					
5 , 8							
5 , 9			S**				
5 , 10			S*				
6 , 7		S*	S**				
6 , 8		S	S**				
6 , 9				S		S*	
6 , 10			S**				
7 , 8		S**					
7 , 9		S	S**				
7 , 10		S	S				
8 , 9		S**	S**				
8 , 10							
9 , 10			S**				

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix B.17. Age composition of sockeye salmon in the District 108 gill net catch by sex, age class, and fishing period, 1989.

	Brood Year and Age Class						
	1986	1985		1984		1983	
	0.2	0.3	1.2	1.3	2.2	2.3	Total
Statistical Weeks 25 - 27 (June 18 - July 8)							
Male							
Sample Size		18	5	57	6	4	90
Percent		9.2	2.5	29.1	3.1	2.0	45.9
Std. Error		1.5	0.8	2.4	0.9	0.8	2.7
Number		41	11	130	14	9	205
Female							
Sample Size		12	7	74	4	9	106
Percent		6.1	3.6	37.8	2.0	4.6	54.1
Std. Error		1.3	1.0	2.6	0.8	1.1	2.7
Number		27	16	169	9	21	242
All Fish							
Sample Size		30	12	131	10	13	196
Percent		15.3	6.1	66.9	5.1	6.6	100.0
Std. Error		1.9	1.3	2.5	1.2	1.3	
Number		68	27	299	23	30	447
Statistical Week 28 (July 9 - 15)							
Male							
Sample Size	2	38	12	90	5	4	151
Percent	0.6	11.7	3.7	27.9	1.6	1.2	46.7
Std. Error	0.4	1.7	1.0	2.4	0.7	0.6	2.7
Number	27	514	163	1,218	68	54	2,044
Female							
Sample Size		39	10	114	1	8	172
Percent		12.1	3.1	35.3	0.3	2.5	53.3
Std. Error		1.7	0.9	2.6	0.3	0.8	2.7
Number		528	135	1,544	14	108	2,329
All Fish							
Sample Size	2	77	22	204	6	12	323
Percent	0.6	23.8	6.8	63.2	1.9	3.7	100.0
Std. Error	0.4	2.3	1.4	2.6	0.7	1.0	
Number	27	1,042	298	2,762	82	162	4,373

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Appendix B.17. (page 2 of 2).

	Brood Year and Age Class						
	1986	1985		1984		1983	
	0.2	0.3	1.2	1.3	2.2	2.3	Total
Statistical Week 29 (July 16 - 22)							
Male							
Sample Size		30	9	84	1	3	127
Percent		10.8	3.2	30.3	0.4	1.1	45.8
Std. Error		1.8	1.0	2.7	0.3	0.6	2.9
Number		384	115	1,074	12	38	1,623
Female							
Sample Size		36	5	104	2	3	150
Percent		13.0	1.8	37.6	0.7	1.1	54.2
Std. Error		1.9	0.8	2.8	0.5	0.6	2.9
Number		460	64	1,329	26	39	1,918
All Fish							
Sample Size		66	14	188	3	6	277
Percent		23.8	5.0	67.9	1.1	2.2	100.0
Std. Error		2.5	1.3	2.7	0.6	0.8	
Number		844	179	2,403	38	77	3,541
Statistical Weeks 30 - 36 (July 23 - Sept. 9)							
Male							
Sample Size		29	7	91	7	2	136
Percent		9.7	2.3	30.3	2.3	0.7	45.3
Std. Error		1.6	0.8	2.4	0.8	0.4	2.6
Number		166	40	521	40	11	778
Female							
Sample Size		29	6	123	1	5	164
Percent		9.7	2.0	41.0	0.3	1.7	54.7
Std. Error		1.6	0.7	2.6	0.3	0.7	2.6
Number		166	34	703	6	29	938
All Fish							
Sample Size		59	13	214	8	7	301
Percent		19.6	4.3	71.1	2.7	2.3	100.0
Std. Error		2.1	1.1	2.4	0.8	0.8	
Number		338	74	1,224	46	40	1,722
Combined Periods (Percentages are weighted by period catches)							
Male							
Sample Size	2	115	33	322	19	13	504
Percent	0.3	11.0	3.3	29.2	1.3	1.1	46.2
Std. Error	0.2	1.0	0.6	1.5	0.3	0.3	1.6
Number	27	1,105	329	2,943	134	112	4,650
Female							
Sample Size		116	28	415	8	25	592
Percent		11.7	2.5	37.2	0.5	1.9	53.8
Std. Error		1.1	0.5	1.6	0.2	0.4	1.6
Number		1,181	249	3,745	55	197	5,427
All Fish							
Sample Size	2	232	61	737	27	38	1,097
Percent	0.3	22.7	5.7	66.3	1.9	3.1	100.0
Std. Error	0.2	1.4	0.8	1.5	0.4	0.6	
Number	27	2,292	578	6,688	189	309	10,083

Appendix B.18. Test for significant changes among periods in the age composition of sockeye salmon in the District 108 gill net catch by age class, 1989.

	Brood Year and Age Class					
	1986	1985		1984		1983
	0.2	0.3	1.2	1.3	2.2	2.3
Periods Compared						
1 , 2		S*			S	
1 , 3		S*			S**	S*
1 , 4						S*
2 , 3						
2 , 4				S*		
3 , 4						

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix B.19. Length composition of sockeye salmon in the District 108 gill net catch by sex, age class, and fishing period, 1989.

		Brood Year and Age Class					
		1985		1984		1983	
		0.3	1.2	1.3	2.2	2.3	Total
Statistical Weeks 25 - 27 (June 18 - July 8)							
Male	Avg. Length	601	534	609	532	592	597
	Std. Error	5.0	22.2	3.5	9.4	19.0	3.9
	Sample Size	18	5	54	6	4	87
Female	Avg. Length	574	535	582	536	569	576
	Std. Error	6.0	10.1	2.5	5.7	8.2	2.5
	Sample Size	11	6	70	3	8	98
All Fish	Avg. Length	591	535	594	534	577	586
	Std. Error	4.5	10.8	2.4	6.3	8.5	2.4
	Sample Size	29	11	124	9	12	185
Statistical Week 28 (July 9 - 15)							
Male	Avg. Length	593	478	605	517	618	589
	Std. Error	3.8	11.0	3.6		21.0	5.0
	Sample Size	21	7	45	1	2	76
Female	Avg. Length	575	511	582		574	576
	Std. Error	4.1	6.6	2.7		11.7	2.9
	Sample Size	17	5	53		3	78
All Fish	Avg. Length	585	492	593	517	592	582
	Std. Error	3.1	8.3	2.5		14.2	2.9
	Sample Size	38	12	98	1	5	154
Statistical Week 29 (July 16 - 22)							
Male	Avg. Length	589	455	593			586
	Std. Error	8.3	5.0	5.8			6.3
	Sample Size	9	2	35			46
Female	Avg. Length	568	530	581	506	567	575
	Std. Error	8.1	20.0	4.1		6.6	3.8
	Sample Size	11	2	39	1	3	56
All Fish	Avg. Length	577	493	587	506	567	580
	Std. Error	6.1	23.2	3.5		6.6	3.5
	Sample Size	20	4	74	1	3	102
Statistical Weeks 30 - 36 (July 23 - Sept. 9)							
Male	Avg. Length	598	509	598	506	547	587
	Std. Error	3.9	15.7	2.6	11.1	81.0	3.5
	Sample Size	25	7	83	7	2	124
Female	Avg. Length	570	512	573	524	559	570
	Std. Error	3.1	8.0	1.6		8.7	1.7
	Sample Size	27	5	108	1	5	146
All Fish	Avg. Length	583	511	584	508	556	577
	Std. Error	3.1	9.4	1.7	9.9	18.8	1.9
	Sample Size	53	12	191	8	7	271
Combined Periods (Lengths weighted by period catches)							
Male	Avg. Length	593	478	600	515	598	588
	Std. Error	2.4	9.6	1.8	7.4	20.5	2.2
	Sample Size	73	21	217	14	8	333
Female	Avg. Length	572	519	580	514	569	574
	Std. Error	2.3	5.2	1.2	6.7	4.5	1.2
	Sample Size	66	18	270	5	19	378
All Fish	Avg. Length	582	497	589	512	576	581
	Std. Error	1.9	5.9	1.2	5.8	6.8	1.3
	Sample Size	140	39	487	19	27	712

Appendix B.20. Test for significant changes among periods in the length composition of sockeye salmon in the District 108 gill net catch by age class, 1989.

	Brood Year and Age Class				
	1985		1984		1983
	0.3	1.2	1.3	2.2	2.3
Periods Compared					
1 , 2		S**			
1 , 3	S				
1 , 4		S	S**	S*	
2 , 3					
2 , 4			S**		
3 , 4					

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix B.21. Age composition of sockeye salmon in the Canadian commercial gill net catch in the Stikine River by sex, age class, and fishing period, 1989.

	Brood Year and Age Class									
	1986	1985		1984			1983		1982	
	0.2	0.3	1.2	0.4	1.3	2.2	1.4	2.3	2.4	Total
Statistical Weeks 26 - 27 (June 25 - July 8)										
Male										
Sample Size		21	2	1	116	2		25		167
Percent		6.1	0.6	0.3	33.5	0.6		7.2		48.3
Std. Error		1.1	0.4	0.3	2.2	0.4		1.2		2.4
Number		90	9	4	498	9		107		717
Female										
Sample Size		22	8		120	8	2	19		179
Percent		6.4	2.3		34.7	2.3	0.6	5.5		51.7
Std. Error		1.2	0.7		2.2	0.7	0.4	1.1		2.4
Number		94	34		516	34	9	82		769
All Fish										
Sample Size		43	10	1	236	10	2	44		346
Percent		12.4	2.9	0.3	68.2	2.9	0.6	12.7		100.0
Std. Error		1.6	0.8	0.3	2.2	0.8	0.4	1.6		
Number		184	43	4	1,014	43	9	189		1,486
Statistical Week 28 (July 9 - 15)										
Male										
Sample Size		20	11		52	5		8		96
Percent		8.5	4.7		22.0	2.1		3.4		40.7
Std. Error		1.5	1.1		2.2	0.8		1.0		2.6
Number		59	32		153	15		23		282
Female										
Sample Size		14	11		99	9	1	6		140
Percent		5.9	4.7		41.9	3.8	0.4	2.5		59.3
Std. Error		1.3	1.1		2.6	1.0	0.3	0.8		2.6
Number		41	32		291	26	3	18		411
All Fish										
Sample Size		34	22		151	14	1	14		236
Percent		14.4	9.3		64.0	5.9	0.4	5.9		100.0
Std. Error		1.9	1.5		2.5	1.3	0.3	1.3		
Number		100	65		443	41	3	41		693
Statistical Week 29 (July 16 - 22)										
Male										
Sample Size		37	22		165	6		10		240
Percent		7.5	4.5		33.4	1.2		2.0		48.6
Std. Error		1.1	0.9		2.1	0.5		0.6		2.2
Number		561	333		2,501	91		152		3,638
Female										
Sample Size		37	18		177	12	1	9		254
Percent		7.5	3.6		35.8	2.4	0.2	1.8		51.4
Std. Error		1.1	0.8		2.1	0.7	0.2	0.6		2.2
Number		561	273		2,684	182	15	136		3,851
All Fish										
Sample Size		74	40		342	18	1	19		494
Percent		15.0	8.1		69.2	3.6	0.2	3.8		100.0
Std. Error		1.6	1.2		2.0	0.8	0.2	0.8		
Number		1,122	606		5,185	273	15	288		7,489
Statistical Week 30 (July 23 - 29)										
Male										
Sample Size	4	16	23		166	7		11		227
Percent	0.7	2.9	4.1		29.7	1.3		2.0		40.6
Std. Error	0.3	0.7	0.8		1.8	0.4		0.6		2.0
Number	35	141	203		1,464	62		97		2,002
Female										
Sample Size		49	8	1	247	12		15		332
Percent		8.8	1.4	0.2	44.2	2.1		2.7		59.4
Std. Error		1.1	0.5	0.2	2.0	0.6		0.6		2.0
Number		432	70	9	2,178	106		132		2,927
All Fish										
Sample Size	4	65	31	1	413	19		26		559
Percent	0.7	11.6	5.5	0.2	73.9	3.4		4.7		100.0
Std. Error	0.3	1.3	0.9	0.2	1.8	0.7		0.8		
Number	35	573	273	9	3,642	168		229		4,929

-continued-

Appendix B.21. (page 2 of 2).

	Brood Year and Age Class									
	1986	1985		1984			1983		1982	
	0.2	0.3	1.2	0.4	1.3	2.2	1.4	2.3	2.4	Total
Statistical Weeks	31 - 37 (July 30 - Sept. 16)									
Male										
Sample Size	1	13	9		69	3		1		96
Percent	0.3	4.4	3.0		23.2	1.0		0.3		32.2
Std. Error	0.3	1.1	0.9		2.3	0.5		0.3		2.6
Number	9	113	78		597	26		9		832
Female										
Sample Size		30	9	1	150	5		6	1	202
Percent		10.1	3.0	0.3	50.3	1.7		2.0	0.3	67.8
Std. Error		1.6	0.9	0.3	2.7	0.7		0.8	0.3	2.6
Number		260	78	9	1,299	43		52	9	1,750
All Fish										
Sample Size	1	43	18	1	219	8		7	1	298
Percent	0.3	14.4	6.0	0.3	73.5	2.7		2.3	0.3	100.0
Std. Error	0.3	1.9	1.3	0.3	2.4	0.9		0.8	0.3	
Number	9	373	156	9	1,896	69		61	9	2,582
Combined Periods (Percentages are weighted by period catches)										
Male										
Sample Size	5	107	67	1	568	23		55		826
Percent	0.3	5.6	3.8	<0.1	30.4	1.2		2.3		43.5
Std. Error	0.1	0.6	0.5	<0.1	1.1	0.3		0.3		1.2
Number	44	964	655	4	5,213	203		388		7,471
Female										
Sample Size		152	54	2	793	46	4	55	1	1,107
Percent		8.1	2.8	0.1	40.6	2.3	0.2	2.4	0.1	56.5
Std. Error		0.7	0.4	0.1	1.2	0.4	0.1	0.3	<0.1	1.2
Number		1,388	487	17	6,968	391	27	420	9	9,708
All Fish										
Sample Size	5	259	121	3	1,361	69	4	110	1	1,933
Percent	0.3	13.7	6.7	0.1	70.9	3.5	0.2	4.7	0.1	100.0
Std. Error	0.1	0.8	0.6	0.1	1.1	0.4	0.1	0.5	<0.1	
Number	44	2,352	1,142	22	12,181	594	27	808	9	17,179

Appendix B.22. Test for significant changes among periods in the age composition of sockeye salmon in the Canadian commercial gill net catch in the Stikine River by age class, 1989.

	Brood Year and Age Class								
	1986	1985		1984			1983		1982
	0.2	0.3	1.2	0.4	1.3	2.2	1.4	2.3	2.4
Periods Compared									
1 . 2			S**					S**	
1 . 3			S**					S**	
1 . 4			S		S			S**	
1 . 5			S					S**	
2 . 3									
2 . 4			S		S**				
2 . 5					S*	S		S	
3 . 4									
3 . 5									
4 . 5									

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix B.23. Length composition of sockeye salmon in the Canadian commercial gill net catch in the Stikine River by sex, age class, and fishing period, 1989.

		Brood Year and Age Class									
		1986	1985		1984			1983		1982	
		0.2	0.3	1.2	0.4	1.3	2.2	1.4	2.3	2.4	Total
Statistical Weeks 26 - 27 (June 25 - July 8)											
Male	Avg. Length		609	560	609	613	600		603		610
	Std. Error		4.6	10.5		2.2	24.5		7.8		2.1
	Sample Size		21	2	1	116	2		25		167
Female	Avg. Length		573	520		597	536	625	590		587
	Std. Error		4.8	8.3		2.2	9.3	21.0	5.9		2.4
	Sample Size		22	8		120	8	2	19		179
All Fish	Avg. Length		590	528	609	605	549	625	597		598
	Std. Error		4.3	8.6		1.7	11.8	21.0	5.2		1.7
	Sample Size		43	10	1	236	10	2	44		346
Statistical Week 28 (July 9 - 15)											
Male	Avg. Length		613	544		620	550		626		607
	Std. Error		4.7	17.7		3.4	10.3		8.2		4.1
	Sample Size		20	11		52	5		8		96
Female	Avg. Length		585	545		602	546	604	602		592
	Std. Error		6.3	10.4		2.6	5.8		6.7		2.7
	Sample Size		14	11		99	9	1	6		140
All Fish	Avg. Length		602	544		608	547	604	615		598
	Std. Error		4.4	10.0		2.2	5.0		6.3		2.3
	Sample Size		34	22		151	14	1	14		236
Statistical Week 29 (July 16 - 22)											
Male	Avg. Length		614	520		619	537		615		607
	Std. Error		3.9	9.0		2.1	15.7		5.0		2.7
	Sample Size		37	22		165	6		10		240
Female	Avg. Length		585	529		603	540	657	593		592
	Std. Error		4.2	5.1		1.7	11.3		8.9		2.1
	Sample Size		37	18		177	12	1	9		254
All Fish	Avg. Length		599	524		611	539	657	604		599
	Std. Error		3.3	5.4		1.4	8.9		5.5		1.7
	Sample Size		74	40		342	18	1	19		494
Statistical Week 30 (July 23 - 29)											
Male	Avg. Length	463	614	486		616	538		616		598
	Std. Error	16.0	4.9	9.9		2.1	8.9		9.6		3.6
	Sample Size	4	16	23		166	7		11		227
Female	Avg. Length		589	530	567	595	534		591		590
	Std. Error		2.6	4.8		1.7	5.3		6.1		1.6
	Sample Size		49	8	1	247	12		15		332
All Fish	Avg. Length	463	595	497	567	603	535		601		593
	Std. Error	16.0	2.7	8.2		1.4	4.6		5.8		1.7
	Sample Size	4	65	31	1	413	19		26		559
Statistical Weeks 31 - 37 (July 30 - Sept. 16)											
Male	Avg. Length	449	604	502		607	539		609		593
	Std. Error		12.2	12.8		2.6	38.0				4.6
	Sample Size	1	13	9		69	3		1		96
Female	Avg. Length		579	515	631	579	534		571	575	575
	Std. Error		4.3	7.3		2.2	9.4		7.9		2.1
	Sample Size		30	9	1	150	5		6	1	202
All Fish	Avg. Length	449	587	509	631	588	536		577	575	581
	Std. Error		5.0	7.3		2.0	13.7		8.6		2.1
	Sample Size	1	43	18	1	219	8		7	1	298
Combined Periods (Lengths weighted by period catches)											
Male	Avg. Length	458	612	512	609	616	543		614		603
	Std. Error	12.7	2.4	6.1		1.1	7.7		4.4		1.5
	Sample Size	5	107	67	1	568	23		55		826
Female	Avg. Length		584	527	589	596	537	648	589	575	588
	Std. Error		1.8	3.5	32.0	1.0	3.8	13.9	3.3		0.9
	Sample Size		152	54	2	793	46	4	55	1	1107
All Fish	Avg. Length	458	596	515	592	605	539	648	599	575	595
	Std. Error	12.7	1.7	3.8	18.8	0.8	3.6	13.9	2.9		0.9
	Sample Size	5	259	121	3	1361	69	4	110	1	1933

Appendix B.24. Test for significant changes among periods in the length composition of sockeye salmon in the Canadian commercial gill net catch in the Stikine River by age class, 1989.

	Brood Year and Age Class								
	1986	1985		1984			1983		1982
	0.2	0.3	1.2	0.4	1.3	2.2	1.4	2.3	2.4
Periods Compared									
1 . 2		S						S*	
1 . 3		S			S**				
1 . 4			S**						
1 . 5			S		S**			S*	
2 . 3			S						
2 . 4			S**		S	S			
2 . 5		S*	S**		S**			S**	
3 . 4			S**		S**				
3 . 5		S*	S		S**			S**	
4 . 5					S**			S**	

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix B.25. Age composition of sockeye salmon in the District 111 gill net catch by sex, age class, and fishing period, 1989.

	Brood Year and Age Class									
	1986	1985			1984			1983		
	0.2	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	Total
Statistical Week 25 (June 18 - 24)										
Male										
Sample Size		6	25		1	248	2		14	296
Percent		1.0	4.2		0.2	41.2	0.3		2.3	49.2
Std. Error		0.4	0.8		0.2	1.9	0.2		0.6	1.9
Number		61	254		10	2,522	20		142	3,009
Female										
Sample Size		8	28			235	5	1	29	306
Percent		1.3	4.7			39.0	0.8	0.2	4.8	50.8
Std. Error		0.4	0.8			1.9	0.4	0.2	0.8	1.9
Number		81	285			2,388	51	10	295	3,110
All Fish										
Sample Size		14	53		1	483	7	1	43	602
Percent		2.3	8.9		0.2	80.2	1.1	0.2	7.1	100.0
Std. Error		0.6	1.1		0.2	1.5	0.4	0.2	1.0	
Number		142	539		10	4,910	71	10	437	6,119
Statistical Week 26 (June 25 - July 1)										
Male										
Sample Size		17	24			224	2	2	18	287
Percent		3.0	4.2			38.9	0.3	0.3	3.1	49.8
Std. Error		0.7	0.8			1.9	0.2	0.2	0.7	2.0
Number		209	295			2,758	25	25	222	3,534
Female										
Sample Size		12	24			225	2	1	25	289
Percent		2.1	4.2			39.1	0.3	0.2	4.3	50.2
Std. Error		0.6	0.8			2.0	0.2	0.2	0.8	2.0
Number		148	295			2,771	25	12	308	3,559
All Fish										
Sample Size		29	48			449	4	3	43	576
Percent		5.0	8.4			78.0	0.6	0.5	7.4	100.0
Std. Error		0.9	1.1			1.7	0.3	0.3	1.1	
Number		357	590			5,529	50	37	530	7,093
Statistical Week 27 (July 2 - 8)										
Male										
Sample Size	4	23	27			207	3		23	287
Percent	0.7	4.0	4.8			36.1	0.5		4.0	50.1
Std. Error	0.3	0.8	0.9			2.0	0.3		0.8	2.0
Number	72	417	489			3,749	54		417	5,198
Female										
Sample Size	1	19	6			227	4		29	286
Percent	0.2	3.3	1.0			39.6	0.7		5.1	49.9
Std. Error	0.2	0.7	0.4			2.0	0.3		0.9	2.0
Number	18	344	109			4,111	73		525	5,180
All Fish										
Sample Size	5	42	33			434	7		52	573
Percent	0.9	7.3	5.8			75.7	1.2		9.1	100.0
Std. Error	0.4	1.1	0.9			1.7	0.4		1.2	
Number	90	761	598			7,860	127		942	10,378

-continued-

Appendix B.25. (page 2 of 3).

	Brood Year and Age Class									
	1986	1985			1984			1983		
	0.2	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	Total
Statistical Week	28	(July 9 - 15)								
Male										
Sample Size	4	36	26			176	4	1	14	261
Percent	0.8	7.4	5.3			35.9	0.8	0.2	2.9	53.3
Std. Error	0.4	1.2	1.0			2.1	0.4	0.2	0.7	2.2
Number	142	1,274	920			6,230	142	35	496	9,239
Female										
Sample Size		27	9			171		2	20	229
Percent		5.5	1.8			34.9		0.4	4.1	46.7
Std. Error		1.0	0.6			2.1		0.3	0.9	2.2
Number		956	319			6,052		71	708	8,106
All Fish										
Sample Size	4	63	35			347	4	3	34	490
Percent	0.8	12.9	7.1			70.8	0.8	0.6	7.0	100.0
Std. Error	0.4	1.5	1.1			2.0	0.4	0.3	1.1	
Number	142	2,230	1,239			12,282	142	106	1,204	17,345
Statistical Week	29	(July 16 - 22)								
Male										
Sample Size	10	48	34			167	8		13	280
Percent	1.7	8.2	5.8			28.7	1.4		2.2	48.0
Std. Error	0.5	1.1	1.0			1.8	0.5		0.6	2.0
Number	256	1,226	868			4,266	204		332	7,152
Female										
Sample Size	2	61	11			199	6		24	303
Percent	0.3	10.5	1.9			34.2	1.0		4.1	52.0
Std. Error	0.2	1.2	0.6			1.9	0.4		0.8	2.0
Number	51	1,558	281			5,083	153		613	7,739
All Fish										
Sample Size	12	110	45			369	14		37	587
Percent	2.0	18.7	7.7			62.9	2.4		6.3	100.0
Std. Error	0.6	1.6	1.1			2.0	0.6		1.0	
Number	307	2,810	1,149			9,425	357		945	14,993
Statistical Week	30	(July 23 - 29)								
Male										
Sample Size	7	43	39	1	1	185	5	1	10	292
Percent	1.1	7.1	6.4	0.2	0.2	30.5	0.8	0.2	1.6	48.1
Std. Error	0.4	1.0	1.0	0.2	0.2	1.8	0.4	0.2	0.5	2.0
Number	92	567	515	13	13	2,440	66	13	132	3,851
Female										
Sample Size	1	53	24			215	4	1	17	315
Percent	0.2	8.7	4.1			35.3	0.7	0.1	2.8	51.9
Std. Error	0.2	1.1	0.8			1.9	0.3	0.2	0.6	2.0
Number	13	699	316			2,836	53	13	224	4,154
All Fish										
Sample Size	8	96	64	1	1	401	9	2	27	609
Percent	1.3	15.8	10.5	0.2	0.2	65.8	1.5	0.3	4.4	100.0
Std. Error	0.4	1.4	1.2	0.2	0.2	1.8	0.5	0.2	0.8	
Number	106	1,266	844	13	13	5,289	119	26	356	8,032

-continued-

Appendix B.25. (page 3 of 3).

	Brood Year and Age Class									
	1986	1985			1984			1983		
	0.2	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	Total
Statistical Week	31	(July 30 - August 5)								
Male										
Sample Size	4	37	36			164	10	1	13	265
Percent	0.7	7.1	6.9			31.3	1.9	0.2	2.5	50.6
Std. Error	0.4	1.0	1.0			1.9	0.6	0.2	0.6	2.0
Number	30	274	267			1,214	74	7	96	1,962
Female										
Sample Size	2	38	12			184	12		11	259
Percent	0.4	7.3	2.3			35.1	2.3		2.0	49.4
Std. Error	0.3	1.1	0.6			1.9	0.6		0.6	2.0
Number	15	281	89			1,363	89		81	1,918
All Fish										
Sample Size	6	76	49			358	23	1	24	537
Percent	1.1	14.2	9.1			66.6	4.3	0.2	4.5	100.0
Std. Error	0.4	1.4	1.2			1.9	0.8	0.2	0.8	
Number	44	563	363			2,651	170	7	178	3,976
Statistical Week	32	(August 6 - 12)								
Male										
Sample Size	2	24	26			114	5		2	173
Percent	0.5	6.3	6.8			29.8	1.3		0.5	45.2
Std. Error	0.3	1.1	1.2			2.2	0.5		0.3	2.3
Number	13	153	164			725	32		13	1,100
Female										
Sample Size		24	11			159	13		3	210
Percent		6.3	2.9			41.5	3.3		0.8	54.8
Std. Error		1.1	0.8			2.3	0.9		0.4	2.3
Number		153	70			1,011	82		19	1,335
All Fish										
Sample Size	3	49	39			280	18		7	396
Percent	0.8	12.3	9.8			70.7	4.6		1.8	100.0
Std. Error	0.4	1.5	1.4			2.1	1.0		0.6	
Number	19	312	248			1,780	114		45	2,518
Statistical Week	33 - 38	(August 13 - Sept. 23)								
Male										
Sample Size	2	7	21			88	15		27	160
Percent	0.5	1.7	5.4			22.7	3.9		7.0	41.2
Std. Error	0.3	0.6	1.1			2.0	0.9		1.2	2.4
Number	18	64	191			800	136		246	1,455
Female										
Sample Size	1	13	25			125	27		37	228
Percent	0.3	3.4	6.4			32.2	7.0		9.5	58.8
Std. Error	0.2	0.9	1.2			2.2	1.2		1.4	2.4
Number	9	118	228			1,137	246		336	2,074
All Fish										
Sample Size	3	20	48			214	42		65	392
Percent	0.8	5.1	12.2			54.6	10.7		16.6	100.0
Std. Error	0.4	1.0	1.6			2.4	1.5		1.8	
Number	27	182	437			1,946	382		591	3,565
Combined Periods	(Percentages are weighted by period catches)									
Male										
Sample Size	33	241	258	1	2	1,573	54	5	134	2,301
Percent	0.8	5.8	5.4	<0.1	<0.1	33.5	1.0	0.1	2.8	49.5
Std. Error	0.2	0.4	0.4	<0.1	<0.1	0.8	0.2	0.1	0.3	0.8
Number	623	4,245	3,963	13	23	24,704	753	80	2,096	36,500
Female										
Sample Size	7	255	150			1,740	73	5	195	2,425
Percent	0.2	5.9	2.7			36.3	1.0	0.2	4.2	50.5
Std. Error	0.1	0.4	0.2			0.8	0.1	0.1	0.3	0.8
Number	106	4,338	1,991			26,752	773	106	3,109	37,175
All Fish										
Sample Size	41	499	414	1	2	3,335	128	10	332	4,762
Percent	1.0	11.6	8.1	<0.1	<0.1	69.8	2.1	0.3	7.1	100.0
Std. Error	0.2	0.5	0.4	<0.1	<0.1	0.7	0.2	0.1	0.4	
Number	735	8,623	6,007	13	23	51,672	1,532	186	5,228	74,019

Appendix B.26. Test for significant changes among periods in the age composition of sockeye salmon in the District 111 gill net catch by age class, 1989.

	Brood Year and Age Class								
	1986	1985			1984			1983	
	0.2	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3
Periods Compared									
1 , 2		S*							
1 , 3	S	S**	S			S			
1 , 4	S	S**				S**			
1 , 5	S**	S**				S**			
1 , 6	S**	S**				S**			S
1 , 7	S*	S**				S**	S**		S
1 , 8		S**				S**	S**		S**
1 , 9		S*	S			S**	S**		S**
2 , 3	S								
2 , 4	S	S**				S**			
2 , 5	S**	S**				S**	S*		
2 , 6	S**	S**				S**			S*
2 , 7	S*	S**				S**	S**		S*
2 , 8		S**				S**	S**		S**
2 , 9			S			S**	S**		S**
3 , 4		S**				S			
3 , 5		S**				S**			S
3 , 6		S**	S**			S**			S**
3 , 7		S**	S*			S**	S**		S**
3 , 8		S**	S*			S	S**		S**
3 , 9			S**			S**	S**		S**
4 , 5		S**				S**	S		
4 , 6			S			S			S
4 , 7							S**		
4 , 8							S**		S**
4 , 9		S**	S**			S**	S**		S**
5 , 6									
5 , 7		S*							
5 , 8		S**				S**	S		S**
5 , 9		S**	S*			S**	S**		S**
6 , 7							S**		
6 , 8							S**		S*
6 , 9		S**				S**	S**		S**
7 , 8									S*
7 , 9		S**				S**	S**		S**
8 , 9		S**				S**	S**		S**

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix B.27. Length composition of sockeye salmon in the District 111 gill net catch by sex, age class, and fishing period, 1989.

		Brood Year and Age Class							
		1986	1985		1984		1983		
		0.2	0.3	1.2	1.3	2.2	1.4	2.3	Total
Statistical Week 25 (June 18 - 24)									
Male	Avg. Length		632	518	607			607	597
	Std. Error			22.4	3.1			16.9	5.4
	Sample Size		1	6	42			3	52
Female	Avg. Length		577	522	588	498		583	578
	Std. Error		8.5	3.7	2.8			8.7	3.5
	Sample Size		2	9	56	1		7	75
All Fish	Avg. Length		595	520	596	498		590	586
	Std. Error		19.1	8.8	2.3			8.2	3.1
	Sample Size		3	15	98	1		10	127
Statistical Week 26 (June 25 - July 1)									
Male	Avg. Length		595	493	595		650	613	585
	Std. Error			18.3	3.5			7.3	6.0
	Sample Size		1	6	40		1	3	51
Female	Avg. Length		558	515	579			580	574
	Std. Error		2.5	11.5	3.7			13.4	4.0
	Sample Size		2	3	35			4	44
All Fish	Avg. Length		570	501	588		650	594	580
	Std. Error		12.6	12.8	2.7			10.2	3.7
	Sample Size		3	9	75		1	7	95
Statistical Week 27 (July 2 - 8)									
Male	Avg. Length	600	620	494	602			617	590
	Std. Error		5.2	16.2	5.4			14.5	6.7
	Sample Size	1	5	7	38			3	54
Female	Avg. Length		582	472	585			581	579
	Std. Error		6.0	11.7	3.9			5.2	4.3
	Sample Size		5	3	43			9	60
All Fish	Avg. Length	600	601	488	593			590	584
	Std. Error		7.4	12.0	3.4			6.8	3.9
	Sample Size	1	10	10	81			12	114
Statistical Week 28 (July 9 - 15)									
Male	Avg. Length	425	594	440	608	510		613	596
	Std. Error		8.0	5.0	4.0			2.5	5.9
	Sample Size	1	8	2	48	1		2	62
Female	Avg. Length		573	513	579			582	576
	Std. Error		7.5	12.5	3.7			21.3	3.7
	Sample Size		5	2	41			3	51
All Fish	Avg. Length	425	586	476	594	510		594	587
	Std. Error		6.3	21.6	3.1			13.9	3.8
	Sample Size	1	13	4	89	1		5	113
Statistical Week 29 (July 16 - 22)									
Male	Avg. Length		579	521	599	588		623	587
	Std. Error		19.5	30.7	6.9	42.5		12.5	7.4
	Sample Size		10	6	33	2		2	53
Female	Avg. Length		569	495	572	565		582	571
	Std. Error		7.7		3.6			10.8	3.4
	Sample Size		12	1	35	1		5	54
All Fish	Avg. Length		573	517	585	580		594	579
	Std. Error		9.6	26.2	4.1	25.7		10.9	4.0
	Sample Size		22	7	69	3		7	108

-continued-

Appendix B.27. (page 2 of 2).

		Brood Year and Age Class							
		1986	1985		1984		1983		
		0.2	0.3	1.2	1.3	2.2	1.4	2.3	Total
Statistical Week 30 (July 23 - 29)									
Male	Avg. Length	470	582	460	604	512		619	579
	Std. Error		7.2	3.5	3.9			8.5	7.2
	Sample Size	1	10	7	36	1		2	57
Female	Avg. Length		564	482	567	493		569	561
	Std. Error		5.3	22.4	2.6			5.2	3.5
	Sample Size		13	4	47	1		4	69
All Fish	Avg. Length	470	572	468	583	503		585	569
	Std. Error		4.6	8.4	3.0	9.5		11.2	3.9
	Sample Size	1	23	11	83	2		6	126
Statistical Week 31 (July 30 - August 5)									
Male	Avg. Length		600	495	595	548		575	579
	Std. Error		11.2	17.7	5.6	21.3			6.9
	Sample Size		7	6	29	3		1	46
Female	Avg. Length		559	518	584			585	576
	Std. Error		4.7	7.3	3.3			14.4	3.7
	Sample Size		6	3	33			3	45
All Fish	Avg. Length		581	503	589	548		583	578
	Std. Error		8.5	12.3	3.2	21.3		10.5	3.8
	Sample Size		13	9	65	3		4	94
Statistical Week 32 (August 6 - 12)									
Male	Avg. Length		580	475	594	502			564
	Std. Error		5.0	21.8	10.7	24.0			12.8
	Sample Size		2	3	14	3			22
Female	Avg. Length		555		569				565
	Std. Error		17.6		10.4				8.7
	Sample Size		3		9				12
All Fish	Avg. Length		565	475	584	502			564
	Std. Error		11.5	21.8	8.0	24.0			8.7
	Sample Size		5	3	23	3			34
Statistical Weeks 33 - 38 (August 13 - Sept. 23)									
Male	Avg. Length	500	578	458	597	535		611	585
	Std. Error		17.5	22.9	4.3			8.1	7.0
	Sample Size	1	2	4	30	1		12	50
Female	Avg. Length		580	510	575	518		600	563
	Std. Error			10.2	3.3	11.8		12.0	5.4
	Sample Size		1	4	25	6		4	40
All Fish	Avg. Length	500	578	484	587	521		608	575
	Std. Error		10.1	15.3	3.2	10.3		6.7	4.7
	Sample Size	1	3	8	55	7		16	90
Combined Periods (Lengths weighted by period catches)									
Male	Avg. Length	487	596	483	602	538	650	613	588
	Std. Error	37.1	5.3	7.2	1.6	13.6		4.4	2.3
	Sample Size	4	46	47	310	11	1	28	447
Female	Avg. Length		570	501	578	530		581	572
	Std. Error		2.9	4.9	1.2	10.1		3.5	1.4
	Sample Size		49	29	324	9		39	450
All Fish	Avg. Length	487	582	493	590	529	650	592	580
	Std. Error	37.1	3.2	4.9	1.1	8.7		3.2	1.4
	Sample Size	4	95	76	638	20	1	67	901

Appendix B.28. Test for significant changes among periods in the length composition of sockeye salmon in the District 111 gill net catch by age class, 1989.

	Brood Year and Age Class						
	1986	1985		1984		1983	
	0.2	0.3	1.2	1.3	2.2	1.4	2.3
Periods Compared							
1 , 2				S**			
1 , 3			S*				
1 , 4			S				
1 , 5				S**			
1 , 6			S**	S**			
1 , 7				S			
1 , 8			S				
1 , 9			S*	S*			S
2 , 3		S*					
2 , 4							
2 , 5							
2 , 6			S*				
2 , 7							
2 , 8							
2 , 9							
3 , 4							
3 , 5		S*					
3 , 6		S**		S*			
3 , 7		S					
3 , 8		S**					
3 , 9		S					S
4 , 5				S			
4 , 6		S		S**			
4 , 7							
4 , 8							
4 , 9				S			
5 , 6			S		S**		
5 , 7							
5 , 8					S*		
5 , 9					S*		
6 , 7			S**		S*		
6 , 8							
6 , 9							S
7 , 8							
7 , 9							S*
8 , 9							

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix B.29. Age composition of sockeye salmon in the Canadian commercial gill net catch in the Taku River by sex, age class, and fishing period, 1989.

	Brood Year and Age Class									
	1986		1985		1984			1983		
	0.2	1.1	0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total
Statistical Week 26 (June 25 - July 1)										
Male										
Sample Size	2		4	10		49		1	3	69
Percent	1.4		2.7	6.7		33.1		0.7	2.0	46.6
Std. Error	0.9		1.3	2.0		3.7		0.6	1.1	3.9
Number	21		42	105		517		11	32	728
Female										
Sample Size			3	14		55	3		4	79
Percent			2.0	9.5		37.2	2.0		2.7	53.4
Std. Error			1.1	2.3		3.8	1.1		1.3	3.9
Number			32	148		580	32		42	834
All Fish										
Sample Size	2		7	24		104	3	1	7	148
Percent	1.4		4.7	16.2		70.3	2.0	0.7	4.7	100.0
Std. Error	0.9		1.7	2.9		3.6	1.1	0.6	1.7	
Number	21		74	253		1,097	32	11	74	1,562
Statistical Week 27 (July 2 - 8)										
Male										
Sample Size	1			5	1	57	1		6	71
Percent	0.7			3.5	0.7	39.9	0.7		4.2	49.7
Std. Error	0.7			1.5	0.7	4.0	0.7		1.6	4.1
Number	26			129	26	1,469	26		155	1,831
Female										
Sample Size			4	8		54			6	72
Percent			2.8	5.6		37.7			4.2	50.3
Std. Error			1.4	1.9		4.0			1.6	4.1
Number			103	206		1,392			155	1,856
All Fish										
Sample Size	1		4	13	1	111	1		12	143
Percent	0.7		2.8	9.1	0.7	77.6	0.7		8.4	100.0
Std. Error	0.7		1.4	2.4	0.7	3.4	0.7		2.3	
Number	26		103	335	26	2,861	26		310	3,687
Statistical Week 28 (July 9 - 15)										
Male										
Sample Size			8	7		54	1		1	71
Percent			6.7	5.9		45.5	0.8		0.8	59.7
Std. Error			2.2	2.1		4.5	0.8		0.8	4.4
Number			140	123		947	18		18	1,246
Female										
Sample Size			4	2		42				48
Percent			3.4	1.7		35.2				40.3
Std. Error			1.6	1.1		4.3				4.4
Number			70	35		737				842
All Fish										
Sample Size			12	9		96	1		1	119
Percent			10.1	7.6		80.7	0.8		0.8	100.0
Std. Error			2.7	2.4		3.5	0.8		0.8	
Number			210	158		1,684	18		18	2,088

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Appendix B.29. (page 2 of 3).

	Brood Year and Age Class									
	1986		1985		1984			1983		
	0.2	1.1	0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total
Statistical Week 29 (July 16 - 22)										
Male										
Sample Size	2		5	13		46			2	68
Percent	1.4		3.5	9.2		32.7			1.4	48.2
Std. Error	1.0		1.5	2.4		3.8			1.0	4.1
Number	32		81	210		742			32	1,097
Female										
Sample Size			6	6		55	2	1	3	73
Percent			4.3	4.3		39.0	1.4	0.7	2.1	51.8
Std. Error			1.7	1.7		4.0	1.0	0.7	1.2	4.1
Number			97	97		888	32	16	48	1,178
All Fish										
Sample Size	2		11	19		101	2	1	5	141
Percent	1.4		7.8	13.5		71.7	1.4	0.7	3.5	100.0
Std. Error	1.0		2.2	2.8		3.7	1.0	0.7	1.5	
Number	32		178	307		1,630	32	16	80	2,275
Statistical Week 30 (July 23 - 29)										
Male										
Sample Size	7		18	20		34	3		1	83
Percent	3.8		9.6	10.7		18.2	1.6		0.5	44.4
Std. Error	1.4		2.1	2.2		2.7	0.9		0.5	3.5
Number	123		315	350		595	52		17	1,452
Female										
Sample Size	1		23	10		58	2		10	104
Percent	0.5		12.3	5.3		31.0	1.1		5.4	55.6
Std. Error	0.5		2.3	1.6		3.3	0.7		1.6	3.5
Number	17		402	175		1,015	35		175	1,819
All Fish										
Sample Size	8		41	30		92	5		11	187
Percent	4.3		21.9	16.0		49.2	2.7		5.9	100.0
Std. Error	1.4		2.9	2.6		3.6	1.1		1.7	
Number	140		717	525		1,610	87		192	3,271
Statistical Week 31 (July 30 - August 5)										
Male										
Sample Size	2	1	14	9	1	46				73
Percent	1.5	0.7	10.4	6.7	0.7	34.1				54.1
Std. Error	1.0	0.7	2.6	2.1	0.7	4.0				4.2
Number	34	17	235	151	17	770				1,224
Female										
Sample Size	2		14	7		36	1		2	62
Percent	1.4		10.3	5.1		26.9	0.7		1.5	45.9
Std. Error	1.0		2.6	1.9		3.7	0.7		1.0	4.2
Number	34		235	117		603	17		34	1,040
All Fish										
Sample Size	4	1	28	16	1	83	1		2	136
Percent	2.9	0.7	20.7	11.8	0.7	61.0	0.7		1.5	100.0
Std. Error	1.4	0.7	3.4	2.7	0.7	4.1	0.7		1.0	
Number	68	17	470	268	17	1,390	17		34	2,281

-continued-

Appendix B.29. (page 3 of 3).

	Brood Year and Age Class									
	1986		1985		1984			1983		
	0.2	1.1	0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total
Statistical Week	32	(August 6 - 12)								
Male										
Sample Size	2		14	12		60	2			90
Percent	1.1		7.7	6.6		33.0	1.1			49.5
Std. Error	0.7		1.9	1.8		3.4	0.7			3.6
Number	30		212	181		907	30			1,360
Female										
Sample Size	2		17	1		66	1	1	4	92
Percent	1.1		9.3	0.5		36.4	0.5	0.5	2.2	50.5
Std. Error	0.7		2.1	0.5		3.5	0.5	0.5	1.1	3.6
Number	30		257	15		998	15	15	60	1,390
All Fish										
Sample Size	4		31	13		126	3	1	4	182
Percent	2.2		17.0	7.1		69.4	1.6	0.5	2.2	100.0
Std. Error	1.1		2.7	1.8		3.3	0.9	0.5	1.1	
Number	60		469	196		1,905	45	15	60	2,750
Statistical Weeks	33 - 34	(August 13 - 26)								
Male										
Sample Size	2		6	10		31				49
Percent	1.4		4.1	6.8		21.3				33.6
Std. Error	0.8		1.4	1.8		3.0				3.4
Number	9		26	43		132				210
Female										
Sample Size	1		18	14		60	4			97
Percent	0.7		12.3	9.6		41.1	2.7			66.4
Std. Error	0.6		2.4	2.1		3.6	1.2			3.4
Number	4		77	60		258	17			416
All Fish										
Sample Size	3		24	24		92	4			147
Percent	2.1		16.4	16.4		62.4	2.7			100.0
Std. Error	1.0		2.7	2.7		3.5	1.2			
Number	13		103	103		395	17			631
Combined Periods	(Percentages are weighted by period catches)									
Male										
Sample Size	18	1	69	86	2	377	7	1	13	574
Percent	1.5	0.1	5.6	7.0	0.2	32.8	0.7	0.1	1.4	49.4
Std. Error	0.4	0.1	0.7	0.7	0.2	1.4	0.3	0.1	0.4	1.5
Number	275	17	1,051	1,292	43	6,079	126	11	254	9,148
Female										
Sample Size	6		89	62		426	13	2	29	627
Percent	0.5		6.9	4.6		34.9	0.8	0.1	2.8	50.6
Std. Error	0.2		0.7	0.6		1.4	0.2	0.1	0.5	1.5
Number	86		1,273	853		6,471	148	31	514	9,375
All Fish										
Sample Size	24	1	158	148	2	805	20	3	42	1,203
Percent	2.0	0.1	12.5	11.6	0.2	67.8	1.5	0.2	4.2	100.0
Std. Error	0.4	0.1	0.9	0.9	0.2	1.3	0.3	0.1	0.6	
Number	360	17	2,324	2,145	43	12,572	274	42	768	18,545

Appendix B.30. Test for significant changes among periods in the age composition of sockeye salmon in the Canadian commercial gill net catch in the Taku River by age class, 1989.

	Brood Year and Age Class								
	1986		1985		1984			1983	
	0.2	1.1	0.3	1.2	0.4	1.3	2.2	1.4	2.3
Periods Compared									
1 , 2				S					
1 , 3				S		S			
1 , 4									
1 , 5			S**			S**			
1 , 6			S**						
1 , 7			S**	S**					
1 , 8			S**						S*
2 , 3			S*						S**
2 , 4									
2 , 5			S**	S		S**			
2 , 6			S**			S**			S**
2 , 7			S**						S*
2 , 8			S**	S		S**			S**
3 , 4									
3 , 5	S		S**	S*		S**			S
3 , 6			S*			S**			
3 , 7						S*			
3 , 8				S*		S**			
4 , 5			S**			S**			
4 , 6			S**			S			
4 , 7			S*	S					
4 , 8			S*						S
5 , 6						S*			S
5 , 7				S**		S**			
5 , 8						S**			S**
6 , 7									
6 , 8									
7 , 8				S**					

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix B.31. Length composition of sockeye salmon in the Canadian commercial gill net catch in the Taku River by sex, age class, and fishing period, 1989.

		Brood Year and Age Class									
		1986		1985		1984			1983		
		0.2	1.1	0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total
Statistical Week 26 (June 25 - July 1)											
Male	Avg. Length	438		604	503		607		610	600	587
	Std. Error	7.5		3.1	13.3		3.3			12.6	6.2
	Sample Size	2		4	10		49		1	3	69
Female	Avg. Length			575	523		580	548		580	569
	Std. Error			2.9	4.4		3.3	34.4		9.4	3.7
	Sample Size			3	14		55	3		4	79
All Fish	Avg. Length	438		591	515		593	548	610	589	577
	Std. Error	7.5		6.1	6.3		2.7	34.4		8.0	3.6
	Sample Size	2		7	24		104	3	1	7	148
Statistical Week 27 (July 2 - 8)											
Male	Avg. Length	412			485	639	607	479		608	595
	Std. Error				30.2		2.5			9.5	5.7
	Sample Size	1			5	1	57	1		6	71
Female	Avg. Length			587	511		576			597	572
	Std. Error			14.5	7.9		4.2			7.4	4.3
	Sample Size			4	8		54			6	72
All Fish	Avg. Length	412		587	501	639	592	479		602	583
	Std. Error			14.5	12.4		2.8			6.0	3.7
	Sample Size	1		4	13	1	111	1		12	143
Statistical Week 28 (July 9 - 15)											
Male	Avg. Length			584	483		609	484		656	593
	Std. Error			17.6	11.2		2.9				5.7
	Sample Size			8	7		54	1		1	71
Female	Avg. Length			588	510		586				583
	Std. Error			9.9	19.5		2.8				3.4
	Sample Size			4	2		42				48
All Fish	Avg. Length			585	489		599	484		656	589
	Std. Error			11.8	10.0		2.3				3.7
	Sample Size			12	9		96	1		1	119
Statistical Week 29 (July 16 - 22)											
Male	Avg. Length	465		598	465		605			640	575
	Std. Error	14.0		7.7	6.0		3.9			5.5	7.7
	Sample Size	2		5	13		46			2	68
Female	Avg. Length			568	513		583	526	606	577	575
	Std. Error			12.9	7.2		3.5	3.0		9.7	3.8
	Sample Size			6	6		55	2	1	3	73
All Fish	Avg. Length	465		582	480		593	526	606	602	575
	Std. Error	14.0		8.9	6.9		2.8	3.0		16.4	4.2
	Sample Size	2		11	19		101	2	1	5	141
Statistical Week 30 (July 23 - 29)											
Male	Avg. Length	447		594	471		601	494		623	552
	Std. Error	14.8		5.7	10.6		5.2	14.7			8.0
	Sample Size	7		18	20		34	3		1	83
Female	Avg. Length	495		570	519		577	490		581	568
	Std. Error			4.0	18.8		3.0	22.0		8.0	3.4
	Sample Size	1		23	10		58	2		10	104
All Fish	Avg. Length	453		581	487		586	492		584	561
	Std. Error	14.2		3.8	10.2		3.0	10.7		8.2	4.0
	Sample Size	8		41	30		92	5		11	187

-continued-

Appendix B.31. (page 2 of 2).

		Brood Year and Age Class									
		1986		1985		1984			1983		
		0.2	1.1	0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total
Statistical Week 31 (July 30 - August 5)											
Male	Avg. Length	432	623	593	459	606	606				581
	Std. Error	4.0		7.1	13.0		4.1				7.1
	Sample Size	2	1	14	9	1	46				73
Female	Avg. Length	465		572	485		577	476		570	560
	Std. Error	41.5		4.6	7.6		5.7			8.0	5.8
	Sample Size	2		14	7		36	1		2	62
All Fish	Avg. Length	448	623	582	470	606	593	476		570	571
	Std. Error	19.4		4.6	8.5		3.7			8.0	4.8
	Sample Size	4	1	28	16	1	82	1		2	135
Statistical Week 32 (August 6 - 12)											
Male	Avg. Length	490		589	477		596	523			575
	Std. Error	27.5		6.2	13.0		3.3	17.0			5.4
	Sample Size	2		14	12		60	2			90
Female	Avg. Length	484		566	512		575	512	551	577	570
	Std. Error	50.0		4.0			2.8			8.7	2.8
	Sample Size	2		17	1		66	1	1	4	92
All Fish	Avg. Length	487		576	479		585	519	551	577	572
	Std. Error	23.4		4.1	12.3		2.3	10.5		8.7	3.0
	Sample Size	4		31	13		126	3	1	4	182
Statistical Weeks 33 - 34 (August 13 - 26)											
Male	Avg. Length	498		570	474		592				561
	Std. Error	58.0		7.8	19.5		3.7				8.5
	Sample Size	2		6	10		31				49
Female	Avg. Length	445		557	495		567	530			552
	Std. Error			3.7	9.9		3.4	20.6			3.9
	Sample Size	1		18	14		60	4			97
All Fish	Avg. Length	480		561	486		576	530			555
	Std. Error	37.9		3.5	9.9		2.8	20.6			3.8
	Sample Size	3		24	24		91	4			146
Combined Periods (Lengths weighted by period catches)											
Male	Avg. Length	448	623	592	476	626	604	494	610	624	578
	Std. Error	9.6		3.3	4.8	16.5	1.3	9.4		7.0	2.5
	Sample Size	18	1	69	86	2	377	7	1	13	574
Female	Avg. Length	480		575	510		578	508	576	582	570
	Std. Error	18.3		2.1	4.4		1.3	11.3	27.5	3.8	1.4
	Sample Size	6		89	62		426	13	2	29	627
All Fish	Avg. Length	450	623	582	488	626	591	501	584	596	574
	Std. Error	8.5		2.0	3.6	16.5	1.0	8.3	19.0	4.1	1.4
	Sample Size	24	1	158	148	2	803	20	3	42	1201

Appendix B.32. Test for significant changes among periods in the length composition of sockeye salmon in the Canadian commercial gill net catch in the Taku River by age class, 1989.

	Brood Year and Age Class								
	1986		1985		1984			1983	
	0.2	1.1	0.3	1.2	0.4	1.3	2.2	1.4	2.3
Periods Compared									
1 , 2									
1 , 3				S*					
1 , 4	S			S**					
1 , 5				S*		S			
1 , 6				S**					
1 , 7	S*		S*	S**		S**			
1 , 8			S**	S**		S**			
2 , 3						S			
2 , 4									
2 , 5									S
2 , 6				S*					S**
2 , 7						S*			S**
2 , 8			S			S**			
3 , 4									
3 , 5						S**			
3 , 6									
3 , 7						S**			
3 , 8			S*			S**			
4 , 5						S	S**		
4 , 6									S
4 , 7						S*			
4 , 8			S*			S**			
5 , 6									
5 , 7							S		
5 , 8			S**			S**			
6 , 7						S			
6 , 8			S**			S**			
7 , 8			S**			S**			

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix B.33. Age composition of sockeye salmon in the District 115 gill net catch by sex, age class, and fishing period, 1989.

	Brood Year and Age Class													
	1986		1985			1984			1983			1982		
	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Statistical Week 25 (June 18 - 24)														
Male														
Sample Size			2	3		1	122	3		71				202
Percent			0.5	0.8		0.3	32.4	0.8		18.9				53.7
Std. Error			0.4	0.5		0.3	2.4	0.5		2.0				2.5
Number			87	132		44	5,348	132		3,112				8,855
Female														
Sample Size			4				101			69				174
Percent			1.1				26.9			18.3				46.3
Std. Error			0.5				2.3			2.0				2.5
Number			175				4,428			3,025				7,628
All Fish														
Sample Size			6	3		1	223	3		140				376
Percent			1.6	0.8		0.3	59.3	0.8		37.2				100.0
Std. Error			0.6	0.5		0.3	2.5	0.5		2.5				
Number			262	132		44	9,776	132		6,137				16,483
Statistical Week 26 (June 25 - July 1)														
Male														
Sample Size	1		3	6			158	4	1	82			2	257
Percent	0.2		0.6	1.2			31.0	0.8	0.2	16.1			0.4	50.5
Std. Error	0.2		0.3	0.5			2.0	0.4	0.2	1.6			0.3	2.2
Number	48		144	289			7,609	193	48	3,949			96	12,376
Female														
Sample Size			6	1			145	10	1	89				252
Percent			1.2	0.2			28.4	2.0	0.2	17.5				49.5
Std. Error			0.5	0.2			2.0	0.6	0.2	1.7				2.2
Number			289	48			6,982	482	48	4,286				12,135
All Fish														
Sample Size	1		9	7			303	14	-2	171			2	509
Percent	0.2		1.8	1.4			59.4	2.8	0.4	33.6			0.4	100.0
Std. Error	0.2		0.6	0.5			2.2	0.7	0.3	2.1			0.3	
Number	48		433	337			14,591	675	96	8,235			96	24,511
Statistical Week 27 (July 2 - 8)														
Male														
Sample Size			2	5			144	7	3	39				200
Percent			0.5	1.1			31.7	1.5	0.7	8.6				44.1
Std. Error			0.3	0.5			2.2	0.6	0.4	1.3				2.3
Number			112	279			8,039	391	167	2,177				11,165
Female														
Sample Size			1	5			171	4		72		1		254
Percent			0.2	1.1			37.7	0.9		15.8		0.2		55.9
Std. Error			0.2	0.5			2.3	0.4		1.7		0.2		2.3
Number			56	279			9,546	223		4,020		56		14,180
All Fish														
Sample Size			3	10			315	11	3	111		1		454
Percent			0.7	2.2			69.4	2.4	0.7	24.4		0.2		100.0
Std. Error			0.4	0.7			2.1	0.7	0.4	2.0		0.2		
Number			168	558			17,585	614	167	6,197		56		25,365
Statistical Week 28 (July 9 - 15)														
Male														
Sample Size			4	15			213	9		38			1	280
Percent			0.8	2.8			40.1	1.7		7.2			0.2	52.8
Std. Error			0.4	0.7			2.1	0.6		1.1			0.2	2.2
Number			303	1,138			16,154	683		2,882			76	21,236
Female														
Sample Size			6	4			184	4		52				250
Percent			1.1	0.8			34.7	0.8		9.8				47.2
Std. Error			0.5	0.4			2.1	0.4		1.3				2.2
Number			455	303			13,955	303		3,944				18,960
All Fish														
Sample Size			10	19			397	13		90			1	530
Percent			1.9	3.6			74.8	2.5		17.0			0.2	100.0
Std. Error			0.6	0.8			1.9	0.7		1.6			0.2	
Number			758	1,441			30,109	986		6,826			76	40,196
Statistical Week 29 (July 16 - 22)														
Male														
Sample Size			6	6			137	8		41			1	199
Percent			1.2	1.1			25.8	1.5		7.7			0.2	37.5
Std. Error			0.5	0.5			1.9	0.5		1.2			0.2	2.1
Number			657	657			14,994	876		4,487			109	21,780
Female														
Sample Size			5	8			207	23	1	87			1	332
Percent			0.9	1.5			39.0	4.3	0.2	16.4			0.2	62.5
Std. Error			0.4	0.5			2.1	0.9	0.2	1.6			0.2	2.1
Number			547	876			22,656	2,517	109	9,523			109	36,337
All Fish														
Sample Size			11	15			345	31	1	130			2	535
Percent			2.1	2.8			64.4	5.8	0.2	24.3			0.4	100.0
Std. Error			0.6	0.7			2.1	1.0	0.2	1.8			0.3	
Number			1,204	1,642			37,760	3,393	109	14,228			219	58,555

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Appendix B.33. (page 2 of 3).

	Brood Year and Age Class													
	1986		1985			1984			1983			1982		
	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Statistical Week 30 (July 23 - 29)														
Male														
Sample Size			10	17			205	20	1	75			1	329
Percent			1.6	2.8			33.7	3.3	0.2	12.3			0.2	54.1
Std. Error			0.5	0.7			1.9	0.7	0.2	1.3			0.2	2.0
Number			618	1,050			12,666	1,236	62	4,634			62	20,328
Female														
Sample Size			7	3			187	11	1	70				279
Percent			1.2	0.5			30.8	1.8	0.1	11.5				45.9
Std. Error			0.4	0.3			1.9	0.5	0.2	1.3				2.0
Number			432	185			11,554	680	62	4,325				17,238
All Fish														
Sample Size	1	1	22	26			486	37	2	168			1	744
Percent	0.1	0.1	3.0	3.5			65.3	5.0	0.3	22.6			0.1	100.0
Std. Error	0.1	0.1	0.6	0.7			1.7	0.8	0.2	1.5			0.1	
Number	62	62	1,359	1,606			30,028	2,286	124	10,380			62	45,969
Statistical Week 31 (July 30 - August 5)														
Male														
Sample Size			10	8			131	34		65		1	2	251
Percent			1.9	1.5			24.7	6.4		12.3		0.2	0.4	47.4
Std. Error			0.6	0.5			1.9	1.1		1.4		0.2	0.3	2.2
Number			1,461	1,168			19,133	4,966		9,494		146	292	36,660
Female														
Sample Size			10	13			156	23		74			2	278
Percent			1.9	2.5			29.5	4.3		14.0			0.4	52.6
Std. Error			0.6	0.7			2.0	0.9		1.5			0.3	2.2
Number			1,461	1,899			22,785	3,359		10,808			292	40,604
All Fish														
Sample Size			20	21			287	57		139		1	4	529
Percent			3.8	4.0			54.2	10.7		26.3		0.2	0.8	100.0
Std. Error			0.8	0.8			2.2	1.3		1.9		0.2	0.4	
Number			2,922	3,067			41,918	8,325		20,302		146	584	77,264
Statistical Week 32 (August 6 - 12)														
Male														
Sample Size			4	9			120	59		93				285
Percent			0.7	1.5			20.1	9.9		15.6				47.8
Std. Error			0.3	0.5			1.6	1.2		1.5				2.0
Number			516	1,160			15,468	7,605		11,988				36,737
Female														
Sample Size			3	5			123	46	1	133				311
Percent			0.5	0.8			20.7	7.7	0.2	22.3				52.2
Std. Error			0.3	0.4			1.7	1.1	0.2	1.7				2.0
Number			386	645			15,855	5,930	129	17,144				40,089
All Fish														
Sample Size			7	14			243	105	1	226				596
Percent			1.2	2.3			40.8	17.6	0.2	37.9				100.0
Std. Error			0.4	0.6			2.0	1.6	0.2	2.0				
Number			902	1,805			31,323	13,535	129	29,132				76,826
Statistical Week 33 (August 13 - 19)														
Male														
Sample Size			2	10			88	46		101			1	248
Percent			0.4	1.8			15.7	8.2		18.1			0.2	44.4
Std. Error			0.3	0.6			1.5	1.2		1.6			0.2	2.1
Number			188	939			8,264	4,320		9,485			94	23,290
Female														
Sample Size		1	1	3			91	64		143			7	310
Percent		0.2	0.2	0.5			16.3	11.5		25.6			1.3	55.6
Std. Error		0.2	0.2	0.3			1.6	1.3		1.8			0.5	2.1
Number		94	94	282			8,546	6,010		13,430			657	29,113
All Fish														
Sample Size		1	3	13			179	110		245			8	559
Percent		0.2	0.6	2.3			32.0	19.7		43.7			1.5	100.0
Std. Error		0.2	0.3	0.6			2.0	1.7		2.1			0.5	
Number		94	282	1,221			16,810	10,330		23,009			751	52,497
Statistical Week 34 (August 20 - 26)														
Male														
Sample Size			1	3			47	112		100				263
Percent			0.2	0.5			8.3	19.7		17.6				46.3
Std. Error			0.2	0.3			1.1	1.7		1.6				2.1
Number			47	141			2,212	5,271		4,707				12,378
Female														
Sample Size			1	2			51	106		142			3	305
Percent			0.2	0.4			9.0	18.7		25.0			0.5	53.7
Std. Error			0.2	0.2			1.2	1.6		1.8			0.3	2.1
Number			47	94			2,400	4,989		6,683			142	14,355
All Fish														
Sample Size			2	5			98	218		242			3	568
Percent			0.4	0.9			17.3	38.4		42.6			0.5	100.0
Std. Error			0.2	0.4			1.6	2.0		2.1			0.3	
Number			94	235			4,612	10,260		11,390			142	26,733

-continued-

Appendix B.33. (page 3 of 3).

	Brood Year and Age Class													
	1986		1985			1984			1983			1982		
	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	3.2	2.4	3.3	Total
Statistical Week 35 (August 27 - Sept. 2)														
Male														
Sample Size		1	2	3			34	101		79			1	221
Percent		0.2	0.4	0.6			6.8	20.4		15.7			0.2	44.3
Std. Error		0.2	0.3	0.3			1.1	1.8		1.6			0.2	2.2
Number		38	76	114			1,288	3,826		2,993			38	8,373
Female														
Sample Size			2		1		37	98		140				278
Percent			0.4		0.2		7.4	19.6		28.1				55.7
Std. Error			0.3		0.2		1.2	1.8		2.0				2.2
Number			76		38		1,402	3,712		5,304				10,532
All Fish														
Sample Size		1	4	3	1		71	200		219			1	500
Percent		0.2	0.8	0.6	0.2		14.2	40.0		43.8			0.2	100.0
Std. Error		0.2	0.4	0.3	0.2		1.5	2.2		2.2			0.2	
Number		38	152	114	38		2,690	7,576		8,297			38	18,943
Statistical Week 36 (Sept. 3 - 9)														
Male														
Sample Size			1	4			25	56	1	138				225
Percent			0.2	0.9			5.3	11.9	0.2	29.2				47.7
Std. Error			0.2	0.4			1.0	1.4	0.2	2.0				2.2
Number			14	54			340	761	14	1,875				3,058
Female														
Sample Size				4			24	80		139				247
Percent				0.8			5.1	16.9		29.5				52.3
Std. Error				0.4			1.0	1.7		2.0				2.2
Number				54			326	1,087		1,890				3,357
All Fish														
Sample Size			1	8			49	136	1	278				473
Percent			0.2	1.7			10.4	28.8	0.2	58.8				100.0
Std. Error			0.2	0.6			1.4	2.0	0.2	2.2				
Number			14	109			666	1,848	14	3,777				6,428
Statistical Week 37 (Sept. 10 - 16)														
Male														
Sample Size							13	43		89			2	147
Percent							5.4	17.9		36.9			0.8	61.0
Std. Error							1.3	2.3		2.9			0.5	2.9
Number							87	289		599			13	988
Female														
Sample Size				1			6	35	1	52			1	94
Percent				0.4			1.7	14.5	0.4	21.6			0.4	39.0
Std. Error				0.4			0.8	2.1	0.4	2.4			0.4	2.9
Number				7			27	235	7	348			7	631
All Fish														
Sample Size				1			17	78	1	141			3	241
Percent				0.4			7.1	32.4	0.4	58.5			1.2	100.0
Std. Error				0.4			1.5	2.8	0.4	2.9			0.7	
Number				7			114	524	7	947			20	1,619
Statistical Week 38 (Sept. 17 - 23)														
Male														
Sample Size				2			11	25		45	1		1	85
Percent				1.7			9.2	21.0		37.8	0.8		0.9	71.4
Std. Error				1.1			2.4	3.3		4.0	0.7		0.7	3.7
Number				9			52	119		214	5		5	404
Female														
Sample Size				2			4	4	1	22			1	34
Percent				1.7			3.4	3.4	0.8	18.5			0.8	28.6
Std. Error				1.1			1.5	1.5	0.7	3.2			0.7	3.7
Number				9			19	19	5	104			5	161
All Fish														
Sample Size				4			15	29	1	67	1		2	119
Percent				3.4			12.6	24.4	0.8	56.3	0.8		1.7	100.0
Std. Error				1.5			2.7	3.5	0.7	4.1	0.7		1.1	
Number				18			71	138	5	318	5		10	565
Combined Periods (Percentages are weighted by period catches)														
Male														
Sample Size	1	1	47	91		1	1,448	527	6	1,056	1	1	12	3,192
Percent	<0.1	<0.1	0.9	1.5		<0.1	24.1	6.6	0.1	13.5	<0.1	<0.1	0.2	47.0
Std. Error	<0.1	<0.1	0.1	0.2		<0.1	0.6	0.3	<0.1	0.5	<0.1	<0.1	0.1	0.7
Number	48	38	4,223	7,130		44	111,654	30,668	291	62,596	5	146	785	217,628
Female														
Sample Size		1	46	51	1		1,485	508	6	1,284		1	15	3,398
Percent		<0.1	0.9	1.0	<0.1		26.0	6.4	0.1	18.3		<0.1	0.3	53.0
Std. Error		<0.1	0.1	0.2	<0.1		0.6	0.3	<0.1	0.5		<0.1	0.1	0.7
Number		94	4,018	4,681	38		120,481	29,546	360	84,834		56	1,212	245,320
All Fish														
Sample Size	2	3	98	149	1	1	3,028	1,042	12	2,367	1	2	27	6,733
Percent	<0.1	<0.1	1.8	2.6	<0.1	<0.1	50.4	12.8	0.1	31.6	<0.1	<0.1	0.4	100.0
Std. Error	<0.1	<0.1	0.2	0.2	<0.1	<0.1	0.7	0.4	<0.1	0.6	<0.1	<0.1	0.1	
Number	110	194	8,550	12,292	38	44	238,053	60,622	651	149,175	5	202	1,998	471,934

Appendix B.34. Test for significant changes among periods in the age composition of District 115 sockeye salmon gill net catch by age class, 1989.

	Brood Year and Age Class												
	1986		1985			1984			1983			1982	
	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	3.2	2.4	3.3
Periods Compared													
1 , 2								S					
1 , 3							S**			S**			
1 , 4				S**			S**			S**			
1 , 5				S				S**		S**			
1 , 6				S**			S	S**		S**			
1 , 7			S	S**				S**		S**			
1 , 8							S**	S**					
1 , 9							S**	S**		S			S*
1 , 10			S				S**	S**					
1 , 11							S**	S**		S			
1 , 12			S				S**	S**		S**			
1 , 13							S**	S**		S**			
1 , 14							S**	S**		S**			S
2 , 3							S**			S**			
2 , 4				S*			S**			S**			
2 , 5								S*		S**			
2 , 6				S*			S*	S		S**			
2 , 7			S	S**			S	S**		S**			
2 , 8							S**	S**					
2 , 9							S**	S**		S**			
2 , 10			S*				S**	S**		S**			
2 , 11							S**	S**		S**			
2 , 12			S*				S**	S**		S**			
2 , 13			S				S**	S**		S**			
2 , 14							S**	S**		S**			
3 , 4							S			S**			
3 , 5								S**					
3 , 6			S**					S*					
3 , 7			S**				S**	S**					
3 , 8							S**	S**		S**			
3 , 9							S**	S**		S**			S*
3 , 10							S**	S**		S**			
3 , 11				S			S**	S**		S**			
3 , 12							S**	S**		S**			
3 , 13							S**	S**		S**			S
3 , 14							S**	S**		S**			S
4 , 5							S**	S**		S**			
4 , 6							S**	S*		S**			
4 , 7			S				S**	S**		S**			
4 , 8							S**	S**		S**			
4 , 9			S				S**	S**		S**			S
4 , 10			S*	S**			S**	S**		S**			
4 , 11				S**			S**	S**		S**			
4 , 12			S*	S			S**	S**		S**			
4 , 13			S	S*			S**	S**		S**			
4 , 14							S**	S**		S**			
5 , 6													
5 , 7							S**	S**					
5 , 8							S**	S**		S**			
5 , 9			S*				S**	S**		S**			
5 , 10			S**	S*			S**	S**		S**			
5 , 11				S**			S**	S**		S**			
5 , 12			S**				S**	S**		S**			
5 , 13			S	S			S**	S**		S**			
5 , 14							S**	S**		S**			
6 , 7							S**	S**					
6 , 8			S*				S**	S**		S**			
6 , 9			S**				S**	S**		S**			S**
6 , 10			S**	S**			S**	S**		S**			
6 , 11			S**	S**			S**	S**		S**			
6 , 12			S**	S			S**	S**		S**			
6 , 13			S**	S*			S**	S**		S**			S
6 , 14							S**	S**		S**			S
7 , 8			S**				S**	S**		S**			
7 , 9			S**				S**	S**		S**			
7 , 10			S**	S**			S**	S**		S**			
7 , 11			S**	S**			S**	S**		S**			
7 , 12			S**	S			S**	S**		S**			
7 , 13			S**	S**			S**	S**		S**			
7 , 14			S				S**	S**		S**			
8 , 9							S**			S*			S**
8 , 10				S			S**	S**					
8 , 11				S*			S**	S**		S			
8 , 12							S**	S**		S**			
8 , 13							S**	S**		S**			S*
8 , 14							S**			S**			S*
9 , 10				S			S**	S**					
9 , 11				S*			S**	S**					S
9 , 12							S**	S**		S**			S*
9 , 13							S**	S**		S**			
9 , 14							S**			S**			
10 , 11													
10 , 12							S**	S**		S**			
10 , 13							S**			S**			
10 , 14				S				S**		S**			
11 , 12							S	S**		S**			
11 , 13							S**	S		S**			
11 , 14				S*				S**		S**			
12 , 13													S
12 , 14													S
13 , 14				S									

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix B.35. Length composition of sockeye salmon in the District 115 gill net catch by sex, age class, and fishing period, 1989.

		Brood Year and Age Class											
		1986	1985			1984			1983		1982		
		1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	2.4	3.3	Total
Statistical Week 25 (June 18 - 24)													
Male	Avg. Length		630	465		655	599	505		594			594
	Std. Error			10.0			6.3			4.8			5.2
	Sample Size		1	2		1	48	1		21			74
Female	Avg. Length		564				576			572			574
	Std. Error		21.5				3.9			3.4			2.6
	Sample Size		2				49			40			91
All Fish	Avg. Length		586	465		655	587	505		580			583
	Std. Error		25.4	10.0			3.9			3.1			2.8
	Sample Size		3	2		1	97	1		61			165
Statistical Week 26 (June 25 - July 1)													
Male	Avg. Length		520	480			607	550		599		573	601
	Std. Error						3.0	0.5		4.5		2.5	2.7
	Sample Size		1	1			85	2		42		2	133
Female	Avg. Length			537			585	533		580			581
	Std. Error						2.4	3.3		3.7			2.2
	Sample Size			1			68	3		46			118
All Fish	Avg. Length		520	509			597	540		589		573	592
	Std. Error			28.5			2.2	4.4		3.0		2.5	1.9
	Sample Size		1	2			153	5		88		2	251
Statistical Week 27 (July 2 - 8)													
Male	Avg. Length			495			612	543	635	601			605
	Std. Error			15.0			3.7	2.5		8.1			4.0
	Sample Size			2			54	2	1	17			76
Female	Avg. Length		578	496			586	525		584			583
	Std. Error			9.0			3.2			4.8			2.9
	Sample Size		1	2			66	1		22			92
All Fish	Avg. Length		578	496			597	537	635	592			593
	Std. Error			7.1			2.7	6.0		4.6			2.6
	Sample Size		1	4			120	3	1	39			168
Statistical Week 28 (July 9 - 15)													
Male	Avg. Length		579	487			594	535		576		565	583
	Std. Error		13.5	22.0			3.9	30.1		7.1			4.3
	Sample Size		2	3			56	4		15		1	81
Female	Avg. Length		595	505			584	558		587			582
	Std. Error			35.0			2.7	29.2		5.2			2.8
	Sample Size		1	2			70	3		12			88
All Fish	Avg. Length		584	494			589	545		581		565	583
	Std. Error		9.5	17.0			2.3	20.1		4.6			2.5
	Sample Size		3	5			126	7		27		1	169
Statistical Week 29 (July 16 - 22)													
Male	Avg. Length		595	524			597	550		588			590
	Std. Error			37.6			3.4	35.0		7.6			3.9
	Sample Size		1	3			46	2		12			64
Female	Avg. Length		590	470			579	528		574		555	569
	Std. Error		5.0	7.4			2.7	7.0		4.2			3.1
	Sample Size		2	4			64	9		28		1	108
All Fish	Avg. Length		592	493			586	532		578		555	577
	Std. Error		3.3	18.3			2.3	7.8		3.8			2.5
	Sample Size		3	7			110	11		40		1	172
Statistical Week 30 (July 23 - 29)													
Male	Avg. Length		599	504			597	538		595			587
	Std. Error		19.8	15.5			3.4	19.5		12.3			4.6
	Sample Size		3	3			44	6		10			66
Female	Avg. Length		585	505			580	540		587			579
	Std. Error						3.1	7.9		5.9			3.0
	Sample Size		1	1			47	4		16			69
All Fish	Avg. Length		595	505			588	539		590			583
	Std. Error		14.4	11.0			2.4	11.6		5.9			2.7
	Sample Size		4	4			91	10		26			135
Statistical Week 31 (July 30 - August 5)													
Male	Avg. Length		613	495			607	524		592	648		591
	Std. Error		7.5				3.1	6.3		4.9			4.3
	Sample Size		2	1			38	9		18	1		69
Female	Avg. Length		586	512			578	551		574		580	570
	Std. Error		16.6	27.2			3.3	16.7		3.7			3.6
	Sample Size		4	6			45	6		22		1	84
All Fish	Avg. Length		595	509			591	534		582	648	580	580
	Std. Error		12.0	23.1			2.8	8.1		3.3			2.9
	Sample Size		6	7			83	15		40	1	1	153

-continued-

Appendix B.35. (page 2 of 2).

		Brood Year and Age Class											
		1986	1985			1984			1983		1982		
		1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	2.4	3.3	Total
Statistical Week 32 (August 6 - 12)													
Male	Avg. Length		505				586	537		604			573
	Std. Error						11.3	8.2		6.3			6.6
	Sample Size		1				29	22		15			67
Female	Avg. Length						577	556		575			573
	Std. Error						2.9	5.4		4.6			2.5
	Sample Size						39	14		33			86
All Fish	Avg. Length		505				581	544		584			573
	Std. Error						5.1	5.6		4.2			3.2
	Sample Size		1				68	36		48			153
Statistical Week 33 (August 13 - 19)													
Male	Avg. Length			462			591	555		588			577
	Std. Error			13.7			4.9	5.6		3.8			4.1
	Sample Size			4			31	15		35			85
Female	Avg. Length			460			573	528		579		580	562
	Std. Error			40.0			3.4	5.6		2.9			3.3
	Sample Size			2			35	30		44		2	113
All Fish	Avg. Length			461			581	537		583		580	568
	Std. Error			13.5			3.1	4.6		2.4			2.6
	Sample Size			6			66	45		79		2	198
Statistical Week 34 (August 20 - 26)													
Male	Avg. Length		585	540			613	547		588			569
	Std. Error			5.0			4.7	5.7		6.8			4.6
	Sample Size		1	2			9	42		31			85
Female	Avg. Length		560	503			592	549		589		570	571
	Std. Error			37.5			4.1	4.8		3.2			3.4
	Sample Size		1	2			15	35		33		1	87
All Fish	Avg. Length		573	521			600	548		588		570	570
	Std. Error		12.5	18.9			3.7	3.8		3.6			2.9
	Sample Size		2	4			24	77		64		1	172
Statistical Week 35 (August 27 - Sept. 2)													
Male	Avg. Length	370	593				591	556		609			577
	Std. Error		2.5				7.6	6.7		6.1			5.8
	Sample Size	1	2				9	33		23			68
Female	Avg. Length		570		350		583	539		582			564
	Std. Error						4.6	3.4		3.3			3.6
	Sample Size		1		1		12	36		53			103
All Fish	Avg. Length	370	585		350		586	547		590			569
	Std. Error		7.6				4.1	3.8		3.3			3.2
	Sample Size	1	3		1		21	69		76			171
Statistical Week 36 (Sept. 3 - 9)													
Male	Avg. Length			568			594	555	615	609			595
	Std. Error			47.5			7.4	10.6		4.6			4.5
	Sample Size			2			12	11	1	36			62
Female	Avg. Length			480			583	548		592			576
	Std. Error						8.7	4.2		4.3			3.9
	Sample Size			1			10	23		43			77
All Fish	Avg. Length			538			589	551	615	600			585
	Std. Error			40.0			5.6	4.4		3.3			3.0
	Sample Size			3			22	34	1	79			139
Statistical Week 37 - 38 (Sept. 10 - 23)													
Male	Avg. Length						599	578		623			607
	Std. Error						3.3	9.2		6.1			5.9
	Sample Size						3	7		15			25
Female	Avg. Length						612	560		604			595
	Std. Error							21.2		8.0			8.6
	Sample Size						1	3		10			14
All Fish	Avg. Length						602	573		615			603
	Std. Error						4.1	8.8		5.1			4.9
	Sample Size						4	10		25			39
Combined Periods (Lengths weighted by period catches)													
Male	Avg. Length	370	575	497		655	598	540	631	594	648	568	584
	Std. Error		9.9	9.3			1.5	2.9	10.0	1.8		2.9	1.3
	Sample Size	1	14	23		1	464	156	2	290	1	3	955
Female	Avg. Length		583	495	350		580	543		579		572	572
	Std. Error		6.2	9.8			1.0	2.1		1.2		4.9	0.9
	Sample Size		13	21	1		521	167		402		5	1,130
All Fish	Avg. Length	370	569	496	350	655	588	538	631	585	648	571	577
	Std. Error		5.8	6.7			0.9	1.8	10.0	1.1		3.1	0.8
	Sample Size	1	27	44	1	1	985	323	2	692	1	8	2,085

Appendix B.36. Test for significant changes among periods in the length composition of District 115 sockeye salmon gill net catch by age class, 1989.

	Brood Year and Age Class										
	1986	1985			1984			1983		1982	
	1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	2.4	3.3
Periods Compared											
1 , 2						S*			S*		
1 , 3			S**			S*			S*		
1 , 4											
1 , 5											
1 , 6			S**								
1 , 7			S								
1 , 8											
1 , 9											
1 , 10			S**			S*			S		
1 , 11									S*		
1 , 12			S						S**		
1 , 13						S**			S**		
2 , 3											
2 , 4						S**					
2 , 5						S**			S*		
2 , 6						S**					
2 , 7						S					
2 , 8						S**					
2 , 9						S**					S**
2 , 10											
2 , 11						S*					
2 , 12							S		S**		
2 , 13							S**		S**		
3 , 4						S**			S		
3 , 5						S**			S*		
3 , 6						S**					
3 , 7									S		
3 , 8						S**					
3 , 9			S*			S**			S		
3 , 10											
3 , 11						S*					
3 , 12							S				
3 , 13							S**		S**		
4 , 5											
4 , 6											
4 , 7											
4 , 8											
4 , 9						S					
4 , 10						S**					
4 , 11											
4 , 12									S**		
4 , 13						S**			S**		
5 , 6									S		
5 , 7											
5 , 8											
5 , 9											
5 , 10						S**	S		S		
5 , 11							S		S**		
5 , 12							S*		S**		
5 , 13						S**	S**		S**		
6 , 7											
6 , 8											
6 , 9			S**			S					
6 , 10						S**					
6 , 11											
6 , 12											
6 , 13						S**	S**		S**		
7 , 8						S					
7 , 9			S			S*					
7 , 10						S					
7 , 11									S		
7 , 12							S		S**		
7 , 13						S*	S**		S**		
8 , 9											
8 , 10						S**					
8 , 11											
8 , 12									S**		
8 , 13						S**	S**		S**		
9 , 10			S**			S**	S				
9 , 11							S		S		
9 , 12			S				S*		S**		
9 , 13						S**	S**		S**		
10 , 11						S**					
10 , 12									S**		
10 , 13							S**		S**		
11 , 12									S*		
11 , 13						S**	S**		S**		
12 , 13						S	S*		S**		

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix C.1. Age composition of sockeye salmon in the District 101 purse seine catch by sex, age class, and fishing period, 1989.

	Brood Year and Age Class											
	1986		1985			1984			1983		1982	
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	3.1	1.4	2.3	3.3	Total
Statistical Week 27 (July 2 - 8)												
Male												
Sample Size			1	33		43	15		1	39		132
Percent			0.3	11.1		14.5	5.1		0.3	13.1		44.4
Std. Error			0.3	1.7		1.9	1.2		0.3	1.8		2.7
Number			7	217		283	99		7	257		870
Female												
Sample Size	2		7	56		36	37			26	1	165
Percent	0.7		2.4	18.9		12.1	12.4			8.8	0.3	55.6
Std. Error	0.4		0.8	2.1		1.7	1.8			1.5	0.3	2.7
Number	13		46	369		237	244			171	7	1,087
All Fish												
Sample Size	2		8	89		79	52		1	65	1	297
Percent	0.7		2.7	30.0		26.6	17.5		0.3	21.9	0.3	100.0
Std. Error	0.4		0.9	2.5		2.4	2.0		0.3	2.2	0.3	
Number	13		53	586		520	343		7	428	7	1,957
Statistical Week 28 (July 9 - 15)												
Male												
Sample Size				56		94	15			23		188
Percent				12.0		20.3	3.2			5.0		40.5
Std. Error				1.4		1.7	0.8			0.9		2.1
Number				457		767	122			188		1,534
Female												
Sample Size			1	75		159	21			20		276
Percent			0.2	16.2		34.2	4.6			4.3		59.5
Std. Error			0.2	1.6		2.1	0.9			0.9		2.1
Number			8	612		1,298	172			163		2,253
All Fish												
Sample Size			1	131		253	36			43		464
Percent			0.2	28.2		54.5	7.8			9.3		100.0
Std. Error			0.2	2.0		2.2	1.2			1.3		
Number			8	1,069		2,065	294			351		3,787
Statistical Week 29 (July 16 - 22)												
Male												
Sample Size		1		24	1	102	17			11		156
Percent		0.2		4.5	0.2	19.3	3.2			2.1		29.5
Std. Error		0.2		0.9	0.2	1.7	0.8			0.6		1.9
Number		25		605	25	2,572	428			277		3,932
Female												
Sample Size		1	1	68	3	258	25			16		372
Percent		0.2	0.2	12.9	0.6	48.9	4.7			3.0		70.5
Std. Error		0.2	0.2	1.4	0.3	2.1	0.9			0.7		1.9
Number		25	25	1,714	76	6,502	630			403		9,375
All Fish												
Sample Size		2	1	92	4	361	42			27		529
Percent		0.4	0.2	17.4	0.8	68.2	7.9			5.1		100.0
Std. Error		0.3	0.2	1.6	0.4	2.0	1.2			0.9		
Number		50	25	2,319	101	9,099	1,058			680		13,332
Statistical Week 30 (July 23 - 29)												
Male												
Sample Size				39		76	15			7		137
Percent				6.9		13.4	2.7			1.2		24.2
Std. Error				1.1		1.4	0.7			0.5		1.8
Number				2,411		4,698	927			433		8,469
Female												
Sample Size				132	1	256	25	1		15		430
Percent				23.3	0.2	45.1	4.4	0.2		2.6		75.8
Std. Error				1.8	0.2	2.1	0.9	0.2		0.7		1.8
Number				8,160	62	15,826	1,545	62		927		26,582
All Fish												
Sample Size				171	1	332	40	1		22		567
Percent				30.2	0.2	58.5	7.1	0.2		3.8		100.0
Std. Error				1.9	0.2	2.1	1.1	0.2		0.8		
Number				10,571	62	20,524	2,472	62		1,360		35,051

-continued-

Appendix C.1. (page 2 of 2).

	Brood Year and Age Class											
	1986		1985			1984			1983		1982	
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	3.1	1.4	2.3	3.3	Total
Statistical Week 31 (July 30 - August 5)												
Male												
Sample Size		3		94	1	166	29			21		314
Percent		0.5		14.5	0.2	25.6	4.5			3.2		48.5
Std. Error		0.3		1.4	0.2	1.7	0.8			0.7		1.9
Number		144		4,527	48	7,994	1,396			1,011		15,120
Female												
Sample Size		1		135	1	159	18			20		334
Percent		0.1		20.8	0.1	24.6	2.8			3.1		51.5
Std. Error		0.2		1.6	0.2	1.7	0.6			0.7		1.9
Number		48		6,501	48	7,657	867			963		16,084
All Fish												
Sample Size		4		229	2	325	47			41		648
Percent		0.6		35.3	0.3	50.2	7.3			6.3		100.0
Std. Error		0.3		1.9	0.2	1.9	1.0			0.9		
Number		192		11,028	96	15,651	2,263			1,974		31,204
Statistical Week 32 (August 6 - 12)												
Male												
Sample Size		3		27	2	56	19			26		133
Percent		1.1		9.9	0.7	20.4	6.9			9.5		48.5
Std. Error		0.6		1.8	0.5	2.4	1.5			1.8		3.0
Number		178		1,606	119	3,330	1,130			1,546		7,909
Female												
Sample Size		1		42	2	66	14			16		141
Percent		0.4		15.3	0.8	24.1	5.1			5.8		51.5
Std. Error		0.4		2.2	0.5	2.6	1.3			1.4		3.0
Number		60		2,497	119	3,925	832			951		8,384
All Fish												
Sample Size		4		69	4	122	33			42		274
Percent		1.5		25.2	1.5	44.5	12.0			15.3		100.0
Std. Error		0.7		2.6	0.7	3.0	2.0			2.2		
Number		238		4,103	238	7,255	1,962			2,497		16,293
Statistical Week 33 (August 13 - 19)												
Male												
Sample Size		5		10	6	32	11			14		78
Percent		1.9		3.7	2.2	12.1	4.1			5.2		29.2
Std. Error		0.8		1.2	0.9	2.0	1.2			1.4		2.8
Number		218		435	261	1,392	478			610		3,394
Female												
Sample Size		2	1	64		81	15			26		189
Percent		0.7	0.4	24.0		30.3	5.6			9.8		70.8
Std. Error		0.5	0.4	2.6		2.8	1.4			1.8		2.8
Number		87	44	2,785		3,525	653			1,131		8,225
All Fish												
Sample Size		7	1	74	6	113	26			40		267
Percent		2.6	0.4	27.7	2.2	42.4	9.7			15.0		100.0
Std. Error		1.0	0.4	2.7	0.9	3.0	1.8			2.2		
Number		305	44	3,220	261	4,917	1,131			1,741		11,619
Statistical Weeks 34 - 35 (August 20 - Sept. 2)												
Male												
Sample Size		4		37	3	37	11			13		105
Percent		0.9		8.2	0.7	8.1	2.4			2.9		23.2
Std. Error		0.4		1.2	0.4	1.2	0.7			0.7		1.9
Number		40		368	30	367	109			129		1,043
Female												
Sample Size		1		187		107	26		1	25		347
Percent		0.2		41.4		23.7	5.8		0.2	5.5		76.8
Std. Error		0.2		2.2		1.9	1.0		0.2	1.0		1.9
Number		10		1,857		1,063	258		10	248		3,446
All Fish												
Sample Size		5		224	3	144	37		1	38		452
Percent		1.1		49.6	0.7	31.8	8.2		0.2	8.4		100.0
Std. Error		0.5		2.2	0.4	2.1	1.2		0.2	1.2		
Number		50		2,225	30	1,430	367		10	377		4,489
Combined Periods (Percentages are weighted by period catches)												
Male												
Sample Size		16	1	320	13	606	132		1	154		1,243
Percent		0.5	<0.1	9.0	0.4	18.2	4.0		<0.1	3.8		35.9
Std. Error		0.1	<0.1	0.6	0.1	0.8	0.4		<0.1	0.4		0.9
Number		605	7	10,626	483	21,403	4,689		7	4,451		42,271
Female												
Sample Size	2	6	10	759	7	1,122	181	1	1	164	1	2,254
Percent	<0.1	0.2	0.1	20.8	0.3	34.0	4.4	0.1	<0.1	4.2	<0.1	64.1
Std. Error	<0.1	0.1	<0.1	0.8	0.1	0.9	0.4	0.1	<0.1	0.4	<0.1	0.9
Number	13	230	123	24,495	305	40,033	5,201	62	10	4,957	7	75,436
All Fish												
Sample Size	2	22	11	1,079	20	1,729	313	1	2	318	1	3,498
Percent	<0.1	0.7	0.1	29.8	0.7	52.2	8.4	0.1	<0.1	8.0	<0.1	100.0
Std. Error	<0.1	0.2	<0.1	0.9	0.2	1.0	0.5	0.1	<0.1	0.5	<0.1	
Number	13	835	130	35,121	788	61,461	9,890	62	17	9,408	7	117,732

Appendix C.2. Test for significant changes among periods in the age composition of sockeye salmon in the District 101 purse seine catch by age class, 1989.

	Brood Year and Age Class										
	1986		1985			1984			1983		1982
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	3.1	1.4	2.3	3.3
Periods Compared											
1 , 2			S**			S**	S**			S**	
1 , 3			S**	S**		S**	S**			S**	
1 , 4			S**			S**	S**			S**	
1 , 5			S**			S**	S**			S**	
1 , 6			S**			S**	S			S	
1 , 7		S**	S		S*	S**	S**			S*	
1 , 8			S**	S**			S**			S**	
2 , 3				S**		S**				S**	
2 , 4										S**	
2 , 5				S**						S	
2 , 6		S*			S*	S**	S			S**	
2 , 7		S**			S**	S**				S*	
2 , 8		S		S**		S**					
3 , 4				S**		S**					
3 , 5				S**		S**					
3 , 6				S**		S**	S			S**	
3 , 7		S**		S**		S**				S**	
3 , 8				S**		S**				S	
4 , 5				S		S**				S	
4 , 6		S**			S	S**	S*			S**	
4 , 7		S**			S**	S**				S**	
4 , 8		S*		S**		S**				S**	
5 , 6				S**			S*			S**	
5 , 7		S*		S*	S**	S*				S**	
5 , 8				S**		S**					
6 , 7											
6 , 8				S**		S**				S**	
7 , 8				S**		S**				S**	

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix C.3. Length composition of sockeye salmon in the District 101 purse seine catch by sex, age class, and fishing period, 1989.

		Brood Year and Age Class								
		1986	1985			1984		1983	1982	
		1.1	0.3	1.2	2.1	1.3	2.2	2.3	3.3	Total
Statistical Week 27 (July 2 - 8)										
Male	Avg. Length		570	500		605	538	616		568
	Std. Error			11.1		4.7	18.5	5.5		8.1
	Sample Size		1	18		15	5	17		56
Female	Avg. Length		485	498		570	532	595	540	543
	Std. Error			7.9		5.7	7.2	13.8		6.3
	Sample Size		1	19		15	15	13	1	64
All Fish	Avg. Length		528	499		587	534	607	540	555
	Std. Error		42.5	6.6		4.9	6.9	6.9		5.2
	Sample Size		2	37		30	20	30	1	120
Statistical Week 28 (July 9 - 15)										
Male	Avg. Length			520		595	525	619		564
	Std. Error			5.0		6.6	34.7	12.7		6.9
	Sample Size			24		22	5	10		61
Female	Avg. Length		600	512		569	526	585		550
	Std. Error			6.9		3.1	6.1	20.0		4.2
	Sample Size		1	19		40	9	3		72
All Fish	Avg. Length		600	517		578	526	611		556
	Std. Error			4.1		3.4	12.1	11.1		3.9
	Sample Size		1	43		62	14	13		133
Statistical Week 29 (July 16 - 22)										
Male	Avg. Length			453		603	524	610		574
	Std. Error			17.5		9.0	19.5			13.1
	Sample Size			2		14	4	1		21
Female	Avg. Length		565	499		586	548	600		571
	Std. Error			7.9		3.9	21.7	5.0		4.8
	Sample Size		1	14		65	3	2		85
All Fish	Avg. Length		565	493		589	534	603		572
	Std. Error			8.1		3.6	14.2	4.4		4.6
	Sample Size		1	16		80	7	3		107
Statistical Week 30 (July 23 - 29)										
Male	Avg. Length			513		623	545	635		578
	Std. Error			11.0		9.6	12.2	5.0		11.2
	Sample Size			7		12	6	2		27
Female	Avg. Length			504	395	575	538	616		548
	Std. Error			7.1		4.6	13.5	22.0		5.7
	Sample Size			28	1	42	8	5		84
All Fish	Avg. Length			506	395	585	541	621		555
	Std. Error			6.1		4.9	9.0	15.6		5.2
	Sample Size			35	1	54	14	7		111
Statistical Week 31 (July 30 - August 5)										
Male	Avg. Length			505		592	518	595		569
	Std. Error			15.6		7.6	21.4	19.7		8.1
	Sample Size			11		30	4	8		53
Female	Avg. Length			499		579	537	583		552
	Std. Error			8.4		4.5	20.9	3.7		6.2
	Sample Size			18		31	3	5		57
All Fish	Avg. Length			501		585	526	590		560
	Std. Error			7.7		4.4	14.4	12.0		5.1
	Sample Size			29		61	7	13		110

-continued-

Appendix C.3. (page 2 of 2).

		Brood Year and Age Class								
		1986	1985			1984		1983	1982	
		1.1	0.3	1.2	2.1	1.3	2.2	2.3	3.3	Total
Statistical Week 32 (August 6 - 12)										
Male	Avg. Length	365		525	390	586	531	586		558
	Std. Error			14.8		10.2	17.7	5.4		8.9
	Sample Size	1		7	1	16	8	12		45
Female	Avg. Length	575		494		579	507	590		552
	Std. Error			13.6		7.0	16.2	11.9		7.5
	Sample Size	1		11		25	8	8		53
All Fish	Avg. Length	470		506	390	582	519	588		555
	Std. Error	105.0		10.5		5.8	12.0	5.6		5.7
	Sample Size	2		18	1	41	16	20		98
Statistical Week 33 (August 13 - 19)										
Male	Avg. Length	368		528	387	605	511	608		523
	Std. Error	11.9		6.6	7.0	4.8	13.9	4.3		15.0
	Sample Size	5		4	6	16	7	4		42
Female	Avg. Length	345	575	507		583	521	587		561
	Std. Error	5.0		4.9		3.3	12.0	5.5		6.1
	Sample Size	2	1	9		40	8	13		73
All Fish	Avg. Length	361	575	513	387	590	516	592		547
	Std. Error	9.3		4.7	7.0	3.0	8.9	4.8		6.9
	Sample Size	7	1	13	6	56	15	17		115
Statistical Weeks 34 - 35 (August 20 - Sept. 2)										
Male	Avg. Length	393		531	417	599	525	586		553
	Std. Error	12.5		8.1	9.3	6.8	10.8	8.2		7.5
	Sample Size	2		19	3	25	10	8		67
Female	Avg. Length			518		576	517	587		546
	Std. Error			5.1		5.5	5.1	5.9		4.1
	Sample Size			52		38	12	18		120
All Fish	Avg. Length	393		521	417	585	520	587		548
	Std. Error	12.5		4.4	9.3	4.5	5.6	4.7		3.8
	Sample Size	2		71	3	63	22	26		187
Combined Periods (Lengths weighted by period catches)										
Male	Avg. Length	370	570	508	392	603	528	609		565
	Std. Error	8.5		4.0	6.5	2.8	6.1	4.2		3.4
	Sample Size	8	1	92	10	150	49	62		372
Female	Avg. Length	479	568	502	395	578	532	597	540	553
	Std. Error	76.7	24.9	2.7		1.7	3.8	4.0		1.9
	Sample Size	3	4	170	1	296	66	67	1	608
All Fish	Avg. Length	420	571	505	394	585	529	602	540	557
	Std. Error	20.1	19.5	2.3	5.9	1.5	3.4	2.9		1.8
	Sample Size	11	5	262	11	447	115	129	1	981

Appendix C.4. Test for significant changes among periods in the length composition of sockeye salmon in the District 101 purse seine catch by age class, 1989.

	Brood Year and Age Class							
	1986	1985			1984		1983	1982
	1.1	0.3	1.2	2.1	1.3	2.2	2.3	3.3
Periods Compared								
1 , 2			S*					
1 , 3								
1 , 4								
1 , 5								
1 , 6							S*	
1 , 7			S				S	
1 , 8			S**				S**	
2 , 3			S**		S*			
2 , 4								
2 , 5			S					
2 , 6							S	
2 , 7					S**			
2 , 8							S*	
3 , 4								
3 , 5								
3 , 6							S*	
3 , 7			S*				S	
3 , 8			S**				S**	
4 , 5								
4 , 6							S*	
4 , 7						S*	S	
4 , 8			S*			S*	S*	
5 , 6								
5 , 7								
5 , 8			S*					
6 , 7								
6 , 8								
7 , 8	S*			S**				

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix C.5. Age composition of sockeye salmon in the District 101 Metlakatla purse seine catch by sex, age class, and fishing period, 1989.

	Brood Year and Age Class									
	1986	1985			1984		1983			
	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	Total
Statistical Weeks 27 - 28 (July 2 - 15)										
Male										
Sample Size			12		48	7		9		76
Percent			6.0		24.0	3.5		4.5		38.0
Std. Error			1.6		2.9	1.2		1.4		3.3
Number			123		492	72		92		779
Female										
Sample Size		1	28	1	77	9		8		124
Percent		0.5	14.0	0.5	38.5	4.5		4.0		62.0
Std. Error		0.5	2.3	0.5	3.3	1.4		1.3		3.3
Number		10	288	10	790	92		82		1,272
All Fish										
Sample Size		1	42	1	125	17		17		203
Percent		0.5	20.7	0.5	61.5	8.3		8.5		100.0
Std. Error		0.5	2.7	0.5	3.3	1.9		1.9		
Number		10	432	10	1,282	174		174		2,082
Statistical Week 29 (July 16 - 22)										
Male										
Sample Size	2		31		45	6		9		93
Percent	0.7		11.2		16.2	2.2		3.3		33.6
Std. Error	0.5		1.8		2.2	0.9		1.0		2.8
Number	35		541		785	105		157		1,623
Female										
Sample Size			46		118	15		5		184
Percent			16.6		42.6	5.4		1.8		66.4
Std. Error			2.2		2.9	1.3		0.8		2.8
Number			802		2,059	262		87		3,210
All Fish										
Sample Size	2		77		163	21		14		277
Percent	0.7		27.8		58.8	7.6		5.1		100.0
Std. Error	0.5		2.6		2.9	1.5		1.3		
Number	35		1,343		2,844	367		244		4,833
Statistical Week 30 (July 23 - 29)										
Male										
Sample Size	2		68	1	49	10	1	3		134
Percent	0.8		27.0	0.4	19.4	4.0	0.4	1.2		53.2
Std. Error	0.5		2.7	0.4	2.4	1.2	0.4	0.7		3.1
Number	36		1,225	18	883	180	18	54		2,414
Female										
Sample Size			49		66	3				118
Percent			19.4		26.2	1.2				46.8
Std. Error			2.4		2.7	0.7				3.1
Number			882		1,189	54				2,125
All Fish										
Sample Size	2		117	1	115	13	1	3		252
Percent	0.8		46.4	0.4	45.6	5.2	0.4	1.2		100.0
Std. Error	0.5		3.1	0.4	3.1	1.4	0.4	0.7		
Number	36		2,107	18	2,072	234	18	54		4,539

-continued-

Appendix C.5. (page 2 of 2).

	Brood Year and Age Class									
	1986	1985			1984		1983			
	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	Total
Statistical Week 31 (July 30 - August 5)										
Male										
Sample Size	2		41	1	62	15		9		130
Percent	0.8		16.7	0.4	25.4	6.1		3.7		53.1
Std. Error	0.5		1.9	0.3	2.2	1.2		1.0		2.6
Number	5		116	3	176	43		26		369
Female										
Sample Size	2		37		62	11		3		115
Percent	0.8		15.1		25.3	4.5		1.2		46.9
Std. Error	0.5		1.8		2.2	1.1		0.6		2.6
Number	6		105		176	31		8		326
All Fish										
Sample Size	4		78	1	124	26		12		245
Percent	1.6		31.8	0.4	50.7	10.6		4.9		100.0
Std. Error	0.7		2.4	0.3	2.6	1.6		1.1		
Number	11		221	3	352	74		34		695
Statistical Weeks 32 - 35 (August 6 - Sept. 2)										
Male										
Sample Size	2		48	1	32	13		9	1	106
Percent	0.7		16.7	0.4	11.2	4.6		3.2	0.4	37.2
Std. Error	0.5		2.1	0.3	1.8	1.2		1.0	0.3	2.7
Number	17		403	9	269	109		75	8	890
Female										
Sample Size	1	1	70	1	83	19		4		179
Percent	0.4	0.4	24.6	0.3	29.1	6.6		1.4		62.8
Std. Error	0.3	0.3	2.4	0.3	2.5	1.4		0.7		2.7
Number	8	8	588	8	697	160		34		1,503
All Fish										
Sample Size	3	1	118	2	115	32		13	1	285
Percent	1.1	0.4	41.3	0.7	40.3	11.2		4.6	0.4	100.0
Std. Error	0.6	0.3	2.7	0.5	2.7	1.8		1.2	0.3	
Number	25	8	991	17	966	269		109	8	2,393
Combined Periods (Percentages are weighted by period catches)										
Male										
Sample Size	8		200	3	236	51	1	39	1	539
Percent	0.6		16.6	0.2	17.9	3.6	0.1	2.8	0.1	41.9
Std. Error	0.2		1.1	0.1	1.2	0.5	0.1	0.5	0.1	1.5
Number	93		2,408	30	2,605	509	18	404	8	6,075
Female										
Sample Size	3	2	230	2	406	57		20		720
Percent	0.1	0.1	18.4	0.1	33.8	4.1		1.5		58.1
Std. Error	0.1	0.1	1.2	0.1	1.4	0.6		0.3		1.5
Number	14	18	2,665	18	4,911	599		211		8,436
All Fish										
Sample Size	11	2	432	5	642	109	1	59	1	1,262
Percent	0.7	0.1	35.0	0.3	51.7	7.7	0.1	4.3	0.1	100.0
Std. Error	0.3	0.1	1.4	0.2	1.5	0.8	0.1	0.6	0.1	
Number	107	18	5,094	48	7,516	1,118	18	615	8	14,542

Appendix C.6. Test for significant changes among periods in the age composition of sockeye salmon in the District 101 Metlakatla purse seine catch by age class, 1989.

	Brood Year and Age Class								
	1986	1985			1984		1983		
	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2
Periods Compared									
1 , 2			S						
1 , 3			S**		S**			S**	
1 , 4			S**		S*				
1 , 5			S**		S**				
2 , 3			S**		S**			S*	
2 , 4					S				
2 , 5			S**		S**				
3 , 4			S**			S*		S*	
3 , 5						S**		S*	
4 , 5			S*		S*				

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix C.7. Length composition of sockeye salmon in the District 101 Metlakatla purse seine catch by sex, age class, and fishing period, 1989.

		Brood Year and Age Class									
		1986	1985			1984		1983			
		1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	Total
Statistical Weeks 27 - 28 (July 2 - 15)											
Male	Avg. Length			499		605	553		593		584
	Std. Error			11.8		6.3	11.8		12.1		6.9
	Sample Size			8		36	4		8		56
Female	Avg. Length		560	499	390	589	534		612		564
	Std. Error			9.4		3.9	15.6		8.0		5.9
	Sample Size		1	18	1	48	7		7		82
All Fish	Avg. Length		560	499	390	596	541		602		572
	Std. Error			7.3		3.6	10.7		7.7		4.6
	Sample Size		1	26	1	84	11		15		138
Statistical Week 29 (July 16 - 22)											
Male	Avg. Length	390		498		591	528		629		559
	Std. Error			7.9		5.0	7.3		9.8		6.9
	Sample Size	1		25		38	5		9		78
Female	Avg. Length			507		579	514		598		559
	Std. Error			6.6		2.7	7.4		11.7		3.7
	Sample Size			23		84	12		3		122
All Fish	Avg. Length	390		503		583	518		621		559
	Std. Error			5.2		2.5	5.7		8.6		3.5
	Sample Size	1		48		122	17		12		200
Statistical Week 30 (July 23 - 29)											
Male	Avg. Length	400		488	350	598	563	600	613		536
	Std. Error			6.6		5.4	36.4		20.3		7.3
	Sample Size	2		51	1	40	4	1	3		102
Female	Avg. Length			500		578	510				546
	Std. Error			4.9		4.1					5.2
	Sample Size			32		49	2				83
All Fish	Avg. Length	400		493	350	587	545	600	613		541
	Std. Error			4.5		3.5	25.5		20.3		4.6
	Sample Size	2		83	1	89	6	1	3		185
Statistical Week 31 (July 30 - August 5)											
Male	Avg. Length	350		498	360	591	525		606		549
	Std. Error			6.8		5.2	10.2		13.6		7.0
	Sample Size	2		25	1	41	12		7		88
Female	Avg. Length	340		503		578	523		510		546
	Std. Error			12.0		5.9	7.7				7.1
	Sample Size	1		21		42	6		1		71
All Fish	Avg. Length	347		500	360	584	524		594		548
	Std. Error	3.3		6.5		4.0	7.1		16.8		5.0
	Sample Size	3		46	1	83	18		8		159
Statistical Weeks 32 - 35 (August 6 - Sept. 2)											
Male	Avg. Length	363		502	370	587	518		611	500	534
	Std. Error	12.5		5.4		6.9	10.8		16.6		7.0
	Sample Size	2		39	1	24	9		8	1	84
Female	Avg. Length	330	590	501	335	573	522		547		536
	Std. Error			3.3		4.2	4.7		6.7		4.4
	Sample Size	1	1	49	1	60	17		3		132
All Fish	Avg. Length	352	590	501	353	577	520		594	500	535
	Std. Error	13.0		3.0	17.5	3.6	4.7		15.0		3.8
	Sample Size	3	1	88	2	84	26		11	1	216
Combined Periods (Lengths weighted by period catches)											
Male	Avg. Length	386		496	357	595	540	600	615	500	551
	Std. Error	8.9		3.3	5.8	2.6	6.6		6.3		3.3
	Sample Size	7		148	3	179	34	1	35	1	408
Female	Avg. Length	332	576	503	361	579	517		583		551
	Std. Error	5.0	15.0	2.8	27.5	1.8	3.8		10.3		2.3
	Sample Size	2	2	143	2	283	44		14		490
All Fish	Avg. Length	384	576	499	360	585	530	600	610	500	551
	Std. Error	8.9	15.0	2.2	9.3	1.5	3.6		5.5		2.0
	Sample Size	9	2	291	5	462	78	1	49	1	898

Appendix C.8. Test for significant changes among periods in the length composition of sockeye salmon in the District 101 Metlakatla purse seine catch by age class, 1989.

	Brood Year and Age Class								
	1986	1985			1984		1983		
	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2
Periods Compared									
1 , 2					S**	S		S	
1 , 3					S				
1 , 4					S*				
1 , 5					S**	S			
2 , 3									
2 , 4									
2 , 5									
3 , 4	S**								
3 , 5	S**				S*				
4 , 5									

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix C.9. Age composition of sockeye salmon in the District 102 purse seine catch by sex, age class, and fishing period, 1989.

	Brood Year and Age Class							
	1986	1985		1984		1983		
	1.1	1.2	2.1	1.3	2.2	1.4	2.3	Total
Statistical Weeks 28 - 30 (July 9 - 29)								
Male								
Sample Size	2	49	4	59	27		11	152
Percent	0.5	11.1	0.9	13.4	6.1		2.5	34.5
Std. Error	0.3	1.5	0.4	1.6	1.1		0.7	2.2
Number	132	3,239	265	3,900	1,785		727	10,048
Female								
Sample Size		110	1	144	19		15	289
Percent		24.9	0.2	32.7	4.3		3.4	65.5
Std. Error		2.0	0.2	2.2	1.0		0.9	2.2
Number		7,271	65	9,519	1,256		992	19,103
All Fish								
Sample Size	2	159	5	203	46		26	441
Percent	0.5	36.0	1.1	46.1	10.4		5.9	100.0
Std. Error	0.3	2.3	0.5	2.4	1.4		1.1	
Number	132	10,510	330	13,419	3,041		1,719	29,151
Statistical Weeks 31 - 39 (July 30 - Sept. 30)								
Male								
Sample Size	7	79	2	58	43		10	199
Percent	1.5	17.2	0.4	12.7	9.4		2.2	43.4
Std. Error	0.6	1.8	0.3	1.5	1.4		0.7	2.3
Number	436	4,914	124	3,608	2,675		622	12,379
Female								
Sample Size	1	114	1	94	36	1	12	259
Percent	0.2	24.9	0.2	20.5	7.9	0.2	2.6	56.6
Std. Error	0.2	2.0	0.2	1.9	1.2	0.2	0.7	2.3
Number	62	7,092	63	5,847	2,239	62	746	16,111
All Fish								
Sample Size	8	193	3	152	79	1	22	458
Percent	1.7	42.1	0.7	33.2	17.3	0.2	4.8	100.0
Std. Error	0.6	2.3	0.4	2.2	1.8	0.2	1.0	
Number	498	12,006	187	9,455	4,914	62	1,368	28,490
Combined Periods (Percentages are weighted by period catches)								
Male								
Sample Size	9	128	6	117	70		21	351
Percent	1.0	14.1	0.7	13.0	7.7		2.4	38.9
Std. Error	0.3	1.1	0.3	1.1	0.9		0.5	1.6
Number	568	8,153	389	7,508	4,460		1,349	22,427
Female								
Sample Size	1	224	2	238	55	1	27	548
Percent	0.1	24.9	0.2	26.7	6.1	0.1	3.0	61.1
Std. Error	0.1	1.4	0.2	1.5	0.8	0.1	0.6	1.6
Number	62	14,363	128	15,366	3,495	62	1,738	35,214
All Fish								
Sample Size	10	352	8	355	125	1	48	899
Percent	1.1	39.0	0.9	39.7	13.8	0.1	5.4	100.0
Std. Error	0.3	1.6	0.3	1.6	1.1	0.1	0.7	
Number	630	22,516	517	22,874	7,955	62	3,087	57,641

Appendix C.10. Test for significant changes among periods in the age composition of sockeye salmon in the District 102 purse seine catch by age class, 1989.

	Brood Year and Age Class						
	1986	1985		1984		1983	
	1.1	1.2	2.1	1.3	2.2	1.4	2.3
Periods Compared							
1 , 2		S		S**	S**		

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix C.11. Length composition of sockeye salmon in the District 102 purse seine catch by sex, age class, and fishing period, 1989.

		Brood Year and Age Class							
		1986	1985		1984		1983		
		1.1	1.2	2.1	1.3	2.2	1.4	2.3	Total
Statistical Weeks 29 - 30 (July 16 - 29)									
Male	Avg. Length		504		588	508		560	549
	Std. Error		6.2		7.5	23.4			9.3
	Sample Size		9		15	5		1	30
Female	Avg. Length		507		570	500		558	551
	Std. Error		8.9		3.4	10.0		22.5	5.4
	Sample Size		10		29	2		2	43
All Fish	Avg. Length		506		576	506		558	550
	Std. Error		5.4		3.6	16.3		13.0	4.9
	Sample Size		19		44	7		3	73
Statistical Weeks 31 - 39 (July 30 - Sept. 30)									
Male	Avg. Length	335	496	380	572	517		562	515
	Std. Error	5.3	7.4		6.1	8.6		9.3	7.4
	Sample Size	7	30	1	29	20		7	94
Female	Avg. Length		488	366	564	494	620	565	522
	Std. Error		3.5		3.8	7.2		14.4	4.1
	Sample Size		62	1	55	19	1	8	146
All Fish	Avg. Length	335	491	373	567	505	620	564	519
	Std. Error	5.3	3.4	7.0	3.3	5.8		8.5	3.8
	Sample Size	7	92	2	84	39	1	15	240
Combined Periods (Lengths weighted by period catches)									
Male	Avg. Length	335	500	380	580	512		561	532
	Std. Error	5.3	5.9		4.9	8.1		8.0	6.1
	Sample Size	7	39	1	44	25		8	124
Female	Avg. Length		497	366	567	497	620	561	537
	Std. Error		3.3		2.7	6.6		11.9	3.5
	Sample Size		72	1	84	21	1	10	189
All Fish	Avg. Length	335	498	373	571	506	620	561	535
	Std. Error	5.3	3.0	7.0	2.5	5.5		7.3	3.2
	Sample Size	7	111	2	128	46	1	18	313

Appendix C.12. Test for significant changes among periods in the length composition of sockeye salmon in the District 102 purse seine catch by age class, 1989.

	Brood Year and Age Class						
	1986	1985		1984		1983	
	1.1	1.2	2.1	1.3	2.2	1.4	2.3
Periods Compared							
1 , 2		S**		S			

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix C.13. Age composition of sockeye salmon in the District 103 purse seine catch by sex and age class, 1989.

	Brood Year and Age Class				
	1985	1984		1983	
	1.2	1.3	2.2	2.3	Total
Statistical Weeks 30 - 35 (July 23 - Sept. 2)					
Male					
Sample Size	12	35	6	3	56
Percent	7.1	20.8	3.6	1.8	33.3
Std. Error	2.0	3.1	1.4	1.0	3.6
Number	1,535	4,476	767	384	7,162
Female					
Sample Size	32	69	4	7	112
Percent	19.0	41.1	2.4	4.2	66.7
Std. Error	3.0	3.8	1.2	1.5	3.6
Number	4,093	8,825	512	895	14,325
All Fish					
Sample Size	44	104	10	10	168
Percent	26.1	61.9	6.0	6.0	100.0
Std. Error	3.4	3.7	1.8	1.8	
Number	5,628	13,301	1,279	1,279	21,487

Appendix C.14. Length composition of sockeye salmon in the District 103 purse seine catch by sex and age class, 1989.

		Brood Year and Age Class				
		1985	1984		1983	
		1.2	1.3	2.2	2.3	Total
Statistical Weeks 30 - 35 (July 23 - Sept. 2)						
Male	Avg. Length	505	552		550	541
	Std. Error	35.0	8.3			10.5
	Sample Size	2	6		1	9
Female	Avg. Length	465	523	485	537	512
	Std. Error	8.7	6.1	17.6	8.8	6.4
	Sample Size	4	16	3	3	26
All Fish	Avg. Length	478	531	485	540	519
	Std. Error	13.5	5.6	17.6	7.1	5.9
	Sample Size	6	22	3	4	35

Appendix C.15. Age composition of sockeye salmon in the District 104 purse seine catch by sex, age class, and fishing period, 1989.

	Brood Year and Age Class												
	1986		1985			1984			1983			1982	
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	3.1	1.4	2.3	3.2	3.3	Tot
Statistical Week 27 (July 2 - 8)													
Male													
Sample Size				27		101	12			23	1		1
Percent				5.5		20.5	2.4			4.7	0.2		33
Std. Error				1.0		1.8	0.7			0.9	0.2		2
Number				478		1,788	213			407	18		2,9
Female													
Sample Size			3	56		202	40		1	26			3
Percent			0.6	11.4		41.1	8.1		0.2	5.3			66
Std. Error			0.3	1.4		2.2	1.2		0.2	1.0			2
Number			53	992		3,578	708		18	460			5,8
All Fish													
Sample Size			3	83		304	52		1	49	1		4
Percent			0.6	16.9		61.6	10.5		0.2	10.0	0.2		100
Std. Error			0.3	1.6		2.1	1.3		0.2	1.3	0.2		
Number			53	1,470		5,384	921		18	867	18		8,7
Statistical Week 28 (July 9 - 15)													
Male													
Sample Size	2		1	40		90	14			10			1
Percent	0.4		0.2	8.6		19.4	3.0			2.1			33
Std. Error	0.3		0.2	1.3		1.8	0.8			0.7			2
Number	206		103	4,115		9,260	1,440			1,029			16,1
Female													
Sample Size			1	71	1	206	18			11		1	3
Percent			0.2	15.2	0.2	44.2	3.9			2.4		0.2	66
Std. Error			0.2	1.7	0.2	2.3	0.9			0.7		0.2	2
Number			103	7,305	103	21,193	1,852			1,132		103	31,7
All Fish													
Sample Size	2		2	112	1	298	32			21		1	4
Percent	0.4		0.4	23.9	0.2	63.5	6.9			4.5		0.2	100
Std. Error	0.3		0.3	2.0	0.2	2.2	1.2			1.0		0.2	
Number	206		206	11,523	103	30,658	3,292			2,161		103	48,2
Statistical Week 29 (July 16 - 22)													
Male													
Sample Size	1		1	50		111	18			12			1
Percent	0.2		0.2	7.9		17.6	2.9			1.9			30
Std. Error	0.2		0.2	1.1		1.5	0.7			0.5			1
Number	50		50	2,496		5,540	898			599			9,6
Female													
Sample Size		1		128	2	263	24		1	16			4
Percent		0.2		20.4	0.3	41.9	3.8		0.2	2.5			69
Std. Error		0.2		1.6	0.2	2.0	0.8		0.2	0.6			1
Number		50		6,389	100	13,127	1,198		50	799			21,71
All Fish													
Sample Size	1	1	1	178	2	374	42		1	28			62
Percent	0.2	0.2	0.2	28.3	0.3	59.5	6.7		0.2	4.4			100
Std. Error	0.2	0.2	0.2	1.8	0.2	1.9	1.0		0.2	0.8			
Number	50	50	50	8,885	100	18,667	2,096		50	1,398			31,34
Statistical Week 30 (July 23 - 29)													
Male													
Sample Size	1	2		57		93	10			14	1		17
Percent	0.2	0.4		11.6		18.8	2.0			2.8	0.2		36
Std. Error	0.2	0.3		1.4		1.8	0.6			0.7	0.2		2
Number	139	278		7,911		12,908	1,388			1,943	139		24,70
Female													
Sample Size				111		189	7		1	8			31
Percent				22.5		38.3	1.4		0.2	1.6			64
Std. Error				1.9		2.2	0.5		0.2	0.6			2
Number				15,406		26,233	972		139	1,110			43,86
All Fish													
Sample Size	1	2		169		282	17		1	22	1		49
Percent	0.2	0.4		34.1		57.1	3.4		0.2	4.4	0.2		100
Std. Error	0.2	0.3		2.1		2.2	0.8		0.2	0.9	0.2		
Number	139	278		23,456		39,141	2,360		139	3,053	139		68,70
Statistical Week 31 (July 30 - August 5)													
Male													
Sample Size				106		116	14			12			24
Percent				15.6		17.1	2.1			1.8			36
Std. Error				1.4		1.4	0.5			0.5			1
Number				18,329		20,059	2,421			2,075			42,88
Female													
Sample Size				183		220	13			14			43
Percent				27.0		32.4	1.9			2.1			63
Std. Error				1.7		1.8	0.5			0.5			1
Number				31,644		38,041	2,248			2,421			74,35
All Fish													
Sample Size				289		336	27			26			67
Percent				42.6		49.6	4.0			3.8			100
Std. Error				1.9		1.9	0.7			0.7			
Number				49,973		58,100	4,669			4,496			117,23

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Appendix C.15. (page 2 of 2).

	Brood Year and Age Class												
	1986		1985			1984			1983			1982	
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	3.1	1.4	2.3	3.2	3.3	Total
Statistical Week 32 (August 6 - 12)													
Male													
Sample Size		3	1	33	1	42	13			6			99
Percent		0.8	0.2	8.5	0.3	10.8	3.3			1.5			25.4
Std. Error		0.4	0.3	1.4	0.3	1.6	0.9			0.6			2.2
Number		655	218	7,202	218	9,167	2,837			1,309			21,606
Female													
Sample Size			1	182		80	21			6			290
Percent			0.3	46.8		20.6	5.4			1.5			74.6
Std. Error			0.3	2.5		2.0	1.1			0.6			2.2
Number			218	39,719		17,459	4,583			1,310			63,289
All Fish													
Sample Size		3	2	215	1	124	34			12			391
Percent		0.8	0.5	55.0	0.3	31.7	8.7			3.1			100.0
Std. Error		0.4	0.4	2.5	0.3	2.4	1.4			0.9			
Number		655	436	46,921	218	27,062	7,420			2,619			85,331
Statistical Week 33 (August 13 - 19)													
Male													
Sample Size				97		21	2			4			124
Percent				32.8		7.0	0.7			1.4			41.9
Std. Error				2.7		1.5	0.5			0.7			2.9
Number				37,291		8,073	769			1,538			47,671
Female													
Sample Size		1		139	1	26	2		1	2			172
Percent		0.3		47.0	0.3	8.8	0.7		0.3	0.7			58.1
Std. Error		0.3		2.9	0.3	1.6	0.5		0.3	0.5			2.9
Number		384		53,438	384	9,996	769		384	769			66,124
All Fish													
Sample Size		1		239	1	47	4		1	6			299
Percent		0.3		79.8	0.3	15.8	1.4		0.3	2.1			100.0
Std. Error		0.3		2.3	0.3	2.1	0.7		0.3	0.8			
Number		384		91,882	384	18,069	1,538		384	2,307			114,948
Statistical Week 34 (August 20 - 26)													
Male													
Sample Size				39	1	17	2			8			67
Percent				12.9	0.3	5.6	0.7			2.6			22.1
Std. Error				1.9	0.3	1.3	0.5			0.9			2.4
Number				3,423	88	1,492	176			702			5,881
Female													
Sample Size				174		45	10			7			236
Percent				57.4		14.9	3.3			2.3			77.9
Std. Error				2.8		2.0	1.0			0.9			2.4
Number				15,273		3,950	877			614			20,714
All Fish													
Sample Size				214	1	62	12			15			304
Percent				70.3	0.3	20.5	4.0			4.9			100.0
Std. Error				2.6	0.3	2.3	1.1			1.2			
Number				18,784	88	5,442	1,053			1,316			26,683
Statistical Week 35 (August 27 - Sept. 2)													
Male													
Sample Size		1		61	1	21	7	1		9			101
Percent		0.3		20.0	0.3	6.9	2.3	0.3		3.0			33.1
Std. Error		0.3		2.3	0.3	1.4	0.8	0.3		1.0			2.7
Number		49		2,967	49	1,021	340	49		438			4,913
Female													
Sample Size		1		141		46	9			7			204
Percent		0.3		46.2		15.1	3.0			2.3			66.9
Std. Error		0.3		2.8		2.0	1.0			0.8			2.7
Number		49		6,858		2,237	438			340			9,922
All Fish													
Sample Size		2		202	1	67	16	1		16			305
Percent		0.6		66.2	0.3	22.0	5.3	0.3		5.3			100.0
Std. Error		0.5		2.7	0.3	2.4	1.3	0.3		1.3			
Number		97		9,825	49	3,259	778	49		778			14,835
Combined Periods (Percentages are weighted by period catches)													
Male													
Sample Size	4	6	3	510	3	612	92	1		98	2		1,331
Percent	0.1	0.2	0.1	16.4	0.1	13.5	2.0	<0.1		2.0	<0.1		34.3
Std. Error	<0.1	0.1	<0.1	0.8	<0.1	0.6	0.3	<0.1		0.3	<0.1		0.9
Number	395	981	371	84,212	355	69,308	10,482	49		10,040	157		176,350
Female													
Sample Size		3	5	1,185	4	1,277	144		4	97		1	2,720
Percent		0.1	0.1	34.5	0.1	26.4	2.7		0.1	1.7		<0.1	65.7
Std. Error		0.1	<0.1	0.9	0.1	0.8	0.3		0.1	0.2		<0.1	0.9
Number		483	374	177,025	587	135,814	13,645		591	8,955		103	337,577
All Fish													
Sample Size	4	9	8	1,701	7	1,894	236	1	4	195	2	1	4,062
Percent	0.1	0.3	0.2	50.9	0.2	39.9	4.7	<0.1	0.1	3.7	<0.1	<0.1	100.0
Std. Error	<0.1	0.1	0.1	0.9	0.1	0.9	0.4	<0.1	0.1	0.3	<0.1	<0.1	
Number	395	1,464	745	262,719	942	205,782	24,127	49	591	18,995	157	103	516,069

Appendix C.16. Test for significant changes among periods in the age composition of sockeye salmon in the District 104 purse seine catch by age class, 1989.

	Brood Year and Age Class											
	1986		1985			1984			1983			1982
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	3.1	1.4	2.3	3.2	3.3
Periods Compared												
1 , 2				S**			S			S**		
1 , 3				S**			S*			S**		
1 , 4				S**			S**			S**		
1 , 5				S**		S**	S**			S**		
1 , 6				S**		S**				S**		
1 , 7				S**		S**	S**			S**		
1 , 8				S**		S**	S**			S**		
1 , 9				S**		S**	S**			S*		
2 , 3												
2 , 4				S**		S*	S*					
2 , 5				S**		S**	S*					
2 , 6				S**		S**						
2 , 7				S**		S**	S**					
2 , 8				S**		S**						
2 , 9				S**		S**						
3 , 4				S*			S*					
3 , 5				S**		S**	S*					
3 , 6				S**		S**						
3 , 7				S**		S**	S**			S		
3 , 8				S**		S**						
3 , 9				S**		S**						
4 , 5				S**		S**						
4 , 6				S**		S**	S**					
4 , 7				S**		S**						
4 , 8				S**		S**						
4 , 9				S**		S**						
5 , 6		S		S**		S**	S**					
5 , 7				S**		S**	S*					
5 , 8				S**		S**						
5 , 9				S**		S**						
6 , 7				S**		S**	S**					
6 , 8				S**		S**	S**					
6 , 9				S**		S**						
7 , 8				S**			S			S		
7 , 9				S**		S	S**			S		
8 , 9												

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix C.17. Length composition of sockeye salmon in the District 104 purse seine catch by sex, age class, and fishing period, 1989.

		Brood Year and Age Class											
		1986		1985			1984		1983			1982	
		0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	3.3	Total
Statistical Week 27 (July 2 - 8)													
Male	Avg. Length				517		598	530		597	510		591
	Std. Error				9.0		3.2	8.5		7.5			3.9
	Sample Size				20		90	10		17	1		138
Female	Avg. Length			572	490		567	515	605	568			549
	Std. Error			15.9	5.4		4.9	6.8		8.2			3.8
	Sample Size			3	50		171	37	1	21			283
All Fish	Avg. Length			572	498		578	519	605	592	510		559
	Std. Error			15.9	4.8		3.5	5.7		5.6			2.9
	Sample Size			3	70		262	47	1	38	1		422
Statistical Week 28 (July 9 - 15)													
Male	Avg. Length	495		590	520		594	535		580			571
	Std. Error				8.1		3.8	10.5		21.6			4.5
	Sample Size	1		1	21		65	12		6			106
Female	Avg. Length			595	488	395	569	450		591		540	544
	Std. Error				5.1		4.6	45.8		13.6			4.9
	Sample Size			1	61	1	175	14		8		1	261
All Fish	Avg. Length	495		593	496	395	576	489		586		540	551
	Std. Error			2.5	4.6		3.6	26.1		11.7			3.7
	Sample Size	1		2	93	1	241	26		14		1	369
Statistical Week 29 (July 16 - 22)													
Male	Avg. Length	465			504		601	528		603			568
	Std. Error				7.4		3.0	9.4		9.8			4.3
	Sample Size	1			45		101	18		11			176
Female	Avg. Length		395		501	398	573	497	560	594			547
	Std. Error				4.1	7.5	4.1	23.3		8.8			3.7
	Sample Size		1		97	2	205	21	1	14			341
All Fish	Avg. Length	465	395		502	398	582	511	560	598			554
	Std. Error				3.7	7.5	3.0	13.4		6.5			2.9
	Sample Size	1	1		142	2	306	39	1	25			517
Statistical Week 30 (July 23 - 29)													
Male	Avg. Length	520	403		513		601	529		629	530		567
	Std. Error		27.5		5.2		6.8	20.7		9.5			5.5
	Sample Size	1	2		57		93	10		14	1		178
Female	Avg. Length				507		582	521	665	596			555
	Std. Error				5.3		1.9	8.6		15.2			3.0
	Sample Size				111		189	7	1	8			316
All Fish	Avg. Length	520	403		509		588	526	665	617	530		560
	Std. Error		27.5		3.9		2.6	12.4		8.7			2.8
	Sample Size	1	2		169		282	17	1	22	1		495
Statistical Week 31 (July 30 - August 5)													
Male	Avg. Length				525		598	569		535			561
	Std. Error				4.3		2.9	18.5		60.4			4.2
	Sample Size				95		97	13		9			214
Female	Avg. Length				514		569	526		560			543
	Std. Error				2.8		4.9	18.4		11.3			3.1
	Sample Size				158		166	9		12			345
All Fish	Avg. Length				519		580	551		549			550
	Std. Error				2.4		3.4	13.8		25.9			2.5
	Sample Size				253		263	22		21			559
Statistical Week 32 (August 6 - 12)													
Male	Avg. Length		365	610	535	360	575	543		593			550
	Std. Error		5.0		6.7		5.3	13.4		9.8			5.7
	Sample Size		3	1	33	1	42	13		6			99
Female	Avg. Length			505	525		575	522		548			539
	Std. Error				2.4		2.9	9.2		16.2			2.3
	Sample Size			1	182		80	21		6			290
All Fish	Avg. Length		365	558	526	360	575	530		571			542
	Std. Error		5.0	52.5	2.3		2.6	7.7		11.3			2.2
	Sample Size		3	2	215	1	122	34		12			389
Statistical Week 33 (August 13 - 19)													
Male	Avg. Length				554		590	495		610			560
	Std. Error				4.7		10.4						4.8
	Sample Size				42		10	1		1			54
Female	Avg. Length				540		570	480	585	630			547
	Std. Error				4.6		9.9						4.7
	Sample Size				43		11	1	1	1			57
All Fish	Avg. Length				547		579	488	585	620			554
	Std. Error				3.3		7.3	7.5		10.0			3.4
	Sample Size				85		21	2	1	2			111

-continued-

Appendix C.17. (page 2 of 2).

		Brood Year and Age Class											
		1986		1985			1984		1983			1982	
		0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	3.3	Total
Statistical Week 34 (August 20 - 26)													
Male	Avg. Length				508	395	593	620		620			555
	Std. Error				27.4		11.5	70.0		10.6			15.5
	Sample Size				19	1	14	2		6			42
Female	Avg. Length				526		572	523		574			536
	Std. Error				6.9		3.8	8.4		18.3			5.4
	Sample Size				128		31	8		7			174
All Fish	Avg. Length				524	395	579	543		595			540
	Std. Error				6.9		4.6	17.9		12.5			5.3
	Sample Size				148	1	45	10		13			217
Statistical Week 35 (August 27 - Sept. 2)													
Male	Avg. Length				545	395	590	534		563			553
	Std. Error				6.9		8.3	17.7		10.3			6.1
	Sample Size				34	1	13	4		4			56
Female	Avg. Length		415		532		574	499		558			542
	Std. Error				3.2		4.1	9.2		17.9			3.1
	Sample Size		1		97		43	7		6			154
All Fish	Avg. Length		415		535	395	578	512		560			545
	Std. Error				3.0		3.8	9.7		11.0			2.8
	Sample Size		1		131	1	56	11		10			210
Combined Periods (Lengths weighted by period catches)													
Male	Avg. Length	500	382	603	529	371	592	538		588	528		561
	Std. Error	15.9	12.9	10.0	2.6	11.7	1.7	5.6		8.4	10.0		1.8
	Sample Size	3	5	2	366	3	525	83		74	2		1063
Female	Avg. Length		401	540	513	396	572	504	607	584		540	545
	Std. Error		10.0	17.5	1.6	4.4	1.6	7.2	22.4	4.5			1.3
	Sample Size		2	5	927	3	1071	125	4	83		1	2221
All Fish	Avg. Length	500	386	570	522	381	580	520	607	587	528	540	551
	Std. Error	15.9	10.3	14.0	1.4	6.3	1.3	5.0	22.4	4.7	10.0		1.1
	Sample Size	3	7	7	1296	6	1598	208	4	157	2	1	3289

Appendix C.18. Test for significant changes among periods in the length composition of sockeye salmon in the District 104 purse seine catch by age class, 1989.

	Brood Year and Age Class										
	1986		1985			1984		1983			1982
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	3.2	3.3
Periods Compared											
1 , 2											
1 , 3											
1 , 4				S		S**			S**		
1 , 5				S**			S*				
1 , 6				S**					S		
1 , 7				S**			S**		S**		
1 , 8				S**							
1 , 9				S**					S**		
2 , 3											
2 , 4				S*		S**			S*		
2 , 5				S**			S*				
2 , 6				S**							
2 , 7				S**					S*		
2 , 8				S**			S				
2 , 9				S**							
3 , 4									S		
3 , 5				S**			S*		S		
3 , 6				S**		S			S*		
3 , 7				S**					S		
3 , 8				S**							
3 , 9				S**					S**		
4 , 5				S*		S*			S**		
4 , 6				S**		S**			S**		
4 , 7				S**			S**				
4 , 8				S		S					
4 , 9				S**		S*			S**		
5 , 6				S**							
5 , 7				S**			S**		S**		
5 , 8											
5 , 9				S**			S**				
6 , 7				S**			S**		S**		
6 , 8											
6 , 9				S**							
7 , 8				S**			S**				
7 , 9				S**			S*		S**		
8 , 9									S*		

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix C.19. Age composition of sockeye salmon in the District 107 purse seine catch by sex and age class, 1989.

	Brood Year and Age Class					
	1986	1985	1984		1983	
	1.1	1.2	1.3	2.2	2.3	Total
Statistical Weeks	30 - 35		(July 23 - Sept. 2)			
Male						
Sample Size	10	32	55	9	6	112
Percent	4.4	14.1	24.2	4.0	2.6	49.3
Std. Error	1.3	2.3	2.8	1.3	1.0	3.3
Number	306	979	1,683	276	184	3,428
Female						
Sample Size		32	72	7	4	115
Percent		14.1	31.7	3.1	1.8	50.7
Std. Error		2.3	3.0	1.1	0.9	3.3
Number		979	2,204	214	122	3,519
All Fish						
Sample Size	10	64	127	16	10	227
Percent	4.4	28.2	55.9	7.0	4.4	100.0
Std. Error	1.3	2.9	3.2	1.7	1.3	
Number	306	1,958	3,887	490	306	6,947

Appendix C.20. Length composition of sockeye salmon in the District 107 purse seine catch by sex and age class, 1989.

		Brood Year and Age Class					
		1986	1985	1984		1983	
		1.1	1.2	1.3	2.2	2.3	Total
Statistical Weeks		30 - 35		(July 23 - Sept. 2)			
Male	Avg. Length	477	532	600	474	607	563
	Std. Error		24.8	5.7	18.0	19.5	12.6
	Sample Size	1	5	11	3	2	22
Female	Avg. Length		504	567	556		550
	Std. Error		6.0	5.3			6.8
	Sample Size		7	18	1		26
All Fish	Avg. Length	477	516	579	495	607	555
	Std. Error		11.0	4.9	24.1	19.5	6.8
	Sample Size	1	12	29	4	2	48

Appendix C.21. Age composition of sockeye salmon in the District 109 purse seine catch by sex and age class, 1989.

	Brood Year and Age Class							
	1986	1985		1984		1983		
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	Total
Statistical Weeks 29 - 35 (July 16 - Sept. 2)								
Male								
Sample Size		2	9	12	4		3	30
Percent		2.5	11.1	14.8	4.9		3.7	37.0
Std. Error		1.7	3.5	4.0	2.4		2.1	5.4
Number		311	1,399	1,864	621		466	4,661
Female								
Sample Size	1	4	12	27	5	1	1	51
Percent	1.2	5.0	14.8	33.4	6.2	1.2	1.2	63.0
Std. Error	1.2	2.4	4.0	5.3	2.7	1.2	1.2	5.4
Number	155	621	1,864	4,197	777	155	155	7,924
All Fish								
Sample Size	1	6	21	39	9	1	4	81
Percent	1.2	7.5	25.9	48.2	11.1	1.2	4.9	100.0
Std. Error	1.2	2.9	4.9	5.6	3.5	1.2	2.4	
Number	155	932	3,263	6,061	1,398	155	621	12,585

Appendix C.22. Length composition of sockeye salmon in the District 109 purse seine catch by sex and age class, 1989.

		Brood Year and Age Class					
		1986	1985		1984	1983	
		0.2	0.3	1.2	1.3	2.3	Total
Statistical Weeks 29 - 35 (July 16 - Sept. 2)							
Male	Avg. Length			505	583	596	553
	Std. Error			16.6	16.5	26.0	15.5
	Sample Size			5	5	2	12
Female	Avg. Length	483	595	507	574	573	554
	Std. Error		8.7	9.3	5.7		8.7
	Sample Size	1	3	6	11	1	22
All Fish	Avg. Length	483	595	506	577	588	554
	Std. Error		8.7	8.6	6.2	16.9	7.7
	Sample Size	1	3	11	16	3	34

Appendix C.23. Age composition of sockeye salmon in the District 110 purse seine catch by sex, age class, and fishing period, 1989.

	Brood Year and Age Class								
	1986		1985			1984		1983	
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	2.3	Total
Statistical Weeks 27 - 29 (July 2 - 22)									
Male									
Sample Size	2		5	33	1	52	12	3	108
Percent	1.0		2.5	16.3	0.5	25.5	5.9	1.5	53.2
Std. Error	0.7		1.1	2.6	0.5	3.0	1.6	0.8	3.5
Number	124		311	2,052	62	3,232	746	187	6,714
Female									
Sample Size			1	25		63	3	3	95
Percent			0.5	12.3		31.0	1.5	1.5	46.8
Std. Error			0.5	2.3		3.2	0.8	0.8	3.5
Number			62	1,554		3,917	186	186	5,905
All Fish									
Sample Size	2		6	58	1	115	15	6	203
Percent	1.0		3.0	28.6	0.5	56.5	7.4	3.0	100.0
Std. Error	0.7		1.2	3.2	0.5	3.5	1.8	1.2	
Number	124		373	3,606	62	7,149	932	373	12,619
Statistical Weeks 30 - 32 (July 23 - 12)									
Male									
Sample Size		1	1	27		23	11	3	66
Percent		0.7	0.7	18.7		16.0	7.6	2.1	45.8
Std. Error		0.7	0.7	3.2		3.0	2.2	1.2	4.1
Number		60	60	1,625		1,384	661	181	3,971
Female									
Sample Size			5	18		44	9	2	78
Percent			3.5	12.5		30.5	6.3	1.4	54.2
Std. Error			1.5	2.7		3.8	2.0	1.0	4.1
Number			301	1,083		2,647	542	120	4,693
All Fish									
Sample Size		1	6	45		67	20	5	144
Percent		0.7	4.2	31.2		46.5	13.9	3.5	100.0
Std. Error		0.7	1.7	3.8		4.1	2.9	1.5	
Number		60	361	2,708		4,031	1,203	301	8,664
Combined Periods (Percentages are weighted by period catches)									
Male									
Sample Size	2	1	6	60	1	75	23	6	174
Percent	0.6	0.3	1.7	17.3	0.3	21.7	6.6	1.7	50.2
Std. Error	0.4	0.3	0.7	2.0	0.3	2.2	1.3	0.7	2.7
Number	124	60	371	3,676	62	4,617	1,408	367	10,685
Female									
Sample Size			6	43		107	12	5	173
Percent			1.7	12.4		30.8	3.4	1.5	49.8
Std. Error			0.7	1.8		2.5	1.0	0.6	2.7
Number			363	2,637		6,563	728	307	10,598
All Fish									
Sample Size	2	1	12	103	1	182	35	11	347
Percent	0.6	0.3	3.4	29.7	0.3	52.5	10.0	3.2	100.0
Std. Error	0.4	0.3	1.0	2.4	0.3	2.7	1.6	0.9	
Number	124	60	734	6,313	62	11,180	2,136	674	21,283

Appendix C.24. Test for significant changes among periods in the age composition of sockeye salmon in the District 110 purse seine catch by age class, 1989.

	Brood Year and Age Class							
	1986		1985			1984		1983
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	2.3
Periods Compared								
1 , 2						S	S	

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix C.25. Length composition of sockeye salmon in the District 110 purse seine catch by sex, age class, and fishing period, 1989.

		Brood Year and Age Class							
		1986	1985			1984		1983	
		0.2	0.3	1.2	2.1	1.3	2.2	2.3	Total
Statistical Weeks 27 - 29 (July 2 - 22)									
Male	Avg. Length	450	588	478	308	596	509	584	548
	Std. Error		14.4	15.5		6.2	49.0		11.8
	Sample Size	1	5	11	1	20	2	1	41
Female	Avg. Length		600	507		564	517	564	557
	Std. Error			1.9		6.1		9.5	6.1
	Sample Size		1	3		20	1	2	27
All Fish	Avg. Length	450	590	484	308	580	512	570	552
	Std. Error		11.9	12.5		5.0	28.4	8.8	7.5
	Sample Size	1	6	14	1	40	3	3	68
Statistical Weeks 30 - 32 (July 23 - August 12)									
Male	Avg. Length		605	527		581	530		559
	Std. Error			7.7		6.1			7.5
	Sample Size		1	8		11	1		21
Female	Avg. Length		550	501		575	594		552
	Std. Error		4.4	10.6		6.9			8.0
	Sample Size		3	8		16	1		28
All Fish	Avg. Length		564	514		577	562		555
	Std. Error		14.1	7.2		4.7	32.0		5.6
	Sample Size		4	16		27	2		49
Combined Periods (Lengths weighted by period catches)									
Male	Avg. Length	450	595	498	308	590	518	584	552
	Std. Error		12.1	10.9		4.7	29.1		8.2
	Sample Size	1	6	19	1	31	3	1	62
Female	Avg. Length		580	505		568	548	564	555
	Std. Error		12.9	7.7		4.6	38.5	9.5	5.0
	Sample Size		4	11		36	2	2	55
All Fish	Avg. Length	450	579	496	308	579	532	570	553
	Std. Error		9.6	7.4		3.5	22.3	8.8	4.9
	Sample Size	1	10	30	1	67	5	3	117

Appendix C.26. Test for significant changes among periods in the length composition of sockeye salmon in the District 110 purse seine catch by age class, 1989.

	Brood Year and Age Class						
	1986	1985			1984		1983
	0.2	0.3	1.2	2.1	1.3	2.2	2.3
Periods Compared							
1 , 2			S*				

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix C.27. Age composition of sockeye salmon in the District 112 purse seine catch by sex, age class, and fishing period, 1989.

	Brood Year and Age Class													
	1987	1986		1985			1984			1983			1982	
	0.1	0.2	1.1	0.3	1.2	2.1	1.3	2.2	3.1	1.4	2.3	3.2	3.3	Total
Statistical Week 27 (July 2 - 8)														
Male														
Sample Size				3	5		45	5		1	4			63
Percent				2.3	3.7		34.1	3.8		0.8	3.0			47.7
Std. Error				1.1	1.4		3.4	1.4		0.6	1.2			3.6
Number				9	16		141	16		3	13			198
Female														
Sample Size				2	5	1	57	2			1	1		69
Percent				1.5	3.8	0.8	43.1	1.5			0.8	0.8		52.3
Std. Error				0.9	1.4	0.6	3.6	0.9			0.6	0.6		3.6
Number				7	16	3	179	6			3	3		217
All Fish														
Sample Size				5	10	1	103	7		1	5	1		133
Percent				3.8	7.5	0.8	77.2	5.3		0.8	3.8	0.8		100.0
Std. Error				1.4	1.9	0.6	3.0	1.6		0.6	1.4	0.6		
Number				16	32	3	323	22		3	16	3		418
Statistical Week 28 (July 9 - 15)														
Male														
Sample Size	1	6	7	11	16	4	72	22	1		34			174
Percent	0.3	1.8	2.1	3.3	4.8	1.2	21.4	6.6	0.3		10.1			51.9
Std. Error	0.3	0.7	0.7	0.9	1.1	0.6	2.1	1.3	0.3		1.6			2.6
Number	11	67	78	123	179	45	805	246	11		380			1,945
Female														
Sample Size		3		16	7		96	10		1	28			161
Percent		0.9		4.8	2.1		28.6	3.0		0.3	8.4			48.1
Std. Error		0.5		1.1	0.7		2.4	0.9		0.3	1.4			2.6
Number		34		179	78		1,072	112		11	313			1,799
All Fish														
Sample Size	1	9	7	27	23	4	168	32	1	1	62			335
Percent	0.3	2.7	2.1	8.1	6.9	1.2	50.0	9.6	0.3	0.3	18.5			100.0
Std. Error	0.3	0.8	0.7	1.4	1.3	0.6	2.6	1.5	0.3	0.3	2.0			
Number	11	101	78	302	257	45	1,877	358	11	11	693			3,744
Statistical Week 29 (July 16 - 22)														
Male														
Sample Size				12	11		27	4			7			61
Percent				6.7	6.2		15.1	2.2			3.9			34.1
Std. Error				1.9	1.8		2.7	1.1			1.4			3.5
Number				1,132	1,038		2,546	377			660			5,753
Female														
Sample Size		2		19	14	1	59	12		1	10			118
Percent		1.1		10.6	7.8	0.6	32.9	6.7		0.6	5.6			65.9
Std. Error		0.8		2.3	2.0	0.6	3.5	1.9		0.6	1.7			3.5
Number		189		1,792	1,320	94	5,566	1,132		94	943			11,130
All Fish														
Sample Size		2		31	25	1	86	16		1	17			179
Percent		1.1		17.3	14.0	0.6	48.0	8.9		0.6	9.5			100.0
Std. Error		0.8		2.8	2.6	0.6	3.7	2.1		0.6	2.2			
Number		189		2,924	2,358	94	8,112	1,509		94	1,603			16,883
Statistical Week 30 (July 23 - 29)														
Male														
Sample Size		1		4	4		24	4			2	1		40
Percent		1.0		4.1	4.1		24.5	4.1			2.0	1.0		40.8
Std. Error		1.0		2.0	2.0		4.3	2.0			1.4	1.0		5.0
Number		99		395	395		2,369	395			197	99		3,949
Female														
Sample Size			1	18	6		20	5			7		1	58
Percent			1.0	18.4	6.1		20.4	5.1			7.2		1.0	59.2
Std. Error			1.0	3.9	2.4		4.1	2.2			2.6		1.0	5.0
Number			99	1,777	592		1,974	494			691		99	5,726
All Fish														
Sample Size		1	1	22	10		44	9			9	1	1	98
Percent		1.0	1.0	22.5	10.2		44.9	9.2			9.2	1.0	1.0	100.0
Std. Error		1.0	1.0	4.2	3.1		5.0	2.9			2.9	1.0	1.0	
Number		99	99	2,172	987		4,343	889			888	99	99	9,675
Statistical Week 31 (July 30 - August 5)														
Male														
Sample Size		2		9	17		53	20		1	12			114
Percent		0.7		3.1	5.8		18.0	6.8		0.3	4.1			38.8
Std. Error		0.5		1.0	1.3		2.2	1.4		0.3	1.1			2.8
Number		69		312	590		1,840	694		35	416			3,956
Female														
Sample Size		3	1	10	10	1	72	48			35			180
Percent		1.0	0.3	3.4	3.4	0.3	24.6	16.3			11.9			61.2
Std. Error		0.6	0.3	1.0	1.0	0.3	2.5	2.1			1.9			2.8
Number		104	35	347	347	35	2,497	1,666			1,215			6,246
All Fish														
Sample Size		5	1	19	27	1	125	68		1	47			294
Percent		1.7	0.3	6.5	9.2	0.3	42.6	23.1		0.3	16.0			100.0
Std. Error		0.7	0.3	1.4	1.7	0.3	2.8	2.4		0.3	2.1			
Number		173	35	659	937	35	4,337	2,360		35	1,631			10,202

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Appendix C.27. (page 2 of 2).

	Brood Year and Age Class													
	1987	1986		1985			1984			1983			1982	
	0.1	0.2	1.1	0.3	1.2	2.1	1.3	2.2	3.1	1.4	2.3	3.2	3.3	Total
Statistical Week 32 (August 6 - 12)														
Male														
Sample Size				12	8		21	6			7			54
Percent				9.3	6.2		16.3	4.7			5.4			41.9
Std. Error				2.5	2.1		3.2	1.8			2.0			4.3
Number				319	212		558	159			186			1,434
Female														
Sample Size				9	7		26	25			8			75
Percent				7.0	5.4		20.2	19.3			6.2			58.1
Std. Error				2.2	2.0		3.5	3.4			2.1			4.3
Number				239	186		691	664			212			1,992
All Fish														
Sample Size				21	15		47	31			15			129
Percent				16.3	11.6		36.5	24.0			11.6			100.0
Std. Error				3.2	2.8		4.2	3.7			2.8			
Number				558	398		1,249	823			398			3,426
Statistical Week 33 (August 13 - 19)														
Male														
Sample Size				2	5		11	28			16			62
Percent				1.1	2.9		6.3	16.1			9.2			35.6
Std. Error				0.8	1.2		1.8	2.6			2.1			3.4
Number				19	48		105	266			152			590
Female														
Sample Size				2	8		22	57			22		1	112
Percent				1.1	4.6		12.7	32.8			12.6		0.6	64.4
Std. Error				0.8	1.5		2.4	3.4			2.4		0.5	3.4
Number				19	76		209	542			210		10	1,066
All Fish														
Sample Size				4	13		33	85			38		1	174
Percent				2.2	7.5		19.0	48.9			21.8		0.6	100.0
Std. Error				1.1	1.9		2.8	3.6			3.0		0.5	
Number				38	124		314	808			362		10	1,656
Statistical Week 34 (August 20 - 26)														
Male														
Sample Size				3	6		15	35			21		1	81
Percent				1.7	3.5		8.7	20.4			12.2		0.6	47.1
Std. Error				0.9	1.3		2.0	2.9			2.4		0.6	3.6
Number				30	60		150	351			210		10	811
Female														
Sample Size					1		10	49			31			91
Percent					0.6		5.8	28.5			18.0			52.9
Std. Error					0.6		1.7	3.3			2.8			3.6
Number					10		100	491			311			912
All Fish														
Sample Size				3	7		25	84			52		1	172
Percent				1.7	4.1		14.5	48.9			30.2		0.6	100.0
Std. Error				0.9	1.4		2.6	3.6			3.3		0.6	
Number				30	70		250	842			521		10	1,723
Statistical Week 35 (August 27 - Sept. 2)														
Male														
Sample Size				1	3		4	7	1		5	1		22
Percent				1.9	5.7		7.5	13.2	1.9		9.4	1.9		41.5
Std. Error				1.7	2.9		3.3	4.3	1.7		3.7	1.7		6.2
Number				6	17		23	39	6		28	6		125
Female														
Sample Size					6		10	11			4			31
Percent					11.3		18.9	20.8			7.5			58.5
Std. Error					4.0		4.9	5.1			3.3			6.2
Number					34		56	62			23			175
All Fish														
Sample Size				1	9		14	18	1		9	1		53
Percent				1.9	17.0		26.4	34.0	1.9		16.9	1.9		100.0
Std. Error				1.7	4.7		5.5	6.0	1.7		4.7	1.7		
Number				6	51		79	101	6		51	6		300
Combined Periods (Percentages are weighted by period catches)														
Male														
Sample Size	1	9	7	57	75	4	272	131	2	2	108	2	1	671
Percent	<0.1	0.5	0.2	4.9	5.3	0.1	17.8	5.3	<0.1	0.1	4.7	0.2	<0.1	39.1
Std. Error	<0.1	0.2	0.1	0.8	0.8	<0.1	1.4	0.7	<0.1	0.1	0.7	0.2	<0.1	1.8
Number	11	235	78	2,345	2,555	45	8,537	2,543	17	38	2,242	105	10	18,761
Female														
Sample Size		8	2	76	64	3	372	219		2	146	1	2	895
Percent		0.7	0.3	9.1	5.5	0.3	25.7	10.8		0.2	8.2	<0.1	0.2	60.9
Std. Error		0.3	0.2	1.2	0.9	0.2	1.6	1.0		0.2	0.9	<0.1	0.2	1.8
Number		327	134	4,360	2,659	132	12,344	5,169		105	3,921	3	109	29,263
All Fish														
Sample Size	1	17	9	133	139	7	645	350	2	4	254	3	3	1,567
Percent	<0.1	1.2	0.4	14.0	10.9	0.4	43.5	16.1	<0.1	0.3	12.8	0.2	0.2	100.0
Std. Error	<0.1	0.4	0.2	1.4	1.2	0.2	1.8	1.1	<0.1	0.2	1.1	0.2	0.2	
Number	11	562	212	6,705	5,214	177	20,884	7,712	17	143	6,163	108	119	48,027

Appendix C.28. Test for significant changes among periods in the age composition of sockeye salmon in the District 112 purse seine catch by age class, 1989.

	Brood Year and Age Class												
	1987	1986		1985			1984			1983			1982
	0.1	0.2	1.1	0.3	1.2	2.1	1.3	2.2	3.1	1.4	2.3	3.2	3.3
Periods Compared													
1 , 2							S**				S**		
1 , 3				S**			S**				S		
1 , 4				S**			S**						
1 , 5							S**	S**			S**		
1 , 6				S**			S**	S**			S*		
1 , 7							S**	S**			S**		
1 , 8							S**	S**			S**		
1 , 9					S		S**	S**			S**		
2 , 3				S**	S**						S**		
2 , 4				S**							S*		
2 , 5							S	S**					
2 , 6				S**			S**	S**			S		
2 , 7		S		S**			S**	S**					
2 , 8		S		S**			S**	S**			S**		
2 , 9					S*		S**	S**					
3 , 4													
3 , 5				S**				S**			S		
3 , 6							S	S**					
3 , 7				S**	S		S**	S**			S**		
3 , 8				S**	S**		S**	S**			S**		
3 , 9				S**			S**	S**					
4 , 5				S**				S**					
4 , 6								S**					
4 , 7				S**			S**	S**			S**		
4 , 8				S**	S		S**	S**			S**		
4 , 9				S**			S*	S**					
5 , 6				S**									
5 , 7				S			S**	S**					
5 , 8				S*	S		S**	S**			S**		
5 , 9							S*						
6 , 7				S**			S**	S**			S*		
6 , 8				S**	S*		S**	S**			S**		
6 , 9				S**									
7 , 8											S		
7 , 9					S			S					
8 , 9					S**		S	S			S		

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix C.29. Length composition of sockeye salmon in the District 112 purse seine catch by sex, age class, and fishing period, 1989.

		Brood Year and Age Class										
		1986		1985		1984		1983			1982	
		0.2	1.1	0.3	1.2	1.3	2.2	1.4	2.3	3.2	3.3	Total
Statistical Week 27 (July 2 - 8)												
Male	Avg. Length			563	469	575	487		588			557
	Std. Error			51.5	27.4	7.0	24.7		17.0			8.7
	Sample Size			2	4	27	4		4			41
Female	Avg. Length			577	508	565				525		562
	Std. Error			33.5	12.5	3.7						4.1
	Sample Size			2	2	37				1		42
All Fish	Avg. Length			570	482	569	487		588	525		560
	Std. Error			25.4	19.4	3.6	24.7		17.0			4.7
	Sample Size			4	6	65	4		4	1		84
Statistical Week 28 (July 9 - 15)												
Male	Avg. Length	453	344	585	427	583	431		594			537
	Std. Error	19.5		25.4	14.0	15.3	20.1		22.5			16.1
	Sample Size	2	1	3	3	13	3		5			30
Female	Avg. Length	522				577	513		570			569
	Std. Error	72.0				5.2			7.4			6.3
	Sample Size	2				20	1		5			28
All Fish	Avg. Length	487	344	585	427	579	452		582			553
	Std. Error	36.5		25.4	14.0	6.7	24.9		11.8			9.1
	Sample Size	4	1	3	3	33	4		10			58
Statistical Week 29 (July 16 - 22)												
Male	Avg. Length			576	477	609	535		615			581
	Std. Error			6.4	31.8	7.2			23.6			11.0
	Sample Size			6	3	10	1		3			23
Female	Avg. Length			569	535	582	541	610	595			574
	Std. Error			21.0	5.0	6.3	13.5		27.5			5.7
	Sample Size			4	2	23	5	1	3			38
All Fish	Avg. Length			573	500	590	540	610	605			577
	Std. Error			8.6	22.6	5.3	11.1		16.8			5.4
	Sample Size			10	5	33	6	1	6			61
Statistical Week 30 (July 23 - 29)												
Male	Avg. Length	525		595	499	598	567		640	545		575
	Std. Error			2.9	14.3	12.6	32.2					10.3
	Sample Size	1		4	4	12	3		1	1		26
Female	Avg. Length			570	467	564	520		598		590	558
	Std. Error			8.6	18.4	6.4	17.6		7.3			7.1
	Sample Size			12	4	13	3		6		1	39
All Fish	Avg. Length	525		576	483	580	543		604	545	590	565
	Std. Error			7.0	12.4	7.6	19.4		8.6			6.0
	Sample Size	1		16	8	25	6		7	1	1	65
Statistical Week 31 (July 30 - August 5)												
Male	Avg. Length			595	489	589			621			586
	Std. Error				41.5	7.4			13.0			10.4
	Sample Size			1	2	12			4			19
Female	Avg. Length	508		588	508	579	528		579			559
	Std. Error	27.5		1.7	10.1	5.3	6.2		6.4			4.8
	Sample Size	2		3	3	16	16		16			56
All Fish	Avg. Length	508		590	500	584	528		588			566
	Std. Error	27.5		2.0	15.1	4.4	6.2		6.8			4.6
	Sample Size	2		4	5	28	16		20			75
Statistical Week 32 (August 6 - 12)												
Male	Avg. Length			587	503	579	532		600			560
	Std. Error			4.4	2.5	18.2	27.7					12.1
	Sample Size			3	2	4	3		1			13
Female	Avg. Length			558	493	571	509		588			544
	Std. Error			12.5	42.5	10.9	12.4		10.3			10.7
	Sample Size			2	2	4	6		4			18
All Fish	Avg. Length			575	498	575	517		590			550
	Std. Error			8.5	17.6	9.9	11.9		8.4			8.0
	Sample Size			5	4	8	9		5			31

-continued-

Appendix C.29. (page 2 of 2).

		Brood Year and Age Class										
		1986		1985		1984		1983			1982	
		0.2	1.1	0.3	1.2	1.3	2.2	1.4	2.3	3.2	3.3	Total
Statistical Week 33 (August 13 - 19)												
Male	Avg. Length				488	563	547					538
	Std. Error				27.5	4.4	20.9					14.3
	Sample Size				2	3	3					8
Female	Avg. Length			575	462	559	529		588			538
	Std. Error				6.7	14.3	10.5		6.0			10.3
	Sample Size			1	3	5	8		3			20
All Fish	Avg. Length			575	472	561	534		588			538
	Std. Error				11.4	8.7	9.3		6.0			8.3
	Sample Size			1	5	8	11		3			28
Statistical Weeks 34 - 35 (August 20 - Sept. 2)												
Male	Avg. Length				535	580	538					551
	Std. Error				10.0	14.4	14.8					10.4
	Sample Size				2	3	4					9
Female	Avg. Length				500	538	530		605			545
	Std. Error					14.5	16.7					12.9
	Sample Size				1	3	4		2			10
All Fish	Avg. Length				523	559	534		605			548
	Std. Error				13.0	13.1	10.4					8.2
	Sample Size				3	6	8		2			19
Combined Periods (Lengths weighted by period catches)												
Male	Avg. Length	505	344	586	484	595	533		619	545		573
	Std. Error	26.7		6.1	9.5	4.2	12.4		8.7			4.6
	Sample Size	3	1	19	22	84	21		18	1		169
Female	Avg. Length	511		573	506	574	529	610	590	525	590	563
	Std. Error	31.7		5.9	8.4	2.3	4.2		3.9			2.4
	Sample Size	4		24	17	121	43	1	39	1	1	251
All Fish	Avg. Length	511	344	579	491	582	529	610	598	544	590	566
	Std. Error	21.2		4.3	6.4	2.2	4.9		4.0	10.0		2.4
	Sample Size	7	1	43	39	206	64	1	57	2	1	421

Appendix C.30. Test for significant changes among periods in the length composition of sockeye salmon in the District 112 purse seine catch by age class, 1989.

	Brood Year and Age Class									
	1986		1985		1984		1983			1982
	0.2	1.1	0.3	1.2	1.3	2.2	1.4	2.3	3.2	3.3
Periods Compared										
1 , 2				S*						
1 , 3					S**	S				
1 , 4						S				
1 , 5					S**					
1 , 6										
1 , 7						S				
1 , 8				S		S				
2 , 3				S**		S**				
2 , 4				S**		S**				
2 , 5				S**		S**				
2 , 6				S**		S**				
2 , 7				S**	S	S**				
2 , 8				S**		S**		S		
3 , 4										
3 , 5			S							
3 , 6										
3 , 7					S**					
3 , 8					S*					
4 , 5			S							
4 , 6										
4 , 7					S					
4 , 8				S*						
5 , 6			S							
5 , 7					S**					
5 , 8					S			S**		
6 , 7										
6 , 8								S		
7 , 8				S**				S**		

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix C.31. Age composition of sockeye salmon in the District 113 purse seine catch by sex, age class, and fishing period, 1989.

	Brood Year and Age Class								
	1986		1985			1984		1983	
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	2.3	Total
Statistical Weeks 27 - 28 (July 2 - 15)									
Male									
Sample Size		2		8		105	4	5	124
Percent		0.9		3.5		46.0	1.8	2.2	54.4
Std. Error		0.6		1.1		3.1	0.8	0.9	3.1
Number		15		59		777	30	37	918
Female									
Sample Size	1	2	2	9		85	4	1	104
Percent	0.4	0.9	0.9	3.9		37.3	1.8	0.4	45.6
Std. Error	0.4	0.6	0.6	1.2		3.0	0.8	0.4	3.1
Number	7	15	15	67		629	30	7	770
All Fish									
Sample Size	1	4	2	17		190	8	6	228
Percent	0.4	1.8	0.9	7.4		83.3	3.6	2.6	100.0
Std. Error	0.4	0.8	0.6	1.6		2.3	1.1	1.0	
Number	7	30	15	126		1,406	60	44	1,688
Statistical Week 29 (July 16 - 22)									
Male									
Sample Size	1	3	1	9	1	84	10	2	111
Percent	0.4	1.3	0.4	4.0	0.4	37.2	4.4	0.9	49.1
Std. Error	0.4	0.7	0.4	1.3	0.4	3.1	1.3	0.6	3.2
Number	15	44	15	133	15	1,237	147	29	1,635
Female									
Sample Size			1	16		89	7	2	115
Percent			0.4	7.1		39.4	3.1	0.9	50.9
Std. Error			0.4	1.7		3.2	1.1	0.6	3.2
Number			15	236		1,311	103	29	1,694
All Fish									
Sample Size	1	4	4	35	3	181	25	5	258
Percent	0.4	1.6	1.6	13.6	1.2	70.0	9.7	1.9	100.0
Std. Error	0.4	0.7	0.7	2.1	0.6	2.8	1.8	0.8	
Number	15	59	59	516	44	2,665	368	74	3,800
Statistical Weeks 30 - 33 (July 23 - August 19)									
Male									
Sample Size		10	2	26	3	45	69	13	168
Percent		3.4	0.7	8.9	1.0	15.5	23.7	4.5	57.7
Std. Error		1.0	0.5	1.6	0.6	2.1	2.4	1.2	2.8
Number		150	30	391	45	676	1,036	195	2,523
Female									
Sample Size	1	2		33	2	42	33	10	123
Percent	0.3	0.7		11.4	0.7	14.4	11.4	3.4	42.3
Std. Error	0.3	0.5		1.8	0.5	2.0	1.8	1.0	2.8
Number	15	30		496	30	631	496	150	1,848
All Fish									
Sample Size	1	12	2	59	5	87	102	23	291
Percent	0.3	4.1	0.7	20.3	1.7	29.9	35.1	7.9	100.0
Std. Error	0.3	1.1	0.5	2.3	0.7	2.6	2.7	1.5	
Number	15	180	30	887	75	1,307	1,532	345	4,371
Combined Periods (Percentages are weighted by period catches)									
Male									
Sample Size	1	15	3	43	4	234	83	20	403
Percent	0.2	2.2	0.5	6.2	0.6	28.7	12.9	2.8	54.1
Std. Error	0.2	0.5	0.3	0.9	0.3	1.6	1.2	0.6	1.8
Number	15	209	45	583	60	2,690	1,213	262	5,076
Female									
Sample Size	2	4	3	58	2	216	44	13	342
Percent	0.2	0.5	0.3	8.5	0.3	27.4	6.7	2.0	45.9
Std. Error	0.2	0.2	0.2	1.0	0.2	1.6	0.9	0.5	1.8
Number	22	45	30	799	30	2,571	629	186	4,312
All Fish									
Sample Size	3	20	8	111	8	458	135	34	777
Percent	0.4	2.7	1.1	15.5	1.2	54.5	19.9	4.7	100.0
Std. Error	0.2	0.6	0.4	1.3	0.4	1.6	1.4	0.8	
Number	37	269	104	1,529	119	5,378	1,960	463	9,859

Appendix C.32. Test for significant changes among periods in the age composition of sockeye salmon in the District 113 purse seine catch by age class, 1989.

	Brood Year and Age Class							
	1986		1985			1984		1983
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	2.3
Periods Compared								
1 , 2				S*		S**	S**	
1 , 3				S**		S**	S**	S**
2 , 3				S*		S**	S**	S**

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix C.33. Length composition of sockeye salmon in the District 113 purse seine catch by sex, age class, and fishing period, 1989.

		Brood Year and Age Class								
		1986		1985			1984		1983	
		0.2	1.1	0.3	1.2	2.1	1.3	2.2	2.3	Total
Statistical Weeks 27 - 28 (July 2 - 15)										
Male	Avg. Length		340		498		562	508		553
	Std. Error				3.0		3.4	32.5		5.7
	Sample Size		1		2		47	2		52
Female	Avg. Length	515	330	580	534		544			539
	Std. Error						3.2			5.4
	Sample Size	1	1	1	1		45			49
All Fish	Avg. Length	515	335	580	510		553	508		546
	Std. Error		5.0		12.1		2.5	32.5		4.0
	Sample Size	1	2	1	3		92	2		101
Statistical Week 29 (July 16 - 22)										
Male	Avg. Length	580	355		530		568	526	535	553
	Std. Error		15.0		34.3		3.9	3.8		7.1
	Sample Size	1	2		4		39	4	1	51
Female	Avg. Length				514		559	503	540	550
	Std. Error				11.7		3.6	12.5		4.2
	Sample Size				9		44	2	1	56
All Fish	Avg. Length	580	355		519		563	518	538	551
	Std. Error		15.0		12.6		2.7	6.4	2.5	4.0
	Sample Size	1	2		13		83	6	2	107
Statistical Weeks 30 - 33 (July 23 - August 19)										
Male	Avg. Length			576	509	370	571	508		532
	Std. Error			19.0	18.5		7.6	9.2		8.1
	Sample Size			2	7	1	17	17		44
Female	Avg. Length	505			493	520	560	504	560	530
	Std. Error				12.0		5.4	19.1		7.3
	Sample Size	1			9	1	17	7	1	36
All Fish	Avg. Length	505		576	500	445	566	507	560	531
	Std. Error			19.0	10.3	75.0	4.7	8.3		5.5
	Sample Size	1		2	16	2	34	24	1	80
Combined Periods (Lengths weighted by period catches)										
Male	Avg. Length	580	350	576	515	370	568	515	535	544
	Std. Error		10.0	19.0	13.9		2.5	7.2		4.1
	Sample Size	1	3	2	13	1	103	23	1	147
Female	Avg. Length	508	330	580	508	520	557	503	551	539
	Std. Error	5.0			8.2		2.3	14.7	10.0	3.2
	Sample Size	2	1	1	19	1	106	9	2	141
All Fish	Avg. Length	536	349	577	509	445	563	511	550	541
	Std. Error	23.5	8.7	11.1	7.4	75.0	1.7	6.5	7.6	2.6
	Sample Size	3	4	3	32	2	209	32	3	288

Appendix C.34. Test for significant changes among periods in the length composition of sockeye salmon in the District 113 purse seine catch by age class, 1989.

	Brood Year and Age Class							
	1986		1985			1984		1983
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	2.3
Periods Compared								
1 , 2						S**		
1 , 3						S**		
2 , 3								

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix C.35. Age composition of sockeye salmon in the District 114 purse seine catch by sex and age class, 1989.

	Brood Year and Age Class							
	1986	1985			1984		1983	
	0.2	0.3	1.2	2.1	1.3	2.2	2.3	Total
Statistical Weeks 27 - 33 (July 2 - August 19)								
Male								
Sample Size	1	9	6	1	52	7	16	92
Percent	0.4	3.8	2.5	0.4	22.1	3.0	6.8	39.0
Std. Error	0.4	1.2	1.0	0.4	2.7	1.1	1.6	3.1
Number	25	227	151	25	1,310	176	403	2,317
Female								
Sample Size		15	17		70	14	28	144
Percent		6.4	7.2		29.6	5.9	11.9	61.0
Std. Error		1.6	1.7		2.9	1.5	2.1	3.1
Number		378	428		1,763	353	705	3,627
All Fish								
Sample Size	1	24	24	1	126	22	44	242
Percent	0.4	9.9	9.9	0.4	52.1	9.1	18.2	100.0
Std. Error	0.4	1.9	1.9	0.4	3.2	1.8	2.4	
Number	25	605	604	25	3,174	554	1,108	6,095

Appendix C.36. Length composition of sockeye salmon in the District 114 purse seine catch by sex and age class, 1989.

		Brood Year and Age Class						
			1985		1984		1983	
		0.3	1.2	2.1	1.3	2.2	2.3	Total
Statistical Weeks 27 - 33 (July 2 - August 19)								
Male	Avg. Length		430	350	595	520	591	572
	Std. Error		20.0		7.3	25.0	7.0	10.9
	Sample Size		2	1	18	2	11	34
Female	Avg. Length	562	472		574	516	570	555
	Std. Error	19.6	13.5		4.6	12.2	6.2	5.5
	Sample Size	3	5		25	8	15	56
All Fish	Avg. Length	562	465	350	580	512	579	560
	Std. Error	19.6	12.2		4.5	10.7	5.0	5.3
	Sample Size	3	8	1	47	11	26	96

Appendix D.1. Age composition of sockeye salmon in the District 108 gill net test fishery catch by sex and age class, 1989.

	Brood Year and Age Class						
	1986	1985	1985	1984	1984	1983	
	0.2	0.3	1.2	1.3	2.2	2.3	Total
Statistical Weeks 25 - 31 (June 18 - August 5)							
Male							
Sample Size		28	2	73	3	9	115
Percent		11.4	0.8	29.7	1.2	3.7	46.7
Std. Error		1.8	0.5	2.5	0.6	1.0	2.8
Number		118	8	308	13	38	485
Female							
Sample Size	1	15	11	89	4	11	131
Percent	0.4	6.1	4.5	36.2	1.6	4.5	53.3
Std. Error	0.4	1.3	1.2	2.7	0.7	1.2	2.8
Number	4	63	46	376	17	46	553
All Fish							
Sample Size	1	43	13	162	7	20	246
Percent	0.4	17.5	5.3	65.9	2.8	8.1	100.0
Std. Error	0.4	2.1	1.2	2.6	0.9	1.5	
Number	4	181	55	684	30	84	1,038

Appendix D.2. Length composition of sockeye salmon in the District 108 gill net test fishery catch by sex and age class, 1989.

		Brood Year and Age Class						
		1986	1985		1984		1983	
		0.2	0.3	1.2	1.3	2.2	2.3	Total
Statistical Weeks 25 - 31 (June 18 - August 5)								
Male	Avg. Length		597	452	611	543	610	603
	Std. Error		3.8	1.0	2.3	3.9	5.8	2.8
	Sample Size		28	2	73	3	9	115
Female	Avg. Length	549	578	530	586	538	577	578
	Std. Error		4.2	5.3	2.5	15.4	6.0	2.4
	Sample Size	1	15	11	89	4	11	131
All Fish	Avg. Length	549	590	518	597	540	592	590
	Std. Error		3.1	9.3	2.0	8.4	5.6	2.0
	Sample Size	1	43	13	162	7	20	246

Appendix D.3. Age composition of sockeye salmon in the Canadian test fishery gill net catch in the Stikine River by sex, age class, and fishing period, 1989.

	Brood Year and Age Class							
	1986	1985		1984		1983		
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	Total
Statistical Weeks 25 - 26 (June 18 - July 1)								
Male								
Sample Size		18	4	94	3		14	133
Percent		7.1	1.6	37.2	1.2		5.5	52.6
Std. Error		1.6	0.8	3.0	0.7		1.4	3.1
Female								
Sample Size		14	2	85	2		17	120
Percent		5.5	0.8	33.6	0.8		6.7	47.4
Std. Error		1.4	0.6	2.9	0.6		1.6	3.1
All Fish								
Sample Size		32	6	179	5		31	253
Percent		12.6	2.4	70.8	2.0		12.3	100.0
Std. Error		2.1	0.9	2.8	0.9		2.0	
Statistical Weeks 27 - 28 (July 2 - 15)								
Male								
Sample Size		10	20	83	5		14	132
Percent		3.6	7.2	29.9	1.8		5.0	47.5
Std. Error		1.1	1.5	2.7	0.8		1.3	3.0
Female								
Sample Size		20	13	99	8		6	146
Percent		7.2	4.7	35.6	2.9		2.2	52.5
Std. Error		1.5	1.3	2.8	1.0		0.9	3.0
All Fish								
Sample Size		30	33	182	13		20	278
Percent		10.8	11.9	65.5	4.7		7.2	100.0
Std. Error		1.8	1.9	2.8	1.3		1.5	
Statistical Weeks 29 - 30 (July 16 - 29)								
Male								
Sample Size	2	21	16	129	8		7	183
Percent	0.5	4.9	3.8	30.3	1.9		1.6	43.0
Std. Error	0.3	1.0	0.9	2.2	0.6		0.6	2.3
Female								
Sample Size		38	14	180	4		7	243
Percent		8.9	3.3	42.3	0.9		1.6	57.0
Std. Error		1.4	0.8	2.3	0.5		0.6	2.3
All Fish								
Sample Size	2	59	30	309	12		14	426
Percent	0.5	13.8	7.0	72.5	2.8		3.3	100.0
Std. Error	0.3	1.6	1.2	2.1	0.8		0.8	

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Appendix D.3. (page 2 of 2).

	Brood Year and Age Class							
	1986	1985		1984		1983		
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	Total
Statistical Weeks 31 - 35 (July 30 - Sept. 2)								
Male								
Sample Size	1	16	15	92	9	2	6	141
Percent	0.3	4.6	4.3	26.6	2.6	0.6	1.7	40.8
Std. Error	0.3	1.1	1.1	2.3	0.8	0.4	0.7	2.6
Female								
Sample Size		26	8	157	4		10	205
Percent		7.5	2.3	45.4	1.2		2.9	59.2
Std. Error		1.4	0.8	2.6	0.6		0.9	2.6
All Fish								
Sample Size	1	42	23	249	13	2	16	346
Percent	0.3	12.1	6.6	72.0	3.8	0.6	4.6	100.0
Std. Error	0.3	1.7	1.3	2.4	1.0	0.4	1.1	
Combined Periods (Percentages are weighted by period catches)								
Male								
Sample Size	3	65	55	398	25	2	41	589
Percent	0.2	5.1	4.2	31.0	1.9	0.1	3.5	45.9
Std. Error	0.1	0.6	0.6	1.3	0.4	0.1	0.5	1.4
Female								
Sample Size		98	37	521	18		40	714
Percent		7.3	2.8	39.2	1.4		3.4	54.1
Std. Error		0.7	0.4	1.3	0.3		0.5	1.4
All Fish								
Sample Size	3	163	92	919	43	2	81	1,303
Percent	0.2	12.4	7.0	70.2	3.3	0.1	6.8	100.0
Std. Error	0.1	0.9	0.7	1.3	0.5	0.1	0.7	

Appendix D.4. Test for significant changes among periods in the age composition of sockeye salmon in the Canadian test fishery gill net catch in the Stikine River by age class, 1989.

	Brood Year and Age Class						
	1986	1985		1984		1983	
	0.2	0.3	1.2	1.3	2.2	1.4	2.3
Periods Compared							
1 , 2			S**				S
1 , 3			S**				S**
1 , 4			S*				S**
2 , 3			S*	S			S*
2 , 4			S*	S			
3 , 4							

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix D.5. Length composition of sockeye salmon in the Canadian test fishery gill net catch in the Stikine River by sex, age class, and fishing period, 1989.

		Brood Year and Age Class							
		1986	1985		1984		1983		
		0.2	0.3	1.2	1.3	2.2	1.4	2.3	Total
Statistical Weeks 25 - 26 (June 18 - July 1)									
Male	Avg. Length		596	489	611	543		618	604
	Std. Error		4.0	24.4	2.7	7.9		4.3	2.9
	Sample Size		18	4	94	3		14	133
Female	Avg. Length		566	502	588	521		579	581
	Std. Error		4.7	15.0	2.8	20.0		5.3	2.6
	Sample Size		14	2	85	2		17	120
All Fish	Avg. Length		583	493	600	534		596	593
	Std. Error		4.0	16.2	2.1	9.4		4.9	2.1
	Sample Size		32	6	179	5		31	253
Statistical Weeks 27 - 28 (July 2 - 15)									
Male	Avg. Length		580	527	604	533		603	588
	Std. Error		7.8	10.0	2.3	9.0		5.2	3.4
	Sample Size		10	20	83	5		14	132
Female	Avg. Length		570	522	576	513		607	568
	Std. Error		3.9	7.7	2.4	8.7		8.6	2.6
	Sample Size		20	13	99	8		6	146
All Fish	Avg. Length		573	525	589	520		604	578
	Std. Error		3.7	6.7	2.0	6.8		4.4	2.2
	Sample Size		30	33	182	13		20	278
Statistical Weeks 29 - 30 (July 16 - 29)									
Male	Avg. Length	455	591	507	602	544		575	588
	Std. Error	12.5	3.6	11.8	2.0	4.8		4.6	3.0
	Sample Size	2	21	16	129	8		7	183
Female	Avg. Length		569	515	574	526		563	569
	Std. Error		3.2	4.6	1.7	5.4		7.8	1.7
	Sample Size		38	14	180	4		7	243
All Fish	Avg. Length	455	577	511	586	538		569	577
	Std. Error	12.5	2.8	6.6	1.5	4.3		4.7	1.6
	Sample Size	2	59	30	309	12		14	426
Statistical Weeks 31 - 35 (July 30 - Sept. 2)									
Male	Avg. Length	575	585	505	591	529	558	567	576
	Std. Error		4.1	13.6	2.6	5.3	11.0	10.8	3.4
	Sample Size	1	16	15	91	9	2	6	140
Female	Avg. Length		567	518	574	566		565	571
	Std. Error		3.5	6.7	1.6	28.6		5.3	1.6
	Sample Size		26	8	157	4		10	205
All Fish	Avg. Length	575	574	509	581	540	558	566	573
	Std. Error		3.0	9.2	1.5	10.0	11.0	5.0	1.7
	Sample Size	1	42	23	248	13	2	16	345
Combined Periods (Lengths weighted by period catches)									
Male	Avg. Length	515	588	507	602	537	558	591	589
	Std. Error	40.8	2.3	6.5	1.2	3.3	11.0	4.1	1.6
	Sample Size	3	65	55	397	25	2	41	588
Female	Avg. Length		568	514	578	531		579	572
	Std. Error		1.9	3.6	1.0	8.7		3.9	1.0
	Sample Size		98	37	521	18		40	714
All Fish	Avg. Length	515	577	510	589	533	558	584	580
	Std. Error	40.8	1.6	4.1	0.9	4.1	11.0	3.0	1.0
	Sample Size	3	163	92	918	43	2	81	1302

Appendix D.6. Test for significant changes among periods in the length composition of sockeye salmon in the Canadian test fishery gill net catch in the Stikine River by age class, 1989.

	Brood Year and Age Class						
	1986	1985		1984		1983	
	0.2	0.3	1.2	1.3	2.2	1.4	2.3
Periods Compared							
1 . 2		S	S	S**			
1 . 3				S**			S**
1 . 4		S		S**			S**
2 . 3					S*		S**
2 . 4				S**			S**
3 . 4				S**			

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix D.7. Age composition of sockeye salmon in the District 112 purse seine test fishery catch by sex and age class, 1989.

	Brood Year and Age Class				
	1985	1984		1983	
	1.2	1.3	2.2	2.3	Total
Statistical Weeks	26 - 28 (June 25 - July 14)				
Male					
Sample Size	1	12		4	17
Percent	2.5	30.0		10.0	42.5
Std. Error	2.4	7.0		4.6	7.5
Number	10	122		41	173
Female					
Sample Size	1	16	1	5	23
Percent	2.5	40.0	2.5	12.5	57.5
Std. Error	2.4	7.4	2.4	5.0	7.5
Number	10	162	10	51	233
All Fish					
Sample Size	2	28	1	9	40
Percent	5.0	70.0	2.5	22.5	100.0
Std. Error	3.3	7.0	2.4	6.3	
Number	20	284	10	91	406

Appendix E.1. Age composition of sockeye salmon in the District 101 Metlakatla trap catch by sex and age class, 1989.

	Brood Year and Age Class					
	1985	1984		1983		
	1.2	1.3	2.2	2.3	3.2	Total
Statistical Weeks 28 - 35 (July 9 - Sept. 2)						
Male						
Sample Size	60	81	21	17		179
Percent	17.3	23.4	6.1	4.9		51.7
Std. Error	1.9	2.1	1.2	1.1		2.5
Number	473	639	166	134		1,412
Female						
Sample Size	37	112	8	9	1	167
Percent	10.7	32.4	2.3	2.6	0.3	48.3
Std. Error	1.6	2.4	0.8	0.8	0.3	2.5
Number	292	884	63	71	8	1,318
All Fish						
Sample Size	97	193	29	26	1	346
Percent	28.0	55.8	8.4	7.5	0.3	100.0
Std. Error	2.3	2.5	1.4	1.3	0.3	
Number	765	1,523	229	205	8	2,730

Appendix E.2. Length composition of sockeye salmon in the District 101 Metlakatla trap catch by sex and age class, 1989.

		Brood Year and Age Class					
		1985	1984		1983		
		1.2	1.3	2.2	2.3	3.2	Total
Statistical Weeks 28 - 35 (July 9 - Sept. 2)							
Male	Avg. Length	531	583	531	594		562
	Std. Error	8.8	4.9	9.7	14.9		4.7
	Sample Size	37	57	15	12		121
Female	Avg. Length	517	572	519	599	570	558
	Std. Error	7.7	3.0	10.6	9.9		3.5
	Sample Size	25	81	8	7	1	122
All Fish	Avg. Length	525	576	527	596	570	560
	Std. Error	6.1	2.7	7.3	9.9		2.9
	Sample Size	62	138	23	19	1	243

Appendix F.1. Age composition of sockeye salmon in the Hugh Smith Lake escapement by sex, age class, and escapement period, 1989.

	Brood Year and Age Class							
	1985	1984		1983		1982		
	1.2	1.3	2.2	2.3	3.2	2.4	3.3	Total
Escapement Dates:	(June 11 - July 15)							
Sample Dates:	(June 11 - July 15)							
Male								
Sample Size	63	80	1	13				157
Percent	21.8	27.7	0.3	4.5				54.3
Std. Error	0.9	1.0	0.1	0.5				1.1
Number	74	93	1	15				183
Female								
Sample Size	14	95	1	21			1	132
Percent	4.8	32.9	0.4	7.3			0.3	45.7
Std. Error	0.5	1.0	0.1	0.6			0.1	1.1
Number	16	110	1	25			1	153
All Fish								
Sample Size	77	175	2	34			1	289
Percent	26.6	60.6	0.7	11.8			0.3	100.0
Std. Error	1.0	1.1	0.2	0.7			0.1	
Number	90	203	2	40			1	336
Escapement Dates:	(July 16 - July 29)							
Sample Dates:	(July 16 - July 29)							
Male								
Sample Size	19	95	2	12				128
Percent	8.0	40.1	0.8	5.1				54.0
Std. Error	0.8	1.5	0.3	0.7				1.5
Number	25	122	3	15				165
Female								
Sample Size	4	98		7				109
Percent	1.7	41.4		3.0				46.0
Std. Error	0.4	1.5		0.5				1.5
Number	5	126		9				140
All Fish								
Sample Size	23	193	2	19				237
Percent	9.7	81.5	0.8	8.0				100.0
Std. Error	0.9	1.2	0.3	0.8				
Number	30	248	3	24				305
Escapement Dates:	(July 30 - August 5)							
Sample Dates:	(July 30 - August 5)							
Male								
Sample Size	11	203	2	6				222
Percent	2.5	47.0	0.5	1.4				51.4
Std. Error	0.6	1.9	0.3	0.4				1.9
Number	27	499	5	15				546
Female								
Sample Size		203		6		1		210
Percent		47.0		1.4		0.2		48.6
Std. Error		1.9		0.4		0.2		1.9
Number		499		15		2		516
All Fish								
Sample Size	11	411	2	12		1		437
Percent	2.5	94.1	0.5	2.8		0.2		100.0
Std. Error	0.6	0.9	0.2	0.6		0.2		
Number	27	1,010	5	30		2		1,074

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Appendix F.1. (page 2 of 3).

	Brood Year and Age Class							
	1985	1984		1983		1982		
	1.2	1.3	2.2	2.3	3.2	2.4	3.3	Total
Escapement Dates:	(August 6 - 12)							
Sample Dates:	(August 6 - 12)							
Male								
Sample Size	1	166		2				169
Percent	0.3	49.4		0.6				50.3
Std. Error	0.3	2.5		0.4				2.5
Number	8	1,249		15				1,272
Female								
Sample Size		158	1	8				167
Percent		47.0	0.3	2.4				49.7
Std. Error		2.5	0.3	0.8				2.5
Number		1,189	8	60				1,257
All Fish								
Sample Size	1	331	1	10				343
Percent	0.3	96.4	0.3	3.0				100.0
Std. Error	0.3	0.9	0.3	0.8				
Number	8	2,490	8	75				2,581
Escapement Dates:	(August 13 - 19)							
Sample Dates:	(August 13 - 19)							
Male								
Sample Size		103		1				104
Percent		43.3		0.4				43.7
Std. Error		2.9		0.4				2.9
Number		608		6				614
Female								
Sample Size		125		9				134
Percent		52.5		3.8				56.3
Std. Error		3.0		1.1				2.9
Number		738		53				791
All Fish								
Sample Size		229		10				239
Percent		95.8		4.2				100.0
Std. Error		1.2		1.2				
Number		1,352		59				1,411
Escapement Dates:	(August 20 - Sept. 16)							
Sample Dates:	(August 20 - Sept. 16)							
Male								
Sample Size	1	36	3	17				57
Percent	0.7	24.8	2.1	11.7				39.3
Std. Error	0.6	3.2	1.0	2.4				3.6
Number	4	158	13	74				249
Female								
Sample Size		57		31				88
Percent		39.3		21.4				60.7
Std. Error		3.6		3.0				3.6
Number		249		135				384
All Fish								
Sample Size	1	93	4	48				146
Percent	0.7	63.7	2.7	32.9				100.0
Std. Error	0.6	3.5	1.2	3.4				
Number	4	407	17	209				637

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Appendix F.1. (page 3 of 3).

	Brood Year and Age Class							
	1985	1984		1983		1982		
	1.2	1.3	2.2	2.3	3.2	2.4	3.3	Total
Escapement Dates:	(Sept. 17 - Oct. 17)							
Sample Dates:	(Sept. 17 - Oct. 17)							
Male								
Sample Size	1	32	6	15				54
Percent	0.8	25.6	4.8	12.0				43.2
Std. Error	0.4	2.0	1.0	1.5				2.3
Number	1	43	8	20				73
Female								
Sample Size	2	25	7	36	1			71
Percent	1.6	20.0	5.6	28.8	0.8			56.8
Std. Error	0.6	1.8	1.0	2.1	0.4			2.3
Number	3	34	9	48	1			95
All Fish								
Sample Size	3	57	13	51	1			125
Percent	2.4	45.6	10.4	40.8	0.8			100.0
Std. Error	0.7	2.3	1.4	2.2	0.4			
Number	4	77	17	69	1			168
Combined Periods (Percentages are weighted by period escapements)								
Male								
Sample Size	96	715	14	66				891
Percent	2.1	43.1	0.5	2.5				48.2
Std. Error	0.2	1.3	0.1	0.3				1.3
Number	138	2,771	30	161				3,100
Female								
Sample Size	20	761	9	118	1	1	1	911
Percent	0.4	45.7	0.3	5.4	<0.1	<0.1	<0.1	51.8
Std. Error	<0.1	1.3	0.1	0.5	<0.1	<0.1	<0.1	1.3
Number	24	2,946	18	345	1	2	1	3,337
All Fish								
Sample Size	116	1,489	24	184	1	1	1	1,816
Percent	2.5	88.9	0.8	7.8	<0.1	<0.1	<0.1	100.0
Std. Error	0.2	0.6	0.2	0.6	<0.1	<0.1	<0.1	
Number	162	5,788	52	506	1	2	1	6,512

Appendix F.2. Test for significant changes among periods in the age composition of sockeye salmon in the Hugh Smith Lake escapement by age class, 1989.

	Brood Year and Age Class						
	1985	1984		1983		1982	
	1.2	1.3	2.2	2.3	3.2	2.4	3.3
Periods Compared							
1 , 2	S**	S**					
1 , 3	S**	S**		S**			
1 , 4	S**	S**		S**			
1 , 5	S**	S**		S**			
1 , 6	S**			S**			
1 , 7	S**	S**	S**	S**			
2 , 3	S**	S**		S**			
2 , 4	S**	S**		S**			
2 , 5	S**	S**					
2 , 6	S**	S**		S**			
2 , 7	S**	S**	S**	S**			
3 , 4	S*						
3 , 5	S*						
3 , 6		S**	S	S**			
3 , 7		S**	S**	S**			
4 , 5							
4 , 6		S**	S*	S**			
4 , 7		S**	S**	S**			
5 , 6		S**	S*	S**			
5 , 7	S	S**	S**	S**			
6 , 7		S**	S**				

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.3. Length composition of sockeye salmon in the Hugh Smith Lake escapement by sex, age class, and escapement period, 1989.

		Brood Year and Age Class							
		1985	1984		1983		1982		
		1.2	1.3	2.2	2.3	3.2	2.4	3.3	Total
Escapement Dates: (June 11 - July 15)									
Sample Dates: (June 11 - July 15)									
Male	Avg. Length	489	615	485	603				562
	Std. Error	3.2	3.2		6.3				5.3
	Sample Size	63	80	1	13				157
Female	Avg. Length	489	596	515	602			605	585
	Std. Error	13.0	2.1		3.8				3.6
	Sample Size	14	95	1	21			1	132
All Fish	Avg. Length	489	604	500	602			605	573
	Std. Error	3.5	2.0	15.0	3.3				3.4
	Sample Size	77	175	2	34			1	289
Escapement Dates: (July 16 - July 29)									
Sample Dates: (July 16 - July 29)									
Male	Avg. Length	504	612	515	598				593
	Std. Error	11.7	2.5	55.0	5.3				4.3
	Sample Size	19	95	2	12				128
Female	Avg. Length	510	593		584				590
	Std. Error	30.6	2.3		7.5				2.8
	Sample Size	4	98		7				109
All Fish	Avg. Length	505	602	515	593				591
	Std. Error	10.7	1.8	55.0	4.5				2.7
	Sample Size	23	193	2	19				237
Escapement Dates: (July 30 - August 5)									
Sample Dates: (July 30 - August 5)									
Male	Avg. Length	480	613	525	622				606
	Std. Error	8.8	1.6	50.0	9.4				2.6
	Sample Size	11	203	2	6				222
Female	Avg. Length		590		574		610		590
	Std. Error		1.5		9.0				1.5
	Sample Size		203		6		1		210
All Fish	Avg. Length	480	601	525	598		610		598
	Std. Error	8.8	1.2	50.0	9.5				1.5
	Sample Size	11	411	2	12		1		437
Escapement Dates: (August 6 - 12)									
Sample Dates: (August 6 - 12)									
Male	Avg. Length	455	604		598				603
	Std. Error		2.1		17.5				2.2
	Sample Size	1	166		2				169
Female	Avg. Length		588	505	576				587
	Std. Error		1.8		5.4				1.8
	Sample Size		158	1	8				167
All Fish	Avg. Length	455	596	505	580				595
	Std. Error		1.4		5.8				1.5
	Sample Size	1	331	1	10				343

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Appendix F.3. (page 2 of 2).

		Brood Year and Age Class							
		1985	1984		1983		1982		
		1.2	1.3	2.2	2.3	3.2	2.4	3.3	Total
Escapement Dates: (August 13 - 19)									
Sample Dates: (August 13 - 19)									
Male	Avg. Length		599		565				599
	Std. Error		2.5						2.5
	Sample Size		103		1				104
Female	Avg. Length		578		577				578
	Std. Error		2.0		8.6				2.0
	Sample Size		125		9				134
All Fish	Avg. Length		587		576				587
	Std. Error		1.7		7.8				1.7
	Sample Size		229		10				239
Escapement Dates: (August 20 - Sept. 16)									
Sample Dates: (August 20 - Sept. 16)									
Male	Avg. Length	495	593	500	586				584
	Std. Error		4.3	7.6	7.4				4.7
	Sample Size	1	36	3	17				57
Female	Avg. Length		578		577				578
	Std. Error		2.6		4.0				2.2
	Sample Size		57		31				88
All Fish	Avg. Length	495	584	500	580				580
	Std. Error		2.4	7.6	3.7				2.3
	Sample Size	1	93	3	48				145
Escapement Dates: (Sept. 17 - October 24)									
Sample Dates: (Sept. 17 - October 17)									
Male	Avg. Length	595	594	516	581				582
	Std. Error		3.8	17.7	5.3				4.6
	Sample Size	1	32	6	15				54
Female	Avg. Length	475	565	515	565	520			557
	Std. Error	35.0	5.1	9.8	4.7				4.0
	Sample Size	2	25	7	36	1			71
All Fish	Avg. Length	515	581	515	570	520			568
	Std. Error	44.8	3.6	9.3	3.8				3.2
	Sample Size	3	57	13	51	1			125
Combined Periods (Lengths weighted by period escapements)									
Male	Avg. Length	475	604	512	593				598
	Std. Error	3.5	1.0	11.1	3.2				1.5
	Sample Size	96	715	14	66				891
Female	Avg. Length	494	585	507	577	520	610	605	584
	Std. Error	11.0	0.8	7.5	2.4				1.0
	Sample Size	20	761	9	118	1	1	1	911
All Fish	Avg. Length	472	594	509	584	520	610	605	590
	Std. Error	3.5	0.7	7.2	2.0				0.9
	Sample Size	116	1489	23	184	1	1	1	1815

Appendix F.4. Test for significant changes among periods in the length composition of sockeye salmon in the Hugh Smith Lake escapement by age class, 1989.

	Brood Year and Age Class						
	1985	1984		1983		1982	
	1.2	1.3	2.2	2.3	3.2	2.4	3.3
Periods Compared							
1 , 2				S			
1 , 3							
1 , 4		S**		S**			
1 , 5		S**		S**			
1 , 6		S**		S**			
1 , 7		S**		S**			
2 , 3	S						
2 , 4		S**		S			
2 , 5		S**		S			
2 , 6		S**		S*			
2 , 7		S**		S**			
3 , 4		S**					
3 , 5		S**		S			
3 , 6		S**		S			
3 , 7		S**		S**			
4 , 5		S**					
4 , 6		S**					
4 , 7		S**					
5 , 6							
5 , 7							
6 , 7				S			

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.5. Daily sockeye salmon counts and associated statistics from Hugh Smith Lake weir, 1989.

Date		Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
June	2	0	0	0.0000	0.0000
June	3	0	0	0.0000	0.0000
June	4	0	0	0.0000	0.0000
June	5	0	0	0.0000	0.0000
June	6	0	0	0.0000	0.0000
June	7	0	0	0.0000	0.0000
June	8	0	0	0.0000	0.0000
June	9	0	0	0.0000	0.0000
June	10	0	0	0.0000	0.0000
June	11	1	1	0.0002	0.0002
June	12	0	1	0.0000	0.0002
June	13	0	1	0.0000	0.0002
June	14	0	1	0.0000	0.0002
June	15	0	1	0.0000	0.0002
June	16	3	4	0.0005	0.0006
June	17	0	4	0.0000	0.0006
June	18	1	5	0.0002	0.0008
June	19	1	6	0.0002	0.0009
June	20	2	8	0.0003	0.0012
June	21	0	8	0.0000	0.0012
June	22	0	8	0.0000	0.0012
June	23	1	9	0.0002	0.0014
June	24	3	12	0.0005	0.0018
June	25	2	14	0.0003	0.0021
June	26	4	18	0.0006	0.0028
June	27	2	20	0.0003	0.0031
June	28	6	26	0.0009	0.0040
June	29	6	32	0.0009	0.0049
June	30	2	34	0.0003	0.0052
July	1	17	51	0.0026	0.0078
July	2	15	66	0.0023	0.0101
July	3	12	78	0.0018	0.0120
July	4	0	78	0.0000	0.0120
July	5	3	81	0.0005	0.0124
July	6	1	82	0.0002	0.0126
July	7	15	97	0.0023	0.0149
July	8	49	146	0.0075	0.0224
July	9	4	150	0.0006	0.0230
July	10	22	172	0.0034	0.0264
July	11	42	214	0.0064	0.0329
July	12	18	232	0.0028	0.0356
July	13	63	295	0.0097	0.0453
July	14	8	303	0.0012	0.0465
July	15	33	336	0.0051	0.0516
July	16	10	346	0.0015	0.0531
July	17	16	362	0.0025	0.0556
July	18	43	405	0.0066	0.0622
July	19	12	417	0.0018	0.0640
July	20	48	465	0.0074	0.0714
July	21	9	474	0.0014	0.0728
July	22	31	505	0.0048	0.0775
July	23	29	534	0.0045	0.0820
July	24	14	548	0.0021	0.0842
July	25	11	559	0.0017	0.0858
July	26	16	575	0.0025	0.0883
July	27	31	606	0.0048	0.0931
July	28	4	610	0.0006	0.0937
July	29	31	641	0.0048	0.0984
July	30	19	660	0.0029	0.1014
July	31	7	667	0.0011	0.1024
Aug.	1	32	699	0.0049	0.1073
Aug.	2	160	859	0.0246	0.1319
Aug.	3	95	954	0.0146	0.1465
Aug.	4	141	1095	0.0217	0.1682
Aug.	5	620	1715	0.0952	0.2634
Aug.	6	886	2601	0.1361	0.3994
Aug.	7	40	2641	0.0061	0.4056
Aug.	8	120	2761	0.0184	0.4240
Aug.	9	485	3246	0.0745	0.4985
Aug.	10	227	3473	0.0349	0.5333

-continued-

Appendix F.5. (page 2 of 2).

Date		Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
Aug.	11	209	3682	0.0321	0.5654
Aug.	12	614	4296	0.0943	0.6597
Aug.	13	121	4417	0.0186	0.6783
Aug.	14	764	5181	0.1173	0.7956
Aug.	15	293	5474	0.0450	0.8406
Aug.	16	124	5598	0.0190	0.8596
Aug.	17	22	5620	0.0034	0.8630
Aug.	18	25	5645	0.0038	0.8669
Aug.	19	62	5707	0.0095	0.8764
Aug.	20	42	5749	0.0064	0.8828
Aug.	21	104	5853	0.0160	0.8988
Aug.	22	39	5892	0.0060	0.9048
Aug.	23	6	5898	0.0009	0.9057
Aug.	24	5	5903	0.0008	0.9065
Aug.	25	50	5953	0.0077	0.9142
Aug.	26	43	5996	0.0066	0.9208
Aug.	27	99	6095	0.0152	0.9360
Aug.	28	53	6148	0.0081	0.9441
Aug.	29	32	6180	0.0049	0.9490
Aug.	30	19	6199	0.0029	0.9519
Aug.	31	35	6234	0.0054	0.9573
Sept.	1	7	6241	0.0011	0.9584
Sept.	2	16	6257	0.0025	0.9608
Sept.	3	14	6271	0.0021	0.9630
Sept.	4	19	6290	0.0029	0.9659
Sept.	5	3	6293	0.0005	0.9664
Sept.	6	0	6293	0.0000	0.9664
Sept.	7	4	6297	0.0006	0.9670
Sept.	8	2	6299	0.0003	0.9673
Sept.	9	7	6306	0.0011	0.9684
Sept.	10	9	6315	0.0014	0.9697
Sept.	11	0	6315	0.0000	0.9697
Sept.	12	17	6332	0.0026	0.9724
Sept.	13	0	6332	0.0000	0.9724
Sept.	14	11	6343	0.0017	0.9740
Sept.	15	0	6343	0.0000	0.9740
Sept.	16	1	6344	0.0002	0.9742
Sept.	17	7	6351	0.0011	0.9753
Sept.	18	8	6359	0.0012	0.9765
Sept.	19	42	6401	0.0064	0.9830
Sept.	20	60	6461	0.0092	0.9922
Sept.	21	29	6490	0.0045	0.9966
Sept.	22	5	6495	0.0008	0.9974
Sept.	23	0	6495	0.0000	0.9974
Sept.	24	1	6496	0.0002	0.9975
Sept.	25	0	6496	0.0000	0.9975
Sept.	26	1	6497	0.0002	0.9977
Sept.	27	0	6497	0.0000	0.9977
Sept.	28	0	6497	0.0000	0.9977
Sept.	29	2	6499	0.0003	0.9980
Sept.	30	0	6499	0.0000	0.9980
Oct.	1	0	6499	0.0000	0.9980
Oct.	2	1	6500	0.0002	0.9982
Oct.	3	1	6501	0.0002	0.9983
Oct.	4	4	6505	0.0006	0.9989
Oct.	5	1	6506	0.0002	0.9991
Oct.	6	0	6506	0.0000	0.9991
Oct.	7	0	6506	0.0000	0.9991
Oct.	8	1	6507	0.0002	0.9992
Oct.	9	0	6507	0.0000	0.9992
Oct.	10	0	6507	0.0000	0.9992
Oct.	11	4	6511	0.0006	0.9998
Oct.	12	0	6511	0.0000	0.9998
Oct.	13	0	6511	0.0000	0.9998
Oct.	14	0	6511	0.0000	0.9998
Oct.	15	0	6511	0.0000	0.9998
Oct.	16	0	6511	0.0000	0.9998
Oct.	17	1	6512	0.0002	1.0000
Oct.	18	0	6512	0.0000	1.0000
Oct.	19	0	6512	0.0000	1.0000
Oct.	20	0	6512	0.0000	1.0000
Oct.	21	0	6512	0.0000	1.0000
Oct.	22	0	6512	0.0000	1.0000
Oct.	23	0	6512	0.0000	1.0000
Oct.	24	0	6512	0.0000	1.0000

Mean Day of Migration = Aug. 10 Variance = 167.9 Days squared

Appendix F.6. Age composition of sockeye salmon in the Bakewell Lake fish ladder escapement by sex and age class, 1989.

	Brood Year and Age Class							
	1986	1985			1984		1983	
	1.1	0.3	1.2	2.1	1.3	2.2	2.3	Total
Sample Dates:	August 3, 6, 8, 13, 23, and Sept. 3, 6							
Male								
Sample Size		2	42		51	5	1	101
Percent		1.1	23.6		28.7	2.8	0.6	56.7
Std. Error		0.8	3.2		3.4	1.2	0.6	3.7
Female								
Sample Size	3	1	24	2	46	1		77
Percent	1.7	0.6	13.5	1.1	25.8	0.6		43.3
Std. Error	1.0	0.6	2.6	0.8	3.3	0.6		3.7
All Fish								
Sample Size	3	3	66	2	97	6	1	178
Percent	1.7	1.7	37.1	1.1	54.5	3.4	0.6	100.0
Std. Error	1.0	1.0	3.6	0.8	3.7	1.4	0.6	

Appendix F.7. Length composition of sockeye salmon in the Bakewell Lake fish ladder escapement by sex and age class, 1989.

		Brood Year and Age Class							
		1986	1985			1984		1983	
		1.1	0.3	1.2	2.1	1.3	2.2	2.3	Total
Sample Dates:		August 3, 6, 8, 13, 23, and Sept. 3, 6							
Male	Avg. Length		605	515		607	526	575	564
	Std. Error		15.0	5.5		3.7	13.6		5.4
	Sample Size		2	42		51	5	1	101
Female	Avg. Length	340	585	510	358	594	560		551
	Std. Error	13.2		8.8	7.5	3.4			8.3
	Sample Size	3	1	24	2	46	1		77
All Fish	Avg. Length	340	598	513	358	601	532	575	559
	Std. Error	13.2	10.9	4.7	7.5	2.6	12.5		4.7
	Sample Size	3	3	66	2	97	6	1	178

Appendix F.8. Age composition of sockeye salmon in the McDonald Lake escapement by sex and age class, 1989.

	Brood Year and Age Class							
	1986	1985		1984		1983		
	1.1	1.2	2.1	1.3	2.2	1.4	2.3	Total
Sample Dates:	(July 19, 26, and Sept. 14, 25, 26)[a]							
Male								
Sample Size	3	26		309	14		15	367
Percent	0.3	2.9		34.8	1.6		1.7	41.3
Std. Error	0.2	0.6		1.6	0.4		0.4	1.6
Number	263	2,280		27,102	1,228		1,316	32,189
Female								
Sample Size	8	21	1	443	8	1	39	521
Percent	0.9	2.4	0.1	49.9	0.9	0.1	4.4	58.7
Std. Error	0.3	0.5	0.1	1.7	0.3	0.1	0.7	1.6
Number	702	1,842	88	38,855	702	88	3,421	45,696
All Fish								
Sample Size	11	47	1	757	22	1	54	893
Percent	1.2	5.3	0.1	84.8	2.5	0.1	6.0	100.0
Std. Error	0.4	0.7	0.1	1.2	0.5	0.1	0.8	
Number	965	4,122	88	66,396	1,930	88	4,736	78,324

[a] Samples (358 fish) from the purse seine test fishery in Yes Bay (July 19 and 26) were included for escapement age composition.

Appendix F.9. Length composition of sockeye salmon in the McDonald Lake escapement by sex and age class, 1989.

		Brood Year and Age Class							
		1986	1985		1984		1983		
		1.1	1.2	2.1	1.3	2.2	1.4	2.3	Total
Sample Dates:	(July 19, 26 and Sept. 14, 25, 26)[a]								
Male	Avg. Length	372	478		606	497		602	591
	Std. Error	36.1	7.4		1.4	10.8		8.8	2.7
	Sample Size	3	26		309	14		15	367
Female	Avg. Length	346	524	355	581	500	610	588	574
	Std. Error	6.5	9.2		1.0	6.2		3.1	1.8
	Sample Size	8	21	1	443	8	1	39	521
All Fish	Avg. Length	353	499	355	591	498	610	592	581
	Std. Error	10.3	6.6		1.0	7.1		3.4	1.5
	Sample Size	11	47	1	757	22	1	54	893

[a] Samples (358 fish) from the purse seine test fishery in Yes Bay (July 19 and 26) were included for escapement length composition.

Appendix F.10. Age composition of sockeye salmon in the Naha River escapement by sex and age class, 1989.

	Brood Year and Age Class						
	1986	1985		1984		1983	
	1.1	0.3	1.2	1.3	2.2	2.3	Total
Sample Dates:	September 6 - 8, October 2 - 3						
Male							
Sample Size	2	1	52	234	6	51	346
Percent	0.4	0.2	9.3	41.8	1.1	9.1	61.8
Std. Error	0.2	0.2	1.2	2.1	0.4	1.2	2.0
Female							
Sample Size			16	149	2	47	214
Percent			2.9	26.6	0.4	8.4	38.2
Std. Error			0.7	1.8	0.2	1.2	2.0
All Fish							
Sample Size	2	1	68	390	8	99	568
Percent	0.4	0.2	12.0	68.7	1.4	17.4	100.0
Std. Error	0.2	0.2	1.3	1.9	0.5	1.6	

Appendix F.11. Length composition of sockeye salmon in the Naha River escapement by sex and age class, 1989.

		Brood Year and Age Class						
		1986	1985		1984		1983	
		1.1	0.3	1.2	1.3	2.2	2.3	Total
Sample Dates:		September 6 - 8, October 2 - 3						
Male	Avg. Length	423	570	522	606	488	603	590
	Std. Error	27.5		6.0	2.1	33.3	4.7	2.7
	Sample Size	2	1	52	234	6	51	346
Female	Avg. Length			518	579	553	579	574
	Std. Error			10.0	2.0	2.5	3.7	2.1
	Sample Size			16	149	2	47	214
All Fish	Avg. Length	423	570	521	596	504	592	584
	Std. Error	27.5		5.1	1.6	26.6	3.2	1.8
	Sample Size	2	1	68	390	8	99	568

Appendix F.12. Age composition of sockeye salmon in the Kegan Lake escapement by sex and age class, 1989.

	Brood Year and Age Class						
	1986	1985		1984		1983	
	1.1	1.2	2.1	1.3	2.2	2.3	Total
Sample Dates: September 19 - 21							
Male							
Sample Size	39	114	8	93	28	16	298
Percent	7.6	22.4	1.6	18.2	5.5	3.1	58.4
Std. Error	1.2	1.8	0.5	1.7	1.0	0.8	2.2
Female							
Sample Size		58		106	19	29	212
Percent		11.4		20.8	3.7	5.7	41.6
Std. Error		1.4		1.8	0.8	1.0	2.2
All Fish							
Sample Size	41	172	8	201	48	45	515
Percent	8.0	33.4	1.6	39.0	9.3	8.7	100.0
Std. Error	1.2	2.1	0.5	2.1	1.3	1.2	

Appendix F.13. Length composition of sockeye salmon in the Kegan Lake escapement by sex and age class, 1989.

		Brood Year and Age Class						
		1986	1985		1984		1983	
		1.1	1.2	2.1	1.3	2.2	2.3	Total
Sample Dates: September 19 - 21								
Male	Avg. Length	342	491	357	569	481	567	496
	Std. Error	3.6	3.7	6.9	2.8	11.3	8.6	4.8
	Sample Size	39	114	8	93	28	16	298
Female	Avg. Length		493		557	505	563	535
	Std. Error		2.8		2.2	5.8	3.8	2.6
	Sample Size		58		106	19	29	212
All Fish	Avg. Length	343	492	357	563	491	564	512
	Std. Error	3.6	2.6	6.9	1.8	7.1	3.9	3.1
	Sample Size	41	172	8	201	48	45	515

Appendix F.14. Age composition of sockeye salmon in the Karta River escapement by sex and age class, 1989.

	Brood Year and Age Class						
	1985		1984		1983	1982	
	1.2	2.1	1.3	2.2	2.3	3.3	Total
Sample Dates: August 29 - 31							
Male							
Sample Size	15	1	172		3	1	192
Percent	2.9	0.2	33.4		0.6	0.2	37.3
Std. Error	0.7	0.2	2.1		0.3	0.2	2.1
Female							
Sample Size	4		311	2	6		323
Percent	0.8		60.4	0.4	1.2		62.7
Std. Error	0.4		2.1	0.3	0.5		2.1
All Fish							
Sample Size	19	1	483	2	9	1	515
Percent	3.7	0.2	93.8	0.4	1.7	0.2	100.0
Std. Error	0.8	0.2	1.1	0.3	0.6	0.2	

Appendix F.15. Length composition of sockeye salmon in the Karta River escapement by sex and age class, 1989.

		Brood Year and Age Class						
		1985		1984		1983	1982	
		1.2	2.1	1.3	2.2	2.3	3.3	Total
Sample Dates: August 29 - 31								
Male	Avg. Length	518	455	603		592	625	596
	Std. Error	3.8		2.2		7.3		2.7
	Sample Size	15	1	172		3	1	192
Female	Avg. Length	495		576	548	568		575
	Std. Error	7.9		1.4	22.5	5.6		1.4
	Sample Size	4		311	2	6		323
All Fish	Avg. Length	513	455	586	548	576	625	582
	Std. Error	4.0		1.3	22.5	5.7		1.4
	Sample Size	19	1	483	2	9	1	515

Appendix F.16. Age composition of sockeye salmon in the Klakas Lake escapement by sex and age class, 1989.

	Brood Year and Age Class						
	1985	1984		1983			
	1.2	1.3	2.2	1.4	2.3	3.2	Total
Sample Dates: September 25 - 27							
Male							
Sample Size	26	55	33		89	1	204
Percent	5.6	11.8	7.1		19.1	0.2	43.8
Std. Error	1.1	1.5	1.2		1.8	0.2	2.3
Female							
Sample Size	13	76	20	1	151	1	262
Percent	2.8	16.3	4.3	0.2	32.4	0.2	56.2
Std. Error	0.8	1.7	0.9	0.2	2.1	0.2	2.3
All Fish							
Sample Size	39	133	54	1	241	2	470
Percent	8.3	28.3	11.5	0.2	51.3	0.4	100.0
Std. Error	1.3	2.1	1.5	0.2	2.3	0.3	

Appendix F.17. Length composition of sockeye salmon in the Klakas Lake escapement by sex and age class, 1989.

		Brood Year and Age Class						
		1985	1984		1983			
		1.2	1.3	2.2	1.4	2.3	3.2	Total
Sample Dates: September 25 - 27								
Male	Avg. Length	514	575	517		580	495	560
	Std. Error	4.7	3.6	3.3		2.2		2.6
	Sample Size	26	55	33		89	1	204
Female	Avg. Length	478	541	473	575	541	470	532
	Std. Error	3.7	2.7	3.2		2.3		2.1
	Sample Size	13	76	20	1	151	1	262
All Fish	Avg. Length	502	555	501	575	556	483	544
	Std. Error	4.4	2.6	3.7		2.1	12.5	1.7
	Sample Size	39	133	54	1	241	2	470

Appendix F.18. Age composition of sockeye salmon in the Klawock Lake escapement by sex and age class, 1989.

	Brood Year and Age Class						
	1986	1985		1984		1983	
	1.1	1.2	2.1	1.3	2.2	2.3	Total
Escapement Dates:	(August 17 - October 10)						
Sample Dates:	(Sept. 8 - 15, 29)						
Male							
Sample Size	15	27	3	143	22	25	235
Percent	3.0	5.4	0.6	28.8	4.4	5.0	47.4
Std. Error	0.7	0.9	0.3	1.9	0.9	0.9	2.1
Number	98	176	20	932	143	163	1,532
Female							
Sample Size		7	1	191	28	34	261
Percent		1.4	0.2	38.5	5.6	6.9	52.6
Std. Error		0.5	0.2	2.0	1.0	1.0	2.1
Number		46	7	1,245	183	222	1,702
All Fish							
Sample Size	15	34	4	334	50	59	496
Percent	3.0	6.9	0.8	67.3	10.1	11.9	100.0
Std. Error	0.7	1.0	0.4	1.9	1.2	1.3	
Number	98	222	26	2,178	326	385	3,234

Appendix F.19. Length composition of sockeye salmon in the Klawock Lake escapement by sex and age class, 1989.

		Brood Year and Age Class						
		1986	1985		1984		1983	
		1.1	1.2	2.1	1.3	2.2	2.3	Total
Escapement Dates:		(August 17 - October 10)						
Sample Dates:		(Sept. 8 - 15, 29)						
Male	Avg. Length	371	521	398	576	511	577	548
	Std. Error	5.8	6.3	1.7	2.1	5.7	4.6	4.0
	Sample Size	15	26	3	143	22	25	234
Female	Avg. Length		511	520	552	498	551	545
	Std. Error		13.7		1.8	3.5	4.9	1.9
	Sample Size		7	1	191	28	34	261
All Fish	Avg. Length	371	519	429	562	504	562	547
	Std. Error	5.8	5.7	30.4	1.5	3.3	3.8	2.1
	Sample Size	15	33	4	334	50	59	495

Appendix F.20. Daily sockeye salmon counts and associated statistics from Klawock Lake weir, 1989.

Date		Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
Aug.	17	917	917	0.2835	0.2835
Aug.	18	121	1038	0.0374	0.3210
Aug.	19	0	1038	0.0000	0.3210
Aug.	20	0	1038	0.0000	0.3210
Aug.	21	492	1530	0.1521	0.4731
Aug.	22	316	1846	0.0977	0.5708
Aug.	23	8	1854	0.0025	0.5733
Aug.	24	11	1865	0.0034	0.5767
Aug.	25	7	1872	0.0022	0.5788
Aug.	26	0	1872	0.0000	0.5788
Aug.	27	0	1872	0.0000	0.5788
Aug.	28	70	1942	0.0216	0.6005
Aug.	29	11	1953	0.0034	0.6039
Aug.	30	4	1957	0.0012	0.6051
Aug.	31	22	1979	0.0068	0.6119
Sept.	1	7	1986	0.0022	0.6141
Sept.	2	0	1986	0.0000	0.6141
Sept.	3	0	1986	0.0000	0.6141
Sept.	4	0	1986	0.0000	0.6141
Sept.	5	306	2292	0.0946	0.7087
Sept.	6	239	2531	0.0739	0.7826
Sept.	7	188	2719	0.0581	0.8408
Sept.	8	49	2768	0.0152	0.8559
Sept.	9	3	2771	0.0009	0.8568
Sept.	10	4	2775	0.0012	0.8581
Sept.	11	33	2808	0.0102	0.8683
Sept.	12	98	2906	0.0303	0.8986
Sept.	13	0	2906	0.0000	0.8986
Sept.	14	58	2964	0.0179	0.9165
Sept.	15	44	3008	0.0136	0.9301
Sept.	16	0	3008	0.0000	0.9301
Sept.	17	0	3008	0.0000	0.9301
Sept.	18	7	3015	0.0022	0.9323
Sept.	19	57	3072	0.0176	0.9499
Sept.	20	0	3072	0.0000	0.9499
Sept.	21	14	3086	0.0043	0.9542
Sept.	22	40	3126	0.0124	0.9666
Sept.	23	5	3131	0.0015	0.9682
Sept.	24	0	3131	0.0000	0.9682
Sept.	25	32	3163	0.0099	0.9780
Sept.	26	0	3163	0.0000	0.9780
Sept.	27	5	3168	0.0015	0.9796
Sept.	28	1	3169	0.0003	0.9799
Sept.	29	2	3171	0.0006	0.9805
Sept.	30	5	3176	0.0015	0.9821
Oct.	1	2	3178	0.0006	0.9827
Oct.	2	7	3185	0.0022	0.9848
Oct.	3	23	3208	0.0071	0.9920
Oct.	4	4	3212	0.0012	0.9932
Oct.	5	8	3220	0.0025	0.9957
Oct.	6	1	3221	0.0003	0.9960
Oct.	7	1	3222	0.0003	0.9963
Oct.	8	0	3222	0.0000	0.9963
Oct.	9	0	3222	0.0000	0.9963
Oct.	10	12	3234	0.0037	1.0000

Mean Day of Migration = Aug. 28 Variance = 145.9 Days squared

Appendix F.21. Age composition of sockeye salmon in the Salmon Bay Lake escapement by sex and age class, 1989.

	Brood Year and Age Class						
	1986	1985		1984		1983	
	1.1	1.2	2.1	1.3	2.2	2.3	Total
Sample Dates: September 14 - 15							
Male							
Sample Size	7	20	1	83	17	2	130
Percent	1.2	3.5	0.2	14.6	3.0	0.4	22.9
Std. Error	0.5	0.8	0.2	1.5	0.7	0.2	1.7
Female							
Sample Size		11		405	13	8	437
Percent		1.9		71.4	2.3	1.4	77.1
Std. Error		0.6		1.9	0.6	0.5	1.7
All Fish							
Sample Size	7	31	1	488	30	10	567
Percent	1.2	5.5	0.2	86.1	5.3	1.8	100.0
Std. Error	0.5	0.9	0.2	1.4	0.9	0.5	

Appendix F.22. Length composition of sockeye salmon in the Salmon Bay Lake escapement by sex and age class, 1989.

		Brood Year and Age Class						
		1986	1985		1984		1983	
		1.1	1.2	2.1	1.3	2.2	2.3	Total
Sample Dates: September 14 - 16								
Male	Avg. Length	325	490	391	595	480	566	547
	Std. Error	5.9	11.2		2.4	9.6	4.5	7.0
	Sample Size	7	20	1	83	17	2	130
Female	Avg. Length		468		554	495	544	549
	Std. Error		7.3		1.2	6.8	10.1	1.4
	Sample Size		11		404	13	8	436
All Fish	Avg. Length	325	482	391	561	487	549	549
	Std. Error	5.9	7.9		1.3	6.3	8.5	1.9
	Sample Size	7	31	1	487	30	10	566

Appendix F.23. Age composition of sockeye salmon in the Red Bay Lake escapement by sex and age class, 1989.

	Brood Year and Age Class							
	1986	1985		1984		1983	1982	
	1.1	1.2	2.1	1.3	2.2	2.3	2.4	Total
Sample Dates: September 12 - 13								
Male								
Sample Size	62	37	5	81	5	3	1	194
Percent	11.1	6.6	0.9	14.5	0.9	0.5	0.2	34.6
Std. Error	1.3	1.0	0.4	1.5	0.4	0.3	0.2	2.0
Female								
Sample Size		20		334	3	9		366
Percent		3.6		59.6	0.5	1.6		65.4
Std. Error		0.8		2.0	0.3	0.5		2.0
All Fish								
Sample Size	62	57	5	415	8	12	1	560
Percent	11.1	10.2	0.9	74.1	1.4	2.1	0.2	100.0
Std. Error	1.3	1.3	0.4	1.8	0.5	0.6	0.2	

Appendix F.24. Length composition of sockeye salmon in the Red Bay Lake escapement by sex and age class, 1989.

		Brood Year and Age Class							
		1986	1985		1984		1983	1982	
		1.1	1.2	2.1	1.3	2.2	2.3	2.4	Total
Sample Dates: September 12 - 13									
Male	Avg. Length	331	455	373	583	456	568	560	470
	Std. Error	4.0	6.9	49.9	2.5	22.2	6.7		8.3
	Sample Size	61	37	5	81	5	3	1	193
Female	Avg. Length		505		552	515	550		549
	Std. Error		5.9		1.2	7.6	6.9		1.3
	Sample Size		20		333	3	9		365
All Fish	Avg. Length	331	473	373	558	478	554	560	522
	Std. Error	4.0	5.8	49.9	1.3	17.3	5.8		3.4
	Sample Size	61	57	5	414	8	12	1	558

Appendix F.25. Age composition of sockeye salmon in the Petersburg Lake escapement by sex and age class, 1989.

	Brood Year and Age Class						
	1986	1985		1984		1983	
	1.1	1.2	2.1	1.3	2.2	2.3	Total
Sample Dates: August 25 - 27							
Male							
Sample Size	90	22	125	9	87	3	336
Percent	20.9	5.1	29.0	2.1	20.2	0.7	78.0
Std. Error	1.9	1.0	2.2	0.7	1.9	0.4	2.0
Female							
Sample Size		7		24	30	34	95
Percent		1.6		5.6	7.0	7.9	22.0
Std. Error		0.6		1.1	1.2	1.3	2.0
All Fish							
Sample Size	90	29	125	33	117	37	431
Percent	20.9	6.7	29.0	7.7	27.1	8.6	100.0
Std. Error	1.9	1.2	2.2	1.3	2.1	1.3	

Appendix F.26. Length composition of sockeye salmon in the Petersburg Lake escapement by sex and age class, 1989.

		Brood Year and Age Class						
		1986	1985		1984		1983	
		1.1	1.2	2.1	1.3	2.2	2.3	Total
Sample Dates: August 25 - 27								
Male	Avg. Length	338	434	356	570	440	599	386
	Std. Error	3.2	3.8	2.5	16.4	2.8	16.4	3.4
	Sample Size	90	22	125	9	87	3	336
Female	Avg. Length		514		564	507	568	544
	Std. Error		13.7		4.9	6.4	3.3	4.0
	Sample Size		7		24	30	34	95
All Fish	Avg. Length	338	453	356	565	457	570	421
	Std. Error	3.2	7.8	2.5	5.6	3.8	3.5	4.2
	Sample Size	90	29	125	33	117	37	431

Appendix F.27. Age composition of sockeye salmon in the Thoms Lake escapement by sex and age class, 1989.

	Brood Year and Age Class						
	1986	1985		1984		1983	
	1.1	1.2	2.1	1.3	2.2	2.3	Total
Sample Dates: September 7 - 8							
Male							
Sample Size	20	67	81	5	112	62	347
Percent	3.5	11.7	14.1	0.9	19.5	10.8	60.5
Std. Error	0.8	1.3	1.4	0.4	1.6	1.3	2.0
Female							
Sample Size		29	1	1	103	93	227
Percent		5.1	0.2	0.2	17.9	16.2	39.5
Std. Error		0.9	0.2	0.2	1.6	1.5	2.0
All Fish							
Sample Size	20	96	82	6	215	155	574
Percent	3.5	16.7	14.3	1.0	37.5	27.0	100.0
Std. Error	0.8	1.5	1.4	0.4	2.0	1.8	

Appendix F.28. Length composition of sockeye salmon in the Thoms Lake escapement by sex and age class, 1989.

		Brood Year and Age Class						
		1986	1985		1984		1983	
		1.1	1.2	2.1	1.3	2.2	2.3	Total
Sample Dates: September 7 - 8								
Male	Avg. Length	346	509	362	575	512	578	479
	Std. Error	5.9	2.9	2.2	11.4	3.1	2.5	4.6
	Sample Size	20	67	81	5	112	62	347
Female	Avg. Length		503	332	595	514	574	537
	Std. Error		4.5			2.0	2.0	2.6
	Sample Size		29	1	1	103	93	227
All Fish	Avg. Length	346	507	362	578	513	575	502
	Std. Error	5.9	2.5	2.2	9.9	1.9	1.6	3.2
	Sample Size	20	96	82	6	215	155	574

Appendix F.29. Age composition of sockeye salmon in the Tahltan Lake escapement by sex, age class, and escapement period, 1989.

	Brood Year and Age Class					
	1985	1984		1983		
	1.2	1.3	2.2	1.4	2.3	Total
Escapement Dates:	(July 9 - 22)					
Sample Dates:	(July 11 - 18)					
Male						
Sample Size		12			1	13
Percent		41.4			3.4	44.8
Std. Error		8.5			3.2	8.6
Number		73			6	79
Female						
Sample Size		15		1		16
Percent		51.7		3.4		55.2
Std. Error		8.6		3.2		8.6
Number		92		6		98
All Fish						
Sample Size		27		1	1	29
Percent		93.1		3.4	3.4	100.0
Std. Error		4.4		3.2	3.2	
Number		165		6	6	177
Escapement Dates:	(July 23 - 29)					
Sample Dates:	(July 23 - 29)					
Male						
Sample Size	2	125	2		13	142
Percent	0.7	46.6	0.7		4.9	53.0
Std. Error	0.5	2.9	0.5		1.2	2.9
Number	20	1,267	20		132	1,440
Female						
Sample Size	5	104	4	1	12	126
Percent	1.9	38.8	1.5	0.4	4.5	47.0
Std. Error	0.8	2.8	0.7	0.4	1.2	2.9
Number	51	1,054	41	10	122	1,277
All Fish						
Sample Size	7	229	6	1	25	268
Percent	2.6	85.4	2.2	0.4	9.3	100.0
Std. Error	0.9	2.0	0.9	0.4	1.7	
Number	71	2,322	61	10	253	2,717
Escapement Dates:	(July 30 - August 5)					
Sample Dates:	(July 30 - August 5)					
Male						
Sample Size	7	57	4		6	74
Percent	4.4	35.6	2.5		3.8	46.3
Std. Error	1.6	3.7	1.2		1.5	3.9
Number	159	1,293	91		136	1,678
Female						
Sample Size	14	61	7		4	86
Percent	8.8	38.1	4.4		2.5	53.8
Std. Error	2.2	3.8	1.6		1.2	3.9
Number	318	1,384	159		91	1,951
All Fish						
Sample Size	21	118	11		10	160
Percent	13.1	73.8	6.9		6.3	100.0
Std. Error	2.6	3.4	2.0		1.9	
Number	476	2,676	249		227	3,629

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Appendix F.29. (page 2 of 2).

	Brood Year and Age Class					
	1985	1984		1983		
	1.2	1.3	2.2	1.4	2.3	Total
Escapement Dates:	(August 6 - 12)					
Sample Dates:	(August 6 - 10)					
Male						
Sample Size	6	26	2		3	37
Percent	4.5	19.5	1.5		2.3	27.8
Std. Error	1.6	3.1	1.0		1.2	3.5
Number	34	148	11		17	211
Female						
Sample Size	41	35	14		6	96
Percent	30.8	26.3	10.5		4.5	72.2
Std. Error	3.6	3.5	2.4		1.6	3.5
Number	233	199	80		34	546
All Fish						
Sample Size	47	61	16		9	133
Percent	35.3	45.9	12.0		6.8	100.0
Std. Error	3.8	3.9	2.6		2.0	
Number	268	347	91		51	757
Escapement Dates:	(August 13 - Sept. 2)					
Sample Dates:	(August 13 - 27)					
Male						
Sample Size	12	24	2		4	42
Percent	8.3	16.7	1.4		2.8	29.2
Std. Error	2.1	2.9	0.9		1.3	3.5
Number	86	173	14		29	302
Female						
Sample Size	50	25	23		4	102
Percent	34.7	17.4	16.0		2.8	70.8
Std. Error	3.7	2.9	2.8		1.3	3.5
Number	360	180	165		29	734
All Fish						
Sample Size	62	49	25		8	144
Percent	43.1	34.0	17.4		5.6	100.0
Std. Error	3.8	3.7	2.9		1.8	
Number	446	353	180		58	1,036
Combined Periods (Percentages are weighted by period escapements)						
Male						
Sample Size	27	244	10		27	308
Percent	3.6	35.5	1.6		3.8	44.6
Std. Error	0.8	1.9	0.6		0.8	2.0
Number	300	2,954	137		320	3,710
Female						
Sample Size	110	240	48	2	26	426
Percent	11.6	35.0	5.3	0.2	3.3	55.4
Std. Error	1.1	2.0	0.8	0.1	0.7	2.0
Number	961	2,909	444	16	275	4,606
All Fish						
Sample Size	137	484	58	2	53	734
Percent	15.2	70.5	7.0	0.2	7.2	100.0
Std. Error	1.3	1.7	1.0	0.1	1.0	
Number	1,261	5,863	581	16	595	8,316

Appendix F.30. Test for significant changes among periods in the age composition of sockeye salmon in the Tahltan Lake escapement by age class, 1989.

	Brood Year and Age Class				
	1985	1984		1983	
	1.2	1.3	2.2	1.4	2.3
Periods Compared					
1 , 2					
1 , 3	S	S*			
1 , 4	S**	S**			
1 , 5	S**	S**	S*		
2 , 3	S**	S**	S*		
2 , 4	S**	S**	S**		
2 , 5	S**	S**	S**		
3 , 4	S**	S**			
3 , 5	S**	S**	S**		
4 , 5		S			

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.31. Length composition of sockeye salmon in the Tahltan Lake escapement by sex, age class, and escapement period, 1989.

		Brood Year and Age Class					
		1985	1984		1983		
		1.2	1.3	2.2	1.4	2.3	Total
Escapement Dates: (July 9 - 22)							
Sample Dates: (July 11 - 18)							
Male	Avg. Length		568			553	567
	Std. Error		4.1				3.9
	Sample Size		12			1	13
Female	Avg. Length		537		592		541
	Std. Error		4.9				5.7
	Sample Size		15		1		16
All Fish	Avg. Length		551		592	553	552
	Std. Error		4.4				4.3
	Sample Size		27		1	1	29
Escapement Dates: (July 23 - 29)							
Sample Dates: (July 23 - 29)							
Male	Avg. Length	466	557	498		552	555
	Std. Error	28.0	2.5	2.5		5.0	2.5
	Sample Size	2	125	2		13	142
Female	Avg. Length	462	536	451	534	532	530
	Std. Error	6.3	2.0	15.0		3.6	2.5
	Sample Size	5	104	4	1	12	126
All Fish	Avg. Length	463	548	466	534	542	543
	Std. Error	7.5	1.8	13.7		3.7	1.9
	Sample Size	7	229	6	1	25	268
Escapement Dates: (July 30 - August 5)							
Sample Dates: (July 30 - August 5)							
Male	Avg. Length	486	553	508		554	544
	Std. Error	5.9	3.6	19.8		7.4	3.9
	Sample Size	7	57	4		6	74
Female	Avg. Length	451	530	471		505	511
	Std. Error	5.4	3.4	6.0		13.8	4.3
	Sample Size	14	61	7		4	86
All Fish	Avg. Length	463	541	485		534	526
	Std. Error	5.4	2.7	9.4		10.4	3.2
	Sample Size	21	118	11		10	160
Escapement Dates: (August 6 - 12)							
Sample Dates: (August 6 - 10)							
Male	Avg. Length	466	546	486		565	531
	Std. Error	14.6	5.2	13.0		9.2	6.9
	Sample Size	6	26	2		3	37
Female	Avg. Length	462	525	464		517	489
	Std. Error	2.5	4.2	3.6		15.9	3.8
	Sample Size	41	35	14		6	96
All Fish	Avg. Length	462	534	467		533	501
	Std. Error	2.8	3.5	3.9		13.4	3.7
	Sample Size	47	61	16		9	133

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Appendix F.31. (page 2 of 2).

		Brood Year and Age Class					
		1985	1984		1983		
		1.2	1.3	2.2	1.4	2.3	Total
Escapement Dates: (August 13 - Sept. 2)							
Sample Dates: (August 13 - 27)							
Male	Avg. Length	464	550	451		530	519
	Std. Error	12.5	4.6	12.5		12.7	7.8
	Sample Size	12	24	2		4	42
Female	Avg. Length	453	526	464		534	477
	Std. Error	2.9	7.3	6.4		6.4	4.2
	Sample Size	50	25	23		4	102
All Fish	Avg. Length	455	538	463		532	489
	Std. Error	3.3	4.6	6.0		6.6	4.1
	Sample Size	62	49	25		8	144
Combined Periods (Lengths weighted by period escapements)							
Male	Avg. Length	475	554	495		551	544
	Std. Error	6.8	1.7	10.5		3.9	2.1
	Sample Size	27	244	10		27	308
Female	Avg. Length	456	531	463	538	519	512
	Std. Error	1.8	1.6	3.5	29.0	4.8	2.1
	Sample Size	110	240	48	2	26	426
All Fish	Avg. Length	462	542	474	538	537	525
	Std. Error	2.0	1.3	3.7	29.0	3.5	1.7
	Sample Size	137	484	58	2	53	734

Appendix F.32. Test for significant changes among periods in the length composition of sockeye salmon in the Tahltan Lake escapement by age class, 1989.

	Brood Year and Age Class				
	1985	1984		1983	
	1.2	1.3	2.2	1.4	2.3
Periods Compared					
1 , 2					
1 , 3		S			
1 , 4		S**			
1 , 5		S*			
2 , 3		S*			
2 , 4		S**			
2 , 5		S*			
3 , 4			S		
3 , 5			S*		
4 , 5	S				

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.33. Daily sockeye salmon counts and associated statistics from Tahltan Lake weir, 1989.

Date		Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
July	9	0	0	0.0000	0.0000
July	10	0	0	0.0000	0.0000
July	11	0	0	0.0000	0.0000
July	12	0	0	0.0000	0.0000
July	13	0	0	0.0000	0.0000
July	14	2	2	0.0002	0.0002
July	15	1	3	0.0001	0.0004
July	16	5	8	0.0006	0.0010
July	17	2	10	0.0002	0.0012
July	18	2	12	0.0002	0.0014
July	19	14	26	0.0017	0.0031
July	20	4	30	0.0005	0.0036
July	21	12	42	0.0014	0.0051
July	22	15	57	0.0018	0.0069
July	23	7	64	0.0008	0.0077
July	24	6	70	0.0007	0.0084
July	25	19	89	0.0023	0.0107
July	26	50	139	0.0060	0.0167
July	27	38	177	0.0046	0.0213
July	28	49	226	0.0059	0.0272
July	29	116	342	0.0139	0.0411
July	30	194	536	0.0233	0.0645
July	31	543	1079	0.0653	0.1297
Aug.	1	690	1769	0.0830	0.2127
Aug.	2	414	2183	0.0498	0.2625
Aug.	3	711	2894	0.0855	0.3480
Aug.	4	238	3132	0.0286	0.3766
Aug.	5	481	3613	0.0578	0.4345
Aug.	6	658	4271	0.0791	0.5136
Aug.	7	802	5073	0.0964	0.6100
Aug.	8	784	5857	0.0943	0.7043
Aug.	9	429	6286	0.0516	0.7559
Aug.	10	237	6523	0.0285	0.7844
Aug.	11	66	6589	0.0079	0.7923
Aug.	12	56	6645	0.0067	0.7991
Aug.	13	101	6746	0.0121	0.8112
Aug.	14	73	6819	0.0088	0.8200
Aug.	15	56	6875	0.0067	0.8267
Aug.	16	166	7041	0.0200	0.8467
Aug.	17	239	7280	0.0287	0.8754
Aug.	18	140	7420	0.0168	0.8923
Aug.	19	124	7544	0.0149	0.9072
Aug.	20	81	7625	0.0097	0.9169
Aug.	21	69	7694	0.0083	0.9252
Aug.	22	38	7732	0.0046	0.9298
Aug.	23	62	7794	0.0075	0.9372
Aug.	24	102	7896	0.0123	0.9495
Aug.	25	147	8043	0.0177	0.9672
Aug.	26	30	8073	0.0036	0.9708
Aug.	27	31	8104	0.0037	0.9746
Aug.	28	33	8137	0.0040	0.9785
Aug.	29	21	8158	0.0025	0.9810
Aug.	30	17	8175	0.0020	0.9830
Aug.	31	23	8198	0.0028	0.9858
Sept.	1	19	8217	0.0023	0.9881
Sept.	2	20	8237	0.0024	0.9905
Sept.	3	20	8257	0.0024	0.9929
Sept.	4	15	8272	0.0018	0.9947
Sept.	5	17	8289	0.0020	0.9968
Sept.	6	8	8297	0.0010	0.9977
Sept.	7	8	8305	0.0010	0.9987
Sept.	8	0	8305	0.0000	0.9987
Sept.	9	0	8305	0.0000	0.9987
Sept.	10	0	8305	0.0000	0.9987
Sept.	11	0	8305	0.0000	0.9987
Sept.	12	0	8305	0.0000	0.9987
Sept.	13	0	8305	0.0000	0.9987
Sept.	14	0	8305	0.0000	0.9987
Sept.	15	0	8305	0.0000	0.9987
Sept.	16	0	8305	0.0000	0.9987
Sept.	17	0	8305	0.0000	0.9987
Sept.	18	8	8313	0.0010	0.9996
Sept.	19	3	8316	0.0004	1.0000

Mean Day of Migration = Aug. 8 Variance = 63.5 Days squared

Appendix F.34. Age composition of sockeye salmon in the Falls Lake escapement by sex, age class, and escapement period, 1989.

	Brood Year and Age Class				
	1985	1984		1983	
	1.2	1.3	2.2	2.3	Total
Escapement Dates:	(June 18 - July 15)				
Sample Dates:	(June 29 - July 15)				
Male					
Sample Size		32	2	4	38
Percent		53.3	3.3	6.7	63.3
Std. Error		4.0	1.4	2.0	3.8
Number		51	3	6	61
Female					
Sample Size		15	7		22
Percent		25.0	11.7		36.7
Std. Error		3.5	2.6		3.8
Number		24	11		35
All Fish					
Sample Size		47	9	4	60
Percent		78.3	15.0	6.7	100.0
Std. Error		3.3	2.8	2.0	
Number		75	14	6	96
Escapement Dates:	(July 16 - 22)				
Sample Dates:	(July 16 - 22)				
Male					
Sample Size	1	100	8	10	119
Percent	0.5	49.5	4.0	5.0	58.9
Std. Error	0.4	2.9	1.1	1.3	2.8
Number	3	305	24	30	363
Female					
Sample Size	2	57	14	10	83
Percent	1.0	28.2	6.9	5.0	41.1
Std. Error	0.6	2.6	1.5	1.3	2.8
Number	6	174	43	30	253
All Fish					
Sample Size	3	157	22	20	202
Percent	1.5	77.7	10.9	9.9	100.0
Std. Error	0.7	2.4	1.8	1.7	
Number	9	479	67	61	616

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Appendix F.34. (page 2 of 3).

	Brood Year and Age Class				
	1985	1984		1983	
	1.2	1.3	2.2	2.3	Total
Escapement Dates:	(July 23 - 29)				
Sample Dates:	(July 23 - 29)				
Male					
Sample Size		71	9	6	86
Percent		37.8	4.8	3.2	45.7
Std. Error		2.8	1.2	1.0	2.9
Number		190	24	16	230
Female					
Sample Size	3	63	31	5	102
Percent	1.6	33.5	16.5	2.7	54.3
Std. Error	0.7	2.7	2.1	0.9	2.9
Number	8	168	83	13	272
All Fish					
Sample Size	3	134	40	11	188
Percent	1.6	71.3	21.3	5.9	100.0
Std. Error	0.7	2.6	2.4	1.4	
Number	8	358	107	29	502
Escapement Dates:	(July 30 - August 5)				
Sample Dates:	(July 30 - August 5)				
Male					
Sample Size	2	78	9	6	95
Percent	1.0	38.2	4.4	2.9	46.6
Std. Error	0.5	2.6	1.1	0.9	2.7
Number	5	191	22	15	233
Female					
Sample Size		75	29	5	109
Percent		36.8	14.2	2.5	53.4
Std. Error		2.6	1.9	0.8	2.7
Number		185	71	12	268
All Fish					
Sample Size	2	153	38	11	204
Percent	1.0	75.0	18.6	5.4	100.0
Std. Error	0.5	2.3	2.1	1.2	
Number	5	376	93	27	501

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Appendix F.34. (page 3 of 3).

	Brood Year and Age Class				
	1985	1984		1983	
	1.2	1.3	2.2	2.3	Total
Escapement Dates:	(August 6 - 12)				
Sample Dates:	(August 6 - 12)				
Male					
Sample Size		34	8	1	43
Percent		28.8	6.8	0.8	36.4
Std. Error		2.4	1.3	0.5	2.6
Number		51	12	1	64
Female					
Sample Size	3	42	29	1	75
Percent	2.5	35.6	24.6	0.8	63.6
Std. Error	0.8	2.5	2.3	0.5	2.6
Number	4	63	43	1	112
All Fish					
Sample Size	3	76	37	2	118
Percent	2.5	64.4	31.4	1.7	100.0
Std. Error	0.8	2.5	2.5	0.7	
Number	4	113	55	3	176
Escapement Dates:	(August 13 - 23)				
Sample Dates:	(August 13 - 21)				
Male					
Sample Size		32	10		42
Percent		29.4	9.2		38.5
Std. Error		2.5	1.6		2.7
Number		48	15		63
Female					
Sample Size	3	39	24	1	67
Percent	2.8	35.8	22.0	0.9	61.5
Std. Error	0.9	2.7	2.3	0.5	2.7
Number	5	59	36	2	101
All Fish					
Sample Size	3	71	34	1	109
Percent	2.8	65.1	31.2	0.9	100.0
Std. Error	0.9	2.7	2.6	0.5	
Number	5	107	51	2	164
Combined Periods	(Percentages are weighted by period escapements)				
Male					
Sample Size	3	347	46	27	423
Percent	0.4	40.7	4.9	3.4	49.3
Std. Error	0.2	1.3	0.6	0.5	1.3
Number	8	836	101	69	1,014
Female					
Sample Size	11	291	134	22	458
Percent	1.1	32.7	14.0	2.9	50.7
Std. Error	0.3	1.3	0.9	0.5	1.3
Number	23	672	287	59	1,041
All Fish					
Sample Size	14	638	180	49	881
Percent	1.5	73.4	18.9	6.2	100.0
Std. Error	0.3	1.2	1.0	0.7	
Number	31	1,508	388	128	2,055

Appendix F.35. Test for significant changes among periods in the age composition of sockeye salmon in the Falls Lake escapement by age class, 1989.

	Brood Year and Age Class			
	1985	1984		1983
	1.2	1.3	2.2	2.3
Periods Compared				
1 , 2				
1 , 3				
1 , 4				
1 , 5		S	S*	
1 , 6			S*	
2 , 3			S**	
2 , 4			S*	
2 , 5		S**	S**	S**
2 , 6		S*	S**	S**
3 , 4				
3 , 5			S	
3 , 6			S	S
4 , 5		S	S**	
4 , 6		S	S**	S
5 , 6				

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.36. Length composition of sockeye salmon in the Falls Lake escapement by sex, age class, and escapement period, 1989.

		Brood Year and Age Class				
		1985	1984		1983	
		1.2	1.3	2.2	2.3	Total
Escapement Dates: (June 18 - July 15)						
Sample Dates: (June 29 - July 15)						
Male	Avg. Length		571	488	558	566
	Std. Error		2.8	2.5	7.0	3.9
	Sample Size		32	2	4	38
Female	Avg. Length		559	481		534
	Std. Error		4.0	9.0		8.9
	Sample Size		15	7		22
All Fish	Avg. Length		568	482	558	554
	Std. Error		2.4	7.0	7.0	4.5
	Sample Size		47	9	4	60
Escapement Dates: (July 16 - 22)						
Sample Dates: (July 16 - 22)						
Male	Avg. Length	495	567	497	563	562
	Std. Error		2.3	10.2	7.8	2.7
	Sample Size	1	100	8	10	119
Female	Avg. Length	485	563	492	551	548
	Std. Error	15.0	2.7	5.1	6.7	3.8
	Sample Size	2	57	14	10	83
All Fish	Avg. Length	488	566	494	557	556
	Std. Error	9.3	1.7	4.8	5.2	2.3
	Sample Size	3	157	22	20	202
Escapement Dates: (July 23 - 29)						
Sample Dates: (July 23 - 29)						
Male	Avg. Length		569	486	578	561
	Std. Error		2.3	7.1	9.0	3.5
	Sample Size		71	9	6	86
Female	Avg. Length	475	560	482	537	533
	Std. Error	8.7	2.7	3.8	16.4	4.3
	Sample Size	3	63	31	5	102
All Fish	Avg. Length	475	565	483	560	545
	Std. Error	8.7	1.8	3.3	10.6	3.0
	Sample Size	3	134	40	11	188
Escapement Dates: (July 30 - August 5)						
Sample Dates: (July 30 - August 5)						
Male	Avg. Length	483	556	488	560	548
	Std. Error	32.5	2.6	6.9	8.9	3.3
	Sample Size	2	78	9	6	95
Female	Avg. Length		557	488	540	538
	Std. Error		2.7	4.5	16.4	3.7
	Sample Size		75	29	5	109
All Fish	Avg. Length	483	557	488	551	543
	Std. Error	32.5	1.8	3.7	9.0	2.5
	Sample Size	2	153	38	11	204

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Appendix F.36. (page 2 of 2).

		Brood Year and Age Class				
		1985	1984		1983	
		1.2	1.3	2.2	2.3	Total
Escapement Dates: (August 6 - 12)						
Sample Dates: (August 6 - 12)						
Male	Avg. Length		560	477	530	544
	Std. Error		3.6	6.3		5.8
	Sample Size		34	8	1	43
Female	Avg. Length	485	556	475	580	522
	Std. Error	13.2	3.1	4.0		5.2
	Sample Size	3	42	29	1	75
All Fish	Avg. Length	485	558	475	555	530
	Std. Error	13.2	2.4	3.4	25.0	4.0
	Sample Size	3	76	37	2	118
Escapement Dates: (August 13 - 26)						
Sample Dates: (August 13 - 21)						
Male	Avg. Length		561	477		541
	Std. Error		4.1	8.0		6.7
	Sample Size		32	10		42
Female	Avg. Length	480	553	481	590	525
	Std. Error	10.4	3.2	3.4		5.0
	Sample Size	3	39	24	1	67
All Fish	Avg. Length	480	557	480	590	531
	Std. Error	10.4	2.6	3.3		4.0
	Sample Size	3	71	34	1	109
Combined Periods (Lengths weighted by period escapements)						
Male	Avg. Length	489	564	488	563	555
	Std. Error	19.2	1.2	3.4	4.4	1.6
	Sample Size	3	347	46	27	423
Female	Avg. Length	481	559	486	550	537
	Std. Error	5.0	1.2	1.9	6.3	1.9
	Sample Size	11	291	134	22	458
All Fish	Avg. Length	482	562	486	559	546
	Std. Error	5.3	0.9	1.6	3.9	1.3
	Sample Size	14	638	180	49	881

Appendix F.37. Test for significant changes among periods in the length composition of sockeye salmon in the Falls Lake escapement by age class, 1989.

	Brood Year and Age Class			
	1985	1984		1983
	1.2	1.3	2.2	2.3
Periods Compared				
1 , 2				
1 , 3				
1 , 4		S**		
1 , 5		S**		
1 , 6		S**		
2 , 3			S	
2 , 4		S**		
2 , 5		S**	S**	
2 , 6		S**	S**	
3 , 4		S**		
3 , 5		S*		
3 , 6		S**		
4 , 5			S**	
4 , 6				
5 , 6				

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.38. Daily sockeye salmon counts and associated statistics from Falls Lake, 1989.

Date		Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
June	23	0	0	0.0000	0.0000
June	24	0	0	0.0000	0.0000
June	25	0	0	0.0000	0.0000
June	26	0	0	0.0000	0.0000
June	27	0	0	0.0000	0.0000
June	28	0	0	0.0000	0.0000
June	29	2	2	0.0010	0.0010
June	30	1	3	0.0005	0.0015
July	1	11	14	0.0054	0.0068
July	2	4	18	0.0019	0.0088
July	3	1	19	0.0005	0.0092
July	4	0	19	0.0000	0.0092
July	5	2	21	0.0010	0.0102
July	6	0	21	0.0000	0.0102
July	7	0	21	0.0000	0.0102
July	8	3	24	0.0015	0.0117
July	9	1	25	0.0005	0.0122
July	10	13	38	0.0063	0.0185
July	11	14	52	0.0068	0.0253
July	12	14	66	0.0068	0.0321
July	13	3	69	0.0015	0.0336
July	14	0	69	0.0000	0.0336
July	15	27	96	0.0131	0.0467
July	16	34	130	0.0165	0.0633
July	17	38	168	0.0185	0.0818
July	18	75	243	0.0365	0.1182
July	19	135	378	0.0657	0.1839
July	20	41	419	0.0200	0.2039
July	21	159	578	0.0774	0.2813
July	22	134	712	0.0652	0.3465
July	23	122	834	0.0594	0.4058
July	24	79	913	0.0384	0.4443
July	25	65	978	0.0316	0.4759
July	26	57	1035	0.0277	0.5036
July	27	6	1041	0.0029	0.5066
July	28	97	1138	0.0472	0.5538
July	29	76	1214	0.0370	0.5908
July	30	103	1317	0.0501	0.6409
July	31	132	1449	0.0642	0.7051
Aug.	1	81	1530	0.0394	0.7445
Aug.	2	60	1590	0.0292	0.7737
Aug.	3	60	1650	0.0292	0.8029
Aug.	4	26	1676	0.0127	0.8156
Aug.	5	39	1715	0.0190	0.8345
Aug.	6	33	1748	0.0161	0.8506
Aug.	7	50	1798	0.0243	0.8749
Aug.	8	31	1829	0.0151	0.8900
Aug.	9	20	1849	0.0097	0.8998
Aug.	10	14	1863	0.0068	0.9066
Aug.	11	14	1877	0.0068	0.9134
Aug.	12	14	1891	0.0068	0.9202
Aug.	13	11	1902	0.0054	0.9255
Aug.	14	16	1918	0.0078	0.9333
Aug.	15	6	1924	0.0029	0.9363
Aug.	16	23	1947	0.0112	0.9474
Aug.	17	24	1971	0.0117	0.9591
Aug.	18	24	1995	0.0117	0.9708
Aug.	19	27	2022	0.0131	0.9839
Aug.	20	19	2041	0.0092	0.9932
Aug.	21	14	2055	0.0068	1.0000
Aug.	22	0	2055	0.0000	1.0000

Mean Day of Migration = July 28 Variance = 89.4 Days squared.

Appendix F.39. Age composition of sockeye salmon in the Kutlaku Lake escapement by sex and age class, 1989.

	Brood Year and Age Class					
	1986	1985	1984		1983	
	1.1	1.2	1.3	2.2	2.3	Total
Sample Dates: September 1 - 2						
Male						
Sample Size	26	33	14	4		77
Percent	15.2	19.3	8.2	2.3		45.0
Std. Error	2.7	3.0	2.1	1.2		3.8
Female						
Sample Size	1	26	66		1	94
Percent	0.6	15.2	38.6		0.6	55.0
Std. Error	0.6	2.7	3.7		0.6	3.8
All Fish						
Sample Size	27	59	80	4	1	171
Percent	15.8	34.5	46.8	2.3	0.6	100.0
Std. Error	2.8	3.6	3.8	1.2	0.6	

Appendix F.40. Length composition of sockeye salmon in the Kutlaku Lake escapement by sex and age class, 1989.

		Brood Year and Age Class					
		1986	1985	1984		1983	
		1.1	1.2	1.3	2.2	2.3	Total
Sample Dates:	September 1 - 2						
Male	Avg. Length	317	456	520	474		422
	Std. Error	2.4	4.9	9.5	25.1		9.4
	Sample Size	26	33	14	4		77
Female	Avg. Length	312	470	512		530	499
	Std. Error		5.0	2.7			3.7
	Sample Size	1	26	66		1	94
All Fish	Avg. Length	317	462	514	474	530	464
	Std. Error	2.4	3.6	2.8	25.1		5.5
	Sample Size	27	59	80	4	1	171

Appendix F.41. Age composition of sockeye salmon in the Alecks Lake escapement by sex and age class, 1989.

	Brood Year and Age Class						
	1986	1985		1984		1983	
	1.1	1.2	2.1	1.3	2.2	2.3	Total
Sample Dates: August 30 - 31							
Male							
Sample Size	9	61	2	65	25		162
Percent	2.8	19.2	0.6	20.4	7.9		50.9
Std. Error	0.9	2.2	0.4	2.2	1.5		2.8
Female							
Sample Size		21	1	125	8	1	156
Percent		6.6	0.3	39.3	2.5	0.3	49.1
Std. Error		1.4	0.3	2.7	0.9	0.3	2.8
All Fish							
Sample Size	9	83	3	191	33	1	320
Percent	2.8	25.9	0.9	59.7	10.3	0.3	100.0
Std. Error	0.9	2.4	0.5	2.7	1.7	0.3	

Appendix F.42. Length composition of sockeye salmon in the Alecks Lake escapement by sex and age class, 1989.

		Brood Year and Age Class						
		1986	1985		1984		1983	
		1.1	1.2	2.1	1.3	2.2	2.3	Total
Sample Dates: August 30 - 31								
Male	Avg. Length	358	476	415	555	471		500
	Std. Error	8.1	5.2	23.5	3.3	7.5		4.9
	Sample Size	9	61	2	65	25		162
Female	Avg. Length		470	393	529	471	562	517
	Std. Error		5.7		2.3	7.6		2.8
	Sample Size		21	1	125	8	1	156
All Fish	Avg. Length	358	475	407	538	471	562	508
	Std. Error	8.1	4.1	15.3	2.1	5.9		2.9
	Sample Size	9	82	3	191	33	1	319

Appendix F.43. Age composition of sockeye salmon in the Canyon Island (Taku River) fish wheel catch by sex, age class, and escapement period, 1989.

	Brood Year and Age Class										
	1987	1986		1985			1984		1983		
	0.1	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	Total
Statistical Weeks 21 - 24 (May 21 - June 17)											
Male											
Sample Size				9	15		294			12	330
Percent				1.6	2.6		50.9			2.1	57.1
Std. Error				0.5	0.6		2.0			0.6	2.0
Number				227	379		7,427			303	8,336
Female											
Sample Size				2	6		230	1		9	248
Percent				0.3	1.0		39.8	0.2		1.6	42.9
Std. Error				0.2	0.4		2.0	0.2		0.5	2.0
Number				51	152		5,810	25		227	6,265
All Fish											
Sample Size				11	21		524	1		21	578
Percent				1.9	3.6		90.7	0.2		3.6	100.0
Std. Error				0.6	0.8		1.2	0.2		0.8	
Number				278	531		13,237	25		530	14,601
Statistical Week 25 (June 18 - 24)											
Male											
Sample Size		3		3	31		120	2		8	167
Percent		1.1		1.1	11.0		42.4	0.7		2.8	59.0
Std. Error		0.6		0.6	1.8		2.9	0.5		1.0	2.9
Number		200		200	2,069		8,008	133		534	11,144
Female											
Sample Size				3	11		83	7		12	116
Percent				1.1	3.9		29.3	2.5		4.2	41.0
Std. Error				0.6	1.1		2.7	0.9		1.2	2.9
Number				200	734		5,538	467		801	7,740
All Fish											
Sample Size		3		6	42		203	9		20	283
Percent		1.1		2.1	14.8		71.7	3.2		7.1	100.0
Std. Error		0.6		0.9	2.1		2.7	1.0		1.5	
Number		200		400	2,803		13,546	600		1,335	18,884
Statistical Week 26 (June 25 - July 1)											
Male											
Sample Size		6	5	3	73	1	135	3	1	6	233
Percent		1.5	1.2	0.7	17.8	0.2	32.9	0.7	0.2	1.5	56.8
Std. Error		0.6	0.5	0.4	1.9	0.2	2.3	0.4	0.2	0.6	2.4
Number		412	343	206	5,014	69	9,272	206	69	412	16,003
Female											
Sample Size				4	34		119	5	1	14	177
Percent				1.0	8.3		29.0	1.2	0.2	3.4	43.2
Std. Error				0.5	1.4		2.2	0.5	0.2	0.9	2.4
Number				275	2,335		8,173	343	69	962	12,157
All Fish											
Sample Size		6	5	7	108	1	254	8	2	20	411
Percent		1.5	1.2	1.7	26.3	0.2	61.8	1.9	0.5	4.9	100.0
Std. Error		0.6	0.5	0.6	2.2	0.2	2.4	0.4	0.3	1.1	
Number		412	343	481	7,417	69	17,445	549	138	1,374	28,228
Statistical Weeks 27 - 28 (July 2 - 15)											
Male											
Sample Size		15	39	31	150	1	301	25	2	25	589
Percent		1.4	3.7	2.9	14.2	0.1	28.5	2.4	0.2	2.4	55.8
Std. Error		0.4	0.6	0.5	1.0	0.1	1.3	0.5	0.1	0.5	1.5
Number		206	536	426	2,062	14	4,138	344	28	344	8,098
Female											
Sample Size		1	3	40	46		331	9	2	34	466
Percent		0.1	0.3	3.8	4.4		31.4	0.9	0.2	3.2	44.2
Std. Error		0.1	0.2	0.6	0.6		1.4	0.3	0.1	0.5	1.5
Number		14	41	550	632		4,551	124	28	467	6,407
All Fish											
Sample Size		16	42	71	196	1	632	34	4	59	1,055
Percent		1.5	4.0	6.7	18.6	0.1	59.9	3.2	0.4	5.6	100.0
Std. Error		0.4	0.6	0.7	1.2	0.1	1.5	0.5	0.2	0.7	
Number		220	577	976	2,695	14	8,689	467	56	811	14,505

-continued-

Appendix F.43. (page 2 of 2).

	Brood Year and Age Class										
	1987	1986		1985			1984		1983		
	0.1	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	Total
Statistical Week 29 (July 16 - 22)											
Male											
Sample Size		31	28	19	93		90	12		3	276
Percent		7.0	6.3	4.3	20.9		20.2	2.7		0.7	61.9
Std. Error		1.2	1.1	0.9	1.9		1.9	0.8		0.4	2.3
Number		1,165	1,053	714	3,496		3,384	451		113	10,376
Female											
Sample Size		1		19	18		107	8	1	16	170
Percent		0.2		4.3	4.0		24.0	1.8	0.2	3.6	38.1
Std. Error		0.2		0.9	0.9		2.0	0.6	0.2	0.9	2.3
Number		38		714	677		4,022	301	38	601	6,391
All Fish											
Sample Size		32	28	38	111		198	20	1	19	447
Percent		7.2	6.3	8.5	24.8		44.3	4.5	0.2	4.3	100.0
Std. Error		1.2	1.1	1.3	2.0		2.3	1.0	0.2	0.9	
Number		1,203	1,053	1,428	4,173		7,444	752	38	714	16,805
Statistical Weeks 30 - 31 (July 23 - August 5)											
Male											
Sample Size	7	34	45	33	120	5	159	16		10	429
Percent	0.8	4.0	5.2	3.8	14.0	0.6	18.5	1.9		1.2	50.0
Std. Error	0.3	0.6	0.7	0.6	1.1	0.3	1.3	0.4		0.4	1.6
Number	93	453	600	440	1,599	67	2,119	213		133	5,717
Female											
Sample Size	1	14	2	66	71	2	245	17		11	429
Percent	0.1	1.6	0.2	7.7	8.3	0.2	28.6	2.0		1.3	50.0
Std. Error	0.1	0.4	0.2	0.9	0.9	0.2	1.5	0.5		0.4	1.6
Number	14	187	26	879	946	26	3,265	227		147	5,717
All Fish											
Sample Size	8	48	47	100	191	7	404	33		21	859
Percent	0.9	5.6	5.5	11.6	22.2	0.8	47.0	3.8		2.4	100.0
Std. Error	0.3	0.8	0.7	1.1	1.4	0.3	1.6	0.6		0.5	
Number	107	640	626	1,333	2,545	93	5,384	440		280	11,448
Statistical Weeks 32 - 40 (August 6 - October 7)											
Male											
Sample Size	4	17	55	28	92	9	100	13	1	4	323
Percent	0.6	2.7	8.6	4.4	14.4	1.4	15.7	2.0	0.2	0.6	50.6
Std. Error	0.3	0.6	1.1	0.8	1.3	0.5	1.4	0.5	0.2	0.3	1.9
Number	60	255	826	421	1,382	135	1,502	195	15	60	4,851
Female											
Sample Size		6	3	35	69		173	22	1	6	315
Percent		0.9	0.5	5.5	10.8		27.1	3.4	0.2	0.9	49.4
Std. Error		0.4	0.3	0.9	1.2		1.7	0.7	0.2	0.4	1.9
Number		90	45	526	1,036		2,598	331	15	90	4,731
All Fish											
Sample Size	4	23	58	64	161	9	273	35	2	10	639
Percent	0.6	3.6	9.1	10.0	25.2	1.4	42.7	5.5	0.3	1.6	100.0
Std. Error	0.3	0.7	1.1	1.1	1.7	0.5	1.9	0.9	0.2	0.5	
Number	60	345	871	962	2,418	135	4,100	526	30	150	9,597
Combined Periods (Percentages are weighted by period escapements)											
Male											
Sample Size	11	106	172	126	574	16	1,199	71	4	68	2,347
Percent	0.1	2.4	2.9	2.3	14.0	0.2	31.5	1.4	0.1	1.7	56.6
Std. Error	<0.1	0.3	0.3	0.2	0.7	0.1	0.9	0.2	0.1	0.2	0.9
Number	153	2,691	3,358	2,634	16,001	285	35,850	1,542	112	1,899	64,525
Female											
Sample Size	1	22	8	169	255	2	1,288	69	5	102	1,921
Percent	<0.1	0.3	0.1	2.8	5.7	<0.1	29.8	1.6	0.1	2.9	43.4
Std. Error	<0.1	0.1	<0.1	0.3	0.4	<0.1	0.9	0.2	0.1	0.3	0.9
Number	14	329	112	3,195	6,512	26	33,957	1,818	150	3,295	49,408
All Fish											
Sample Size	12	128	180	297	830	18	2,488	140	9	170	4,272
Percent	0.1	2.6	3.0	5.1	19.8	0.3	61.2	2.9	0.2	4.6	100.0
Std. Error	<0.1	0.3	0.3	0.3	0.8	0.1	0.9	0.3	0.1	0.4	
Number	167	3,020	3,470	5,858	22,582	311	69,845	3,359	262	5,194	114,068 [a]

[a] Estimated escapement does not exclude upriver Canadian commercial, test fish, and subsistence catches.

Appendix F.44. Test for significant changes among periods in the age composition of sockeye salmon in the Canyon Island (Taku River) fish wheel catch by age class, 1989.

	Brood Year and Age Class									
	1987	1986		1985			1984		1983	
	0.1	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3
Periods Compared										
1 , 2		S			S**		S**	S**		S*
1 , 3		S**	S*		S**		S**	S**		
1 , 4		S**	S**	S**	S**		S**	S**		
1 , 5		S**	S**	S**	S**		S**	S**		
1 , 6	S*	S**	S**	S**	S**	S	S**	S**		
1 , 7		S**	S**	S**	S**	S**	S**	S**		S*
2 , 3					S**		S**			
2 , 4			S**	S**			S**			
2 , 5		S**	S**	S**	S**		S**			
2 , 6		S**	S**	S**	S**		S**			S**
2 , 7		S	S**	S**	S**		S**			S**
3 , 4			S**	S**	S**					
3 , 5		S**	S**	S**			S**	S		
3 , 6		S**	S**	S**			S**			S*
3 , 7		S	S**	S**			S**	S**		S**
4 , 5		S**	S		S**		S**			
4 , 6	S**	S**		S**	S	S*	S**			S**
4 , 7	S*	S**	S**	S**	S**	S**	S**	S*		S**
5 , 6	S			S						
5 , 7		S**				S*				S**
6 , 7		S	S**							

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.45. Length composition of sockeye salmon in the Canyon Island (Taku River) fish wheel catch by sex, age class, and escapement period, 1989.

		Brood Year and Age Class										
		1987	1986		1985			1984		1983		
		0.1	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	Total
Statistical Weeks 21 - 24 (May 21 - June 17)												
Male	Avg. Length				606	498		614			620	609
	Std. Error				9.9	9.9		1.8			8.0	2.1
	Sample Size				9	15		294			12	330
Female	Avg. Length				585	531		596	500		587	594
	Std. Error				20.0	8.3		1.8			8.1	1.8
	Sample Size				2	6		229	1		9	247
All Fish	Avg. Length				602	508		606	500		605	602
	Std. Error				8.9	8.0		1.3			6.7	1.5
	Sample Size				11	21		523	1		21	577
Statistical Week 25 (June 18 - 24)												
Male	Avg. Length		433		627	475		615	518		624	585
	Std. Error		18.6		8.8	7.8		2.6	12.5		11.7	5.2
	Sample Size		3		3	31		120	2		8	167
Female	Avg. Length				572	522		593	517		586	581
	Std. Error				7.3	5.2		3.9	11.1		10.8	3.9
	Sample Size				3	11		83	7		12	116
All Fish	Avg. Length		433		599	487		606	517		602	583
	Std. Error		18.6		13.3	6.7		2.3	8.7		8.9	3.4
	Sample Size		3		6	42		203	9		20	283
Statistical Week 26 (June 25 - July 1)												
Male	Avg. Length		438	333	622	466	360	607	488	620	615	550
	Std. Error		6.3	10.1	21.3	5.5		2.7	24.6		7.6	5.6
	Sample Size		6	5	3	73	1	135	3	1	5	232
Female	Avg. Length				585	510		573	491	660	580	560
	Std. Error				12.1	5.6		2.7	12.5		9.5	3.2
	Sample Size				4	34		119	5	1	14	177
All Fish	Avg. Length		438	333	601	481	360	591	490	640	589	555
	Std. Error		6.3	10.1	12.7	4.6		2.2	11.0	20.0	8.0	3.4
	Sample Size		6	5	7	108	1	254	8	2	19	410
Statistical Weeks 27 - 29 (July 2 - 15)												
Male	Avg. Length		448	352	606	458	330	605	459	625	596	540
	Std. Error		7.3	3.0	6.1	2.4		1.7	6.3	25.0	8.3	3.7
	Sample Size		15	39	31	150	1	298	25	2	25	586
Female	Avg. Length		440	375	577	499		574	523	608	583	565
	Std. Error			5.8	3.9	4.6		1.5	12.8	7.5	4.5	1.9
	Sample Size		1	3	40	45		330	9	2	34	464
All Fish	Avg. Length		447	354	590	467	330	589	476	616	588	551
	Std. Error		6.8	3.0	3.9	2.5		1.3	7.5	11.8	4.4	2.3
	Sample Size		16	42	71	195	1	628	34	4	59	1050
Statistical Week 29 (July 16 - 22)												
Male	Avg. Length		441	346	594	455		603	463		600	502
	Std. Error		5.0	4.2	6.1	4.3		3.2	11.5		41.9	5.7
	Sample Size		30	28	19	93		89	12		3	274
Female	Avg. Length		455		566	494		570	483	600	565	557
	Std. Error				5.1	8.3		2.6	11.0		8.0	3.1
	Sample Size		1		19	18		106	9	1	16	169
All Fish	Avg. Length		442	346	580	462		585	474	600	570	523
	Std. Error		4.9	4.2	4.5	4.0		2.3	8.2		9.2	3.9
	Sample Size		31	28	38	111		195	20	1	19	443
Statistical Weeks 30 - 31 (July 23 - August 5)												
Male	Avg. Length	299	434	335	589	458	342	596	471		590	504
	Std. Error	4.6	3.9	3.5	5.4	3.5	6.6	2.6	11.6		9.3	4.8
	Sample Size	7	34	45	33	119	5	159	16		10	428
Female	Avg. Length	300	459	393	560	476	325	571	499		580	545
	Std. Error		9.5	37.5	3.3	4.3	20.0	1.6	9.1		6.4	2.6
	Sample Size	1	14	2	66	70	2	244	17		11	427
All Fish	Avg. Length	299	441	338	570	465	337	581	485		584	525
	Std. Error	3.9	4.2	3.9	3.1	2.8	7.1	1.5	7.6		5.5	2.8
	Sample Size	8	48	47	100	189	7	403	33		21	856

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Appendix F.45. (page 2 of 2).

		Brood Year and Age Class										
		1987	1986		1985			1984		1983		
		0.1	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3	Total
Statistical Weeks 32 - 40 (August 6 - October 7)												
Male	Avg. Length	346	438	328	584	447	328	591	497	640	586	483
	Std. Error	39.0	7.7	3.1	5.1	3.8	6.7	2.5	12.5		2.4	5.9
	Sample Size	4	17	55	28	92	9	100	13	1	4	323
Female	Avg. Length		446	332	559	478		562	506	585	564	535
	Std. Error		10.5	4.4	4.7	4.2		1.7	6.6		10.0	2.8
	Sample Size		6	3	35	69		172	22	1	6	314
All Fish	Avg. Length	346	440	328	570	460	328	573	503	613	573	508
	Std. Error	39.0	6.2	2.9	3.8	3.1	6.7	1.6	6.2	27.5	6.8	3.4
	Sample Size	4	23	58	63	161	9	272	35	2	10	637
Combined Periods (Lengths weighted by period escapements)												
Male	Avg. Length	321	439	339	608	467	345	606	485	625	608	545
	Std. Error	15.0	2.6	1.8	2.8	1.6	4.7	0.9	4.9	11.1	4.5	2.0
	Sample Size	11	105	172	126	573	16	1195	71	4	67	2340
Female	Avg. Length	300	450	369	574	505	325	578	501	624	579	564
	Std. Error		6.7	12.1	2.1	2.3	20.0	0.8	4.1	12.9	2.9	1.1
	Sample Size	1	22	8	169	253	2	1283	69	5	102	1914
All Fish	Avg. Length	321	440	340	590	477	344	592	492	621	589	553
	Std. Error	13.7	2.5	1.8	1.9	1.4	4.6	0.7	3.4	8.6	2.7	1.2
	Sample Size	12	127	180	296	827	18	2478	140	9	169	4256

Appendix F.46. Test for significant changes among periods in the length composition of sockeye salmon in the Canyon Island (Taku River) fish wheel catch by age class, 1989.

	Brood Year and Age Class									
	1987	1986		1985			1984		1983	
	0.1	0.2	1.1	0.3	1.2	2.1	1.3	2.2	1.4	2.3
Periods Compared										
1 , 2					S					
1 , 3					S**		S**			
1 , 4					S**		S**			S*
1 , 5				S*	S**		S**			S**
1 , 6				S**	S**		S**			S**
1 , 7				S**	S**		S**			S**
2 , 3							S**	S		
2 , 4					S**		S**	S**		
2 , 5					S**		S**	S**		S**
2 , 6				S*	S**		S**	S**		S
2 , 7				S*	S**		S**			S**
3 , 4			S*		S**					
3 , 5					S**		S			
3 , 6				S**	S**		S**			
3 , 7				S**	S**		S**			
4 , 5										S
4 , 6			S**	S**			S**			
4 , 7			S**	S**	S		S**	S**		S
5 , 6				S						
5 , 7			S**	S			S**	S**		
6 , 7			S				S**	S		

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.47. Catch and CPUE (catch/wheel hour) of sockeye salmon in fishwheels at Canyon Island (Taku River), 1989.

Date	Daily Sockeye Catch	Cumulative Sockeye Catch	Daily CPUE	Daily Proportion CPUE	Cumulative Proportion CPUE
27 May	2	2	0.043	0.000	0.000
28 May	0	2	0.000	0.000	0.000
29 May	0	2	0.000	0.000	0.000
30 May	0	2	0.000	0.000	0.000
31 May	1	3	0.021	0.000	0.000
1 Jun	1	4	0.022	0.000	0.001
2 Jun	0	4	0.000	0.000	0.001
3 Jun	8	12	0.175	0.001	0.002
4 Jun	7	19	0.152	0.001	0.003
5 Jun	3	22	0.065	0.000	0.003
6 Jun	4	26	0.091	0.001	0.004
7 Jun	14	40	0.302	0.002	0.006
8 Jun	26	66	0.575	0.004	0.010
9 Jun	51	117	1.117	0.008	0.018
10 Jun	49	166	1.107	0.008	0.026
11 Jun	84	250	1.853	0.013	0.040
12 Jun	97	347	2.168	0.016	0.055
13 Jun	82	429	1.809	0.013	0.068
14 Jun	84	513	1.870	0.013	0.082
15 Jun	107	620	2.395	0.017	0.099
16 Jun	70	690	2.360	0.017	0.116
17 Jun	75	765	1.642	0.012	0.128
18 Jun	66	831	1.469	0.011	0.138
19 Jun	71	902	1.593	0.011	0.150
20 Jun	86	988	1.897	0.014	0.164
21 Jun	67	1055	1.454	0.010	0.174
22 Jun	20	1075	0.429	0.003	0.177
23 Jun	0	1075	0.000	0.000	0.177
24 Jun	39	1114	1.197	0.009	0.186
25 Jun	113	1227	2.885	0.021	0.206
26 Jun	63	1290	2.393	0.017	0.224
27 Jun	98	1388	2.166	0.016	0.239
28 Jun	90	1478	1.996	0.014	0.254
29 Jun	62	1540	1.363	0.010	0.263
30 Jun	44	1584	1.025	0.007	0.271
1 Jul	69	1653	1.545	0.011	0.282
2 Jul	110	1763	2.500	0.018	0.300
3 Jul	110	1873	2.519	0.018	0.318
4 Jul	120	1993	2.701	0.019	0.338
5 Jul	70	2063	1.542	0.011	0.349
6 Jul	31	2094	0.685	0.005	0.354
7 Jul	45	2139	1.002	0.007	0.361
8 Jul	102	2241	2.296	0.017	0.377
9 Jul	198	2439	4.810	0.035	0.412
10 Jul	131	2570	3.373	0.024	0.436
11 Jul	107	2677	3.335	0.024	0.460
12 Jul	97	2774	4.528	0.033	0.493
13 Jul	96	2870	3.715	0.027	0.519
14 Jul	57	2927	1.632	0.012	0.531
15 Jul	111	3038	3.297	0.024	0.555
16 Jul	86	3124	2.851	0.021	0.575
17 Jul	104	3228	2.423	0.017	0.593
18 Jul	70	3298	1.625	0.012	0.605
19 Jul	104	3402	2.333	0.017	0.621
20 Jul	85	3487	2.227	0.016	0.637
21 Jul	103	3590	2.543	0.018	0.656
22 Jul	70	3660	1.544	0.011	0.667
23 Jul	119	3779	2.694	0.019	0.686
24 Jul	130	3909	3.158	0.023	0.709
25 Jul	85	3994	2.103	0.015	0.724
26 Jul	56	4050	1.295	0.009	0.733
27 Jul	52	4102	1.200	0.009	0.742
28 Jul	39	4141	0.870	0.006	0.748

-continued-

Appendix F.47. (page 2 of 2).

Date	Daily Sockeye Catch	Cumulative Sockeye Catch	Daily CPUE	Daily Proportion CPUE	Cumulative Proportion CPUE
29 Jul	50	4191	1.377	0.010	0.758
30 Jul	51	4242	1.339	0.010	0.768
31 Jul	81	4323	1.831	0.013	0.781
1 Aug	93	4416	2.070	0.015	0.796
2 Aug	91	4507	2.112	0.015	0.811
3 Aug	115	4622	2.633	0.019	0.830
4 Aug	62	4684	1.404	0.010	0.840
5 Aug	63	4747	1.367	0.010	0.850
6 Aug	72	4819	1.603	0.012	0.862
7 Aug	93	4912	2.090	0.015	0.877
8 Aug	91	5003	1.996	0.014	0.891
9 Aug	68	5071	1.503	0.011	0.902
10 Aug	49	5120	1.067	0.008	0.909
11 Aug	56	5176	1.213	0.009	0.918
12 Aug	68	5244	1.508	0.011	0.929
13 Aug	93	5337	2.205	0.016	0.945
14 Aug	74	5411	1.935	0.014	0.959
15 Aug	0	5411	0.000	0.000	0.959
16 Aug	0	5411	0.000	0.000	0.959
17 Aug	0	5411	0.000	0.000	0.959
18 Aug	7	5418	0.359	0.003	0.961
19 Aug	23	5441	0.521	0.004	0.965
20 Aug	21	5462	0.473	0.003	0.969
21 Aug	23	5485	0.539	0.004	0.972
22 Aug	18	5503	0.433	0.003	0.976
23 Aug	13	5516	0.297	0.002	0.978
24 Aug	19	5535	0.420	0.003	0.981
25 Aug	14	5549	0.313	0.002	0.983
26 Aug	8	5557	0.174	0.001	0.984
27 Aug	13	5570	0.276	0.002	0.986
28 Aug	13	5583	0.294	0.002	0.988
29 Aug	8	5591	0.177	0.001	0.990
30 Aug	11	5602	0.242	0.002	0.991
31 Aug	5	5607	0.107	0.001	0.992
1 Sep	6	5613	0.129	0.001	0.993
2 Sep	2	5615	0.044	0.000	0.993
3 Sep	1	5616	0.021	0.000	0.994
4 Sep	0	5616	0.000	0.000	0.994
5 Sep	7	5623	0.159	0.001	0.995
6 Sep	3	5626	0.063	0.000	0.995
7 Sep	2	5628	0.048	0.000	0.995
8 Sep	4	5632	0.128	0.001	0.996
9 Sep	2	5634	0.074	0.001	0.997
10 Sep	6	5640	0.168	0.001	0.998
11 Sep	4	5644	0.087	0.001	0.999
12 Sep	3	5647	0.082	0.001	0.999
13 Sep	1	5648	0.023	0.000	1.000
14 Sep	1	5649	0.021	0.000	1.000
15 Sep	0	5649	0.000	0.000	1.000
16 Sep	0	5649	0.000	0.000	1.000
17 Sep	0	5649	0.000	0.000	1.000
18 Sep	0	5649	0.000	0.000	1.000
19 Sep	0	5649	0.000	0.000	1.000
20 Sep	0	5649	0.000	0.000	1.000
21 Sep	0	5649	0.000	0.000	1.000
22 Sep	0	5649	0.000	0.000	1.000
23 Sep	0	5649	0.000	0.000	1.000
24 Sep	0	5649	0.000	0.000	1.000
25 Sep	1	5650	0.046	0.000	1.000
26 Sep	0	5650	0.000	0.000	1.000
27 Sep	0	5650	0.000	0.000	1.000
28 Sep	0	5650	0.000	0.000	1.000
29 Sep	0	5650	0.000	0.000	1.000
30 Sep	0	5650	0.000	0.000	1.000
1 Oct	0	5650	0.000	0.000	1.000

Appendix F.48. Age composition of sockeye salmon in the Yehring Creek escapement by sex and age class, 1989[a].

	Brood Year and Age Class							
	1986		1985			1984		
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	Total
Escapement Dates:	(August 13 - October 14)							
Sample Dates:	(Sept. 6, 18, 28; Oct. 13)							
Male								
Sample Size		2		21	1	44	1	69
Percent		1.8		18.9	0.9	39.6	0.9	62.2
Std. Error		1.2		3.4	0.8	4.3	0.8	4.3
Number		14		142	7	297	7	466
Female								
Sample Size	1		1	7		32	1	42
Percent	0.9		0.9	6.3		28.8	0.9	37.8
Std. Error	0.8		0.8	2.1		4.0	0.8	4.3
Number	7		7	47		216	7	284
All Fish								
Sample Size	1	2	1	29	1	76	2	112
Percent	0.9	1.8	0.9	25.9	0.9	67.9	1.8	100.0
Std. Error	0.8	1.2	0.8	3.8	0.8	4.1	1.2	
Number	7	14	7	196	7	514	14	757

[a] Incomplete counts.

Appendix F.49. Length composition of sockeye salmon in the Yehring Creek escapement by sex and age class, 1989.

		Brood Year and Age Class							
		1986		1985			1984		
		0.2	1.1	0.3	1.2	2.1	1.3	2.2	Total
Escapement Dates:		(August 13 - October 14)							
Sample Dates:		(Sept. 6, 18, 28; Oct. 13)							
Male	Avg. Length		323		461	340	584	515	534
	Std. Error		2.5		6.3		4.6		9.3
	Sample Size		2		21	1	44	1	69
Female	Avg. Length	495		550	489		551	530	539
	Std. Error				17.7		4.4		5.7
	Sample Size	1		1	7		32	1	42
All Fish	Avg. Length	495	323	550	468	340	570	523	536
	Std. Error		2.5		6.7		3.8	7.5	6.2
	Sample Size	1	2	1	28	1	76	2	111

Appendix F.50. Daily sockeye salmon counts and associated statistics from Yehring Creek weir, 1989 [a].

Date		Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
Aug.	13	0	0	0.0000	0.0000
Aug.	14	0	0	0.0000	0.0000
Aug.	15	0	0	0.0000	0.0000
Aug.	16	0	0	0.0000	0.0000
Aug.	17	0	0	0.0000	0.0000
Aug.	18	1	1	0.0013	0.0013
Aug.	19	0	1	0.0000	0.0013
Aug.	20	1	2	0.0013	0.0026
Aug.	21	0	2	0.0000	0.0026
Aug.	22	0	2	0.0000	0.0026
Aug.	23	0	2	0.0000	0.0026
Aug.	24	0	2	0.0000	0.0026
Aug.	25	4	6	0.0053	0.0079
Aug.	26	0	6	0.0000	0.0079
Aug.	27	4	10	0.0053	0.0132
Aug.	28	2	12	0.0026	0.0159
Aug.	29	17	29	0.0225	0.0383
Aug.	30	30	59	0.0396	0.0779
Aug.	31	7	66	0.0092	0.0872
Sept.	1	0	66	0.0000	0.0872
Sept.	2	10	76	0.0132	0.1004
Sept.	3	111	187	0.1466	0.2470
Sept.	4	6	193	0.0079	0.2550
Sept.	5	10	203	0.0132	0.2682
Sept.	6	9	212	0.0119	0.2801
Sept.	7	4	216	0.0053	0.2853
Sept.	8	122	338	0.1612	0.4465
Sept.	9	77	415	0.1017	0.5482
Sept.	10	3	418	0.0040	0.5522
Sept.	11	5	423	0.0066	0.5588
Sept.	12	18	441	0.0238	0.5826
Sept.	13	25	466	0.0330	0.6156
Sept.	14	38	504	0.0502	0.6658
Sept.	15	9	513	0.0119	0.6777
Sept.	16	7	520	0.0092	0.6869
Sept.	17	19	539	0.0251	0.7120
Sept.	18	2	541	0.0026	0.7147
Sept.	19	11	552	0.0145	0.7292
Sept.	20	1	553	0.0013	0.7305
Sept.	21	0	553	0.0000	0.7305
Sept.	22	0	553	0.0000	0.7305
Sept.	23	1	554	0.0013	0.7318
Sept.	24	0	554	0.0000	0.7318
Sept.	25	0	554	0.0000	0.7318
Sept.	26	13	567	0.0172	0.7490
Sept.	27	101	668	0.1334	0.8824
Sept.	28	1	669	0.0013	0.8838
Sept.	29	17	686	0.0225	0.9062
Sept.	30	6	692	0.0079	0.9141
Oct.	1	24	716	0.0317	0.9458
Oct.	2	5	721	0.0066	0.9524
Oct.	3	4	725	0.0053	0.9577
Oct.	4	16	741	0.0211	0.9789
Oct.	5	13	754	0.0172	0.9960
Oct.	6	2	756	0.0026	0.9987
Oct.	7	1	757	0.0013	1.0000

Mean Day of Migration = Sept. 13 Variance = 117.7 Days squared

[a] Incomplete count. Unknown number of fish passed upriver prior to 13 August.

Appendix F.51. Age composition of sockeye salmon in the Tulsequah Creek (Taku River) escapement by sex and age class, 1989.

	Brood Year and Age Class				
	1985		1984		
	0.3	1.2	1.3	2.2	Total
Escapement Date: September 6					
Male					
Sample Size	2	7	1		10
Percent	8.3	29.2	4.2		41.7
Std. Error	5.8	9.5	4.2		10.3
Female					
Sample Size	1	2	10	1	14
Percent	4.2	8.3	41.7	4.2	58.3
Std. Error	4.2	5.8	10.3	4.2	10.3
All Fish					
Sample Size	3	9	11	1	24
Percent	12.5	37.5	45.8	4.2	100.0
Std. Error	6.9	10.1	10.4	4.2	

Appendix F.52. Length composition of sockeye salmon in the Tulsequah Creek (Taku River) escapement by sex and age class, 1989.

		Brood Year and Age Class				
		1985		1984		
		0.3	1.2	1.3	2.2	Total
Escapement Date: September 6						
Male	Avg. Length	565	411	560		457
	Std. Error	5.0	5.9			23.7
	Sample Size	2	7	1		10
Female	Avg. Length	525	455	536	430	516
	Std. Error		15.0	9.4		12.2
	Sample Size	1	2	10	1	14
All Fish	Avg. Length	552	421	538	430	491
	Std. Error	13.6	8.3	8.8		13.3
	Sample Size	3	9	11	1	24

Appendix F.53. Age composition of sockeye salmon in the Kuthai Lake escapement by sex and age class, 1989.

	Brood Year and Age Class				
	1985	1984		1983	
	1.2	1.3	2.2	2.3	Total
Sample Dates:	(Sept. 2 - 3)				
Male					
Sample Size	2	190		30	222
Percent	0.6	55.4		8.7	64.7
Std. Error	0.4	2.6		1.5	2.5
Female					
Sample Size	5	101	1	14	121
Percent	1.5	29.4	0.3	4.1	35.3
Std. Error	0.6	2.4	0.3	1.1	2.5
All Fish					
Sample Size	7	293	1	45	346
Percent	2.0	84.7	0.3	13.0	100.0
Std. Error	0.7	1.9	0.3	1.8	

Appendix F.54. Length composition of sockeye salmon in the Kuthai Lake escapement by sex and age class, 1989.

		Brood Year and Age Class				
		1985	1984		1983	
		1.2	1.3	2.2	2.3	Total
Sample Dates:	(Sept. 2 - 3)					
Male	Avg. Length	478	599		598	598
	Std. Error	22.5	2.0		3.3	1.9
	Sample Size	2	190		30	222
Female	Avg. Length	499	574	510	580	571
	Std. Error	8.6	2.1		9.1	2.5
	Sample Size	5	101	1	14	121
All Fish	Avg. Length	493	590	510	594	588
	Std. Error	8.7	1.6		3.9	1.7
	Sample Size	7	292	1	45	345

Appendix F.55. Age composition of sockeye salmon in the Little Trapper Lake escapement by sex, age class, and escapement period, 1989.

	Brood Year and Age Class					
	1985	1984		1983		
	1.2	1.3	2.2	1.4	2.3	Total
Escapement Dates:	(July 22 - August 5)					
Sample Dates:	(July 22 - August 5)					
Male						
Sample Size	18	89	3		7	117
Percent	10.0	49.4	1.7		3.9	65.0
Std. Error	2.2	3.7	0.9		1.4	3.5
Number	755	3,734	126		293	4,908
Female						
Sample Size	1	51	2	1	8	63
Percent	0.6	28.3	1.1	0.6	4.4	35.0
Std. Error	0.5	3.3	0.8	0.5	1.5	3.5
Number	42	2,139	84	42	336	2,643
All Fish						
Sample Size	19	140	5	1	15	180
Percent	10.6	77.8	2.8	0.6	8.3	100.0
Std. Error	2.3	3.1	1.2	0.5	2.0	
Number	797	5,873	210	42	629	7,551
Escapement Dates:	(August 6 - 12)					
Sample Dates:	(August 6 - 12)					
Male						
Sample Size	10	99	6		7	122
Percent	3.8	37.9	2.3		2.7	46.7
Std. Error	1.1	2.7	0.8		0.9	2.8
Number	55	541	33		38	667
Female						
Sample Size	3	115	1		20	139
Percent	1.1	44.1	0.4		7.7	53.3
Std. Error	0.6	2.8	0.3		1.5	2.8
Number	16	629	5		110	760
All Fish						
Sample Size	14	214	7		27	262
Percent	5.3	81.7	2.7		10.3	100.0
Std. Error	1.3	2.2	0.9		1.7	
Number	77	1,170	38		148	1,433

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Appendix F.55. (page 2 of 2).

	Brood Year and Age Class					
	1985	1984		1983		
	1.2	1.3	2.2	1.4	2.3	Total
Escapement Dates:	(August 13 - Sept. 9)					
Sample Dates:	(August 13 - Sept. 9)					
Male						
Sample Size	27	54	16		7	104
Percent	14.4	28.7	8.5		3.7	55.3
Std. Error	2.1	2.7	1.7		1.1	3.0
Number	83	165	49		21	318
Female						
Sample Size	6	52	8		18	84
Percent	3.2	27.7	4.3		9.6	44.7
Std. Error	1.1	2.7	1.2		1.8	3.0
Number	18	159	25		55	257
All Fish						
Sample Size	33	107	25		25	190
Percent	17.4	56.3	13.2		13.2	100.0
Std. Error	2.3	3.0	2.0		2.0	
Number	101	328	77		76	582
Combined Periods (Percentages are weighted by period escapements)						
Male						
Sample Size	55	242	25		21	343
Percent	9.3	46.5	2.2		3.7	61.7
Std. Error	1.8	2.9	0.8		1.1	2.8
Number	892	4,440	208		354	5,894
Female						
Sample Size	10	218	11	1	46	286
Percent	0.8	30.6	1.2	0.4	5.2	38.3
Std. Error	0.4	2.7	0.6	0.4	1.2	2.8
Number	77	2,928	114	42	499	3,660
All Fish						
Sample Size	66	461	37	1	67	632
Percent	10.2	77.1	3.4	0.4	8.9	100.0
Std. Error	1.8	2.5	1.0	0.4	1.6	
Number	975	7,371	325	42	853	9,566

Appendix F.56. Test for significant changes among periods in the age composition of sockeye salmon in the Little Trapper Lake escapement by age class, 1989.

	Brood Year and Age Class				
	1985	1984		1983	
	1.2	1.3	2.2	1.4	2.3
Periods Compared					
1 , 2	S				
1 , 3	S	S**	S**		
2 , 3	S**	S**	S**		

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.57. Length composition of sockeye salmon in the Little Trapper Lake escapement by sex, age class, and escapement period, 1989.

		Brood Year and Age Class					
		1985	1984		1983		
		1.2	1.3	2.2	1.4	2.3	Total
Escapement Dates: (July 22 - August 5)							
Sample Dates: (July 22 - August 5)							
Male	Avg. Length	411	531	441		528	510
	Std. Error	9.0	1.9	41.6		5.7	4.7
	Sample Size	18	89	3		7	117
Female	Avg. Length	489	506	393	518	516	504
	Std. Error		2.4	28.5		5.6	3.4
	Sample Size	1	51	2	1	8	63
All Fish	Avg. Length	415	522	422	518	522	507
	Std. Error	9.5	1.8	27.2		4.2	3.3
	Sample Size	19	140	5	1	15	180
Escapement Dates: (August 6 - 12)							
Sample Dates: (August 6 - 12)							
Male	Avg. Length	401	529	402		532	512
	Std. Error	10.1	2.1	11.4		6.6	4.4
	Sample Size	10	99	6		7	122
Female	Avg. Length	458	506	446		512	506
	Std. Error	14.7	1.4			3.4	1.5
	Sample Size	3	115	1		20	139
All Fish	Avg. Length	411	517	408		517	508
	Std. Error	10.5	1.4	11.5		3.4	2.3
	Sample Size	14	214	7		27	262
Escapement Dates: (August 13 - Sept. 9)							
Sample Dates: (August 13 - Sept. 9)							
Male	Avg. Length	428	512	407		527	475
	Std. Error	12.0	4.4	9.4		8.5	6.2
	Sample Size	27	54	16		7	104
Female	Avg. Length	420	492	425		497	481
	Std. Error	4.4	3.7	5.5		3.8	3.8
	Sample Size	6	52	8		18	84
All Fish	Avg. Length	426	502	412		506	478
	Std. Error	9.8	3.0	6.5		4.4	3.8
	Sample Size	33	107	25		25	190
Combined Periods (Lengths weighted by period escapements)							
Male	Avg. Length	410	529	433		528	508
	Std. Error	6.9	1.5	8.0		3.9	3.0
	Sample Size	55	242	25		21	343
Female	Avg. Length	480	505	402	518	514	502
	Std. Error	9.2	1.3	7.2		2.6	1.6
	Sample Size	10	218	11	1	46	286
All Fish	Avg. Length	415	520	419	518	520	506
	Std. Error	6.0	1.2	5.9		2.5	1.8
	Sample Size	66	461	37	1	67	632

Appendix F.58. Test for significant changes among periods in the length composition of sockeye salmon in the Little Trapper Lake escapement by age class, 1989.

	Brood Year and Age Class				
	1985	1984		1983	
	1.2	1.3	2.2	1.4	2.3
Periods Compared					
1 , 2		S*			
1 , 3		S**			S**
2 , 3		S**			S*

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.59. Daily sockeye salmon counts and associated statistics from Little Trapper Lake weir, 1989.

Date		Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
July	22	0	0	0.0000	0.0000
July	23	16	16	0.0017	0.0017
July	24	123	139	0.0129	0.0145
July	25	184	323	0.0192	0.0338
July	26	260	583	0.0272	0.0609
July	27	486	1069	0.0508	0.1117
July	28	755	1824	0.0789	0.1907
July	29	312	2136	0.0326	0.2233
July	30	533	2669	0.0557	0.2790
July	31	701	3370	0.0733	0.3523
Aug.	1	1006	4376	0.1052	0.4575
Aug.	2	948	5324	0.0991	0.5566
Aug.	3	655	5979	0.0685	0.6250
Aug.	4	856	6835	0.0895	0.7145
Aug.	5	716	7551	0.0748	0.7894
Aug.	6	259	7810	0.0271	0.8164
Aug.	7	656	8466	0.0686	0.8850
Aug.	8	168	8634	0.0176	0.9026
Aug.	9	150	8784	0.0157	0.9183
Aug.	10	51	8835	0.0053	0.9236
Aug.	11	43	8878	0.0045	0.9281
Aug.	12	106	8984	0.0111	0.9392
Aug.	13	32	9016	0.0033	0.9425
Aug.	14	70	9086	0.0073	0.9498
Aug.	15	62	9148	0.0065	0.9563
Aug.	16	55	9203	0.0057	0.9621
Aug.	17	34	9237	0.0036	0.9656
Aug.	18	41	9278	0.0043	0.9699
Aug.	19	42	9320	0.0044	0.9743
Aug.	20	17	9337	0.0018	0.9761
Aug.	21	36	9373	0.0038	0.9798
Aug.	22	24	9397	0.0025	0.9823
Aug.	23	22	9419	0.0023	0.9846
Aug.	24	11	9430	0.0011	0.9858
Aug.	25	33	9463	0.0034	0.9892
Aug.	26	13	9476	0.0014	0.9906
Aug.	27	13	9489	0.0014	0.9920
Aug.	28	14	9503	0.0015	0.9934
Aug.	29	15	9518	0.0016	0.9950
Aug.	30	38	9556	0.0040	0.9990
Aug.	31	10	9566	0.0010	1.0000

Mean Day of Migration = Aug. 3 Variance = 35.9 Days squared

Appendix F.60. Age composition of sockeye salmon in the Little Tatsamenie Lake escapement by sex, age class, and escapement period, 1989.

	Brood Year and Age Class							
	1986	1985		1984		1983		
	0.2	0.3	1.2	1.3	2.2	1.4	2.3	Total
Escapement Dates: (August 1 - Sept. 2)								
Sample Dates: (August 1 - Sept. 2)								
Male								
Sample Size	18	19	74	37	3		1	152
Percent	6.5	6.8	26.6	13.3	1.1		0.4	54.7
Std. Error	1.4	1.4	2.5	1.9	0.6		0.3	2.8
Number	117	124	484	242	20		7	994
Female								
Sample Size	3	26	23	63	9		2	126
Percent	1.1	9.4	8.3	22.7	3.2		0.7	45.3
Std. Error	0.6	1.6	1.5	2.3	1.0		0.5	2.8
Number	20	170	150	412	59		13	824
All Fish								
Sample Size	21	45	100	106	12		3	287
Percent	7.3	15.7	34.8	36.9	4.2		1.0	100.0
Std. Error	1.4	2.0	2.6	2.6	1.1		0.6	
Number	137	294	654	693	79		20	1,877
Escapement Dates: (Sept. 3 - October 28)								
Sample Dates: (Sept. 3 - October 28)								
Male								
Sample Size	3	5	27	24	13	1	4	77
Percent	1.5	2.5	13.7	12.2	6.6	0.5	2.0	39.1
Std. Error	0.8	1.0	2.2	2.1	1.6	0.5	0.9	3.2
Number	18	29	159	142	77	6	23	454
Female								
Sample Size	1	8	39	40	28		4	120
Percent	0.5	4.1	19.8	20.3	14.2		2.0	60.9
Std. Error	0.5	1.3	2.6	2.6	2.3		0.9	3.2
Number	6	47	230	236	165		24	708
All Fish								
Sample Size	4	13	66	64	41	1	8	197
Percent	2.0	6.6	33.5	32.5	20.8	0.5	4.1	100.0
Std. Error	0.9	1.6	3.1	3.0	2.6	0.5	1.3	
Number	24	76	389	378	242	6	47	1,162
Combined Periods (Percentages are weighted by period escapements)								
Male								
Sample Size	21	24	101	61	16	1	5	229
Percent	4.5	5.2	21.6	12.9	3.2	0.2	1.0	48.6
Std. Error	0.9	0.9	1.7	1.4	0.7	0.2	0.4	2.1
Number	135	153	643	384	97	6	30	1,448
Female								
Sample Size	4	34	62	103	37		6	246
Percent	0.9	7.3	12.8	21.7	7.5		1.2	51.4
Std. Error	0.4	1.1	1.4	1.7	1.1		0.5	2.1
Number	26	217	380	648	224		37	1,532
All Fish								
Sample Size	25	58	166	170	53	1	11	484
Percent	5.3	12.2	34.3	35.2	10.5	0.2	2.2	100.0
Std. Error	0.9	1.4	2.0	2.0	1.2	0.2	0.6	
Number	161	370	1,043	1,071	321	6	67	3,039

Appendix F.61. Test for significant changes among periods in the age composition of sockeye salmon in the Little Tatsamenie Lake escapement by age class, 1989.

	Brood Year and Age Class						
	1986	1985		1984		1983	
	0.2	0.3	1.2	1.3	2.2	1.4	2.3
Periods Compared							
1 , 2	S**	S**			S**		S

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.62. Length composition of sockeye salmon in the Little Tatsamenie Lake escapement by sex, age class, and escapement period, 1989.

		Brood Year and Age Class							
		1986	1985		1984		1983		
		0.2	0.3	1.2	1.3	2.2	1.4	2.3	Total
Escapement Dates: (August 1 - Sept. 2)									
Sampling Dates: (August 1 - Sept. 2)									
Male	Avg. Length	388	473	406	534	480		529	446
	Std. Error	4.1	17.8	6.1	4.2	9.7			6.0
	Sample Size	18	19	74	37	3		1	152
Female	Avg. Length	420	514	445	504	450		487	489
	Std. Error	5.0	3.2	4.0	4.6	6.0		22.5	3.6
	Sample Size	3	26	23	63	9		2	126
All Fish	Avg. Length	392	497	416	515	457		501	466
	Std. Error	4.4	8.2	5.1	3.4	6.3		19.2	3.8
	Sample Size	21	45	100	106	12		3	287
Escapement Dates: (Sept. 3 - October 28)									
Sample Dates: (Sept. 3 - October 28)									
Male	Avg. Length	373	472	423	525	459	486	548	470
	Std. Error	14.1	34.4	9.3	7.9	9.3		11.4	7.4
	Sample Size	3	5	27	24	13	1	4	77
Female	Avg. Length	423	509	433	490	455		521	465
	Std. Error		5.7	3.7	4.6	4.3		4.0	3.4
	Sample Size	1	8	39	40	28		4	120
All Fish	Avg. Length	386	494	429	503	456	486	534	467
	Std. Error	16.0	13.8	4.4	4.6	4.1		7.5	3.6
	Sample Size	4	13	66	64	41	1	8	197
Combined Periods (Lengths weighted by period escapements)									
Male	Avg. Length	382	473	413	531	472	486	536	455
	Std. Error	4.1	15.5	5.1	4.0	7.9		9.6	4.7
	Sample Size	21	24	101	61	16	1	5	229
Female	Avg. Length	421	512	440	498	452		500	480
	Std. Error	3.6	2.8	2.9	3.4	3.6		9.7	2.6
	Sample Size	4	34	62	103	37		6	246
All Fish	Avg. Length	390	496	421	511	457	486	514	466
	Std. Error	4.3	7.0	3.5	2.8	3.5		8.4	2.7
	Sample Size	25	58	166	170	53	1	11	484

Appendix F.63. Test for significant changes among periods in the length composition of sockeye salmon in the Little Tatsamenie Lake escapement by age class, 1989.

	Brood Year and Age Class						
	1986	1985		1984		1983	
	0.2	0.3	1.2	1.3	2.2	1.4	2.3
Periods Compared							
1 , 2			S	S*			

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.64. Daily sockeye salmon counts and associated statistics from Little Tatsamenie Lake weir, 1989.

Date		Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
Aug.	4	0	0	0.0000	0.0000
Aug.	5	1	1	0.0003	0.0003
Aug.	6	5	6	0.0016	0.0020
Aug.	7	2	8	0.0007	0.0026
Aug.	8	3	11	0.0010	0.0036
Aug.	9	11	22	0.0036	0.0072
Aug.	10	10	32	0.0033	0.0105
Aug.	11	24	56	0.0079	0.0184
Aug.	12	22	78	0.0072	0.0257
Aug.	13	34	112	0.0112	0.0369
Aug.	14	28	140	0.0092	0.0461
Aug.	15	28	168	0.0092	0.0553
Aug.	16	38	206	0.0125	0.0678
Aug.	17	37	243	0.0122	0.0800
Aug.	18	54	297	0.0178	0.0977
Aug.	19	46	343	0.0151	0.1129
Aug.	20	68	411	0.0224	0.1352
Aug.	21	57	468	0.0188	0.1540
Aug.	22	45	513	0.0148	0.1688
Aug.	23	53	566	0.0174	0.1862
Aug.	24	57	623	0.0188	0.2050
Aug.	25	68	691	0.0224	0.2274
Aug.	26	55	746	0.0181	0.2455
Aug.	27	86	832	0.0283	0.2738
Aug.	28	154	986	0.0507	0.3244
Aug.	29	210	1196	0.0691	0.3936
Aug.	30	227	1423	0.0747	0.4682
Aug.	31	166	1589	0.0546	0.5229
Sept.	1	148	1737	0.0487	0.5716
Sept.	2	140	1877	0.0461	0.6176
Sept.	3	116	1993	0.0382	0.6558
Sept.	4	124	2117	0.0408	0.6966
Sept.	5	106	2223	0.0349	0.7315
Sept.	6	118	2341	0.0388	0.7703
Sept.	7	125	2466	0.0411	0.8115
Sept.	8	119	2585	0.0392	0.8506
Sept.	9	69	2654	0.0227	0.8733
Sept.	10	60	2714	0.0197	0.8931
Sept.	11	39	2753	0.0128	0.9059
Sept.	12	42	2795	0.0138	0.9197
Sept.	13	26	2821	0.0086	0.9283
Sept.	14	16	2837	0.0053	0.9335
Sept.	15	3	2840	0.0010	0.9345
Sept.	16	16	2856	0.0053	0.9398
Sept.	17	16	2872	0.0053	0.9450
Sept.	18	10	2882	0.0033	0.9483
Sept.	19	0	2882	0.0000	0.9483
Sept.	20	19	2901	0.0063	0.9546
Sept.	21	29	2930	0.0095	0.9641
Sept.	22	46	2976	0.0151	0.9793
Sept.	23	27	3003	0.0089	0.9882
Sept.	24	8	3011	0.0026	0.9908
Sept.	25	4	3015	0.0013	0.9921
Sept.	26	5	3020	0.0016	0.9937
Sept.	27	0	3020	0.0000	0.9937
Sept.	28	2	3022	0.0007	0.9944
Sept.	29	0	3022	0.0000	0.9944
Sept.	30	3	3025	0.0010	0.9954

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Appendix F.64. (page 2 of 2).

Date		Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
Oct.	1	0	3025	0.0000	0.9954
Oct.	2	2	3027	0.0007	0.9961
Oct.	3	0	3027	0.0000	0.9961
Oct.	4	1	3028	0.0003	0.9964
Oct.	5	2	3030	0.0007	0.9970
Oct.	6	2	3032	0.0007	0.9977
Oct.	7	1	3033	0.0003	0.9980
Oct.	8	0	3033	0.0000	0.9980
Oct.	9	0	3033	0.0000	0.9980
Oct.	10	0	3033	0.0000	0.9980
Oct.	11	0	3033	0.0000	0.9980
Oct.	12	2	3035	0.0007	0.9987
Oct.	13	0	3035	0.0000	0.9987
Oct.	14	2	3037	0.0007	0.9993
Oct.	15	1	3038	0.0003	0.9997
Oct.	16	0	3038	0.0000	0.9997
Oct.	17	0	3038	0.0000	0.9997
Oct.	18	0	3038	0.0000	0.9997
Oct.	19	0	3038	0.0000	0.9997
Oct.	20	0	3038	0.0000	0.9997
Oct.	21	0	3038	0.0000	0.9997
Oct.	22	0	3038	0.0000	0.9997
Oct.	23	0	3038	0.0000	0.9997
Oct.	24	1	3039	0.0003	1.0000

Mean Day of Migration = Aug. 31 Variance = 93.1 Days squared

Appendix F.65. Age composition of sockeye salmon in the Nahlin River escapement by sex and age class, 1989.

	Brood Year and Age Class				
	1985		1984	1983	
	0.3	1.2	1.3	2.3	Total
Escapement Dates: (July 30 - August 12)					
Male					
Sample Size	2	1	27	2	32
Percent	4.3	2.1	57.4	4.3	68.1
Std. Error	3.0	2.1	7.3	3.0	6.9
Female					
Sample Size	1	3	11		15
Percent	2.1	6.4	23.4		31.9
Std. Error	2.1	3.6	6.2		6.9
All Fish					
Sample Size	3	4	38	2	47
Percent	6.4	8.5	80.9	4.3	100.0
Std. Error	3.6	4.1	5.8	3.0	

Appendix F.66. Length composition of sockeye salmon in the Nahlin River escapement by sex and age class, 1989.

		Brood Year and Age Class				
		1985		1984	1983	
		0.3	1.2	1.3	2.3	Total
Escapement Dates: (July 30 - August 12)						
Male	Avg. Length	605	525	601	618	600
	Std. Error	10.0		5.5	12.5	5.3
	Sample Size	2	1	27	2	32
Female	Avg. Length	545	530	569		559
	Std. Error		5.8	4.5		5.4
	Sample Size	1	3	11		15
All Fish	Avg. Length	585	529	592	618	587
	Std. Error	20.8	4.3	4.7	12.5	4.8
	Sample Size	3	4	38	2	47

Appendix F.67. Age composition of sockeye salmon in the Chuunk Mountain Creek (Taku River) escapement by sex and age class, 1989.

	Brood Year and Age Class					
	1986		1985		1984	
	0.2	1.1	0.3	1.2	1.3	Total
Sample Date: (Sept. 21)						
Male						
Sample Size	14	3	3	6	7	33
Percent	30.4	6.5	6.5	13.0	15.2	71.7
Std. Error	6.8	3.7	3.7	5.0	5.3	6.7
Female						
Sample Size			3	2	8	13
Percent			6.5	4.3	17.4	28.3
Std. Error			3.7	3.0	5.6	6.7
All Fish						
Sample Size	14	3	6	8	15	46
Percent	30.4	6.5	13.0	17.4	32.6	100.0
Std. Error	6.8	3.7	5.0	5.6	7.0	

Appendix F.68. Length composition of sockeye salmon in the Chuunk Mountain Creek (Taku River) escapement by sex and age class, 1989.

		Brood Year and Age Class					
		1986		1985		1984	
		0.2	1.1	0.3	1.2	1.3	Total
Sample Date:	(Sept. 21)						
Male	Avg. Length	428	328	603	433	608	474
	Std. Error	3.7	8.3	4.4	9.2	6.2	16.4
	Sample Size	14	3	3	6	7	33
Female	Avg. Length			533	515	566	550
	Std. Error			24.0	20.0	9.6	9.7
	Sample Size			3	2	8	13
All Fish	Avg. Length	428	328	568	454	585	496
	Std. Error	3.7	8.3	19.1	15.4	8.0	13.1
	Sample Size	14	3	6	8	15	46

Appendix F.69. Age composition of sockeye salmon in the Stuhini Lake (South Fork Lake; Taku River) escapement by sex and age class, 1989.

	Brood Year and Age Class					
	1986	1985		1984	1983	
	0.2	0.3	1.2	1.3	2.3	Total
Sample Dates: September 27, October 13						
Male						
Sample Size	5	5	12	11	1	34
Percent	9.1	9.1	21.8	20.0	1.8	61.8
Std. Error	3.9	3.9	5.6	5.4	1.8	6.6
Female						
Sample Size	1	4	6	10		21
Percent	1.8	7.3	10.9	18.2		38.2
Std. Error	1.8	3.5	4.2	5.2		6.6
All Fish						
Sample Size	6	9	18	21	1	55
Percent	10.9	16.4	32.7	38.2	1.8	100.0
Std. Error	4.2	5.0	6.4	6.6	1.8	

Appendix F.70. Length composition of sockeye salmon in the Stuhini Lake (South Fork Lake; Taku River) escapement by sex and age class, 1989.

		Brood Year and Age Class					
		1986	1985		1984	1983	
		0.2	0.3	1.2	1.3	2.3	Total
Sample Dates: September 27, October 13							
Male	Avg. Length	432	580	451	593	600	518
	Std. Error	2.5	10.7	9.1	11.1		13.6
	Sample Size	5	5	12	11	1	34
Female	Avg. Length	470	553	482	554		529
	Std. Error		17.1	8.1	6.8		9.1
	Sample Size	1	4	6	10		21
All Fish	Avg. Length	438	568	461	574	600	522
	Std. Error	6.7	10.2	7.4	7.9		9.0
	Sample Size	6	9	18	21	1	55

Appendix F.71. Age composition of sockeye salmon in the Tuskwa Slough (Taku River) escapement by sex and age class, 1989.

	Brood Year and Age Class					
	1986		1985		1984	
	0.2	1.1	0.3	1.2	1.3	Total
Sample Date: September 20						
Male						
Sample Size	4	1	3	3	1	12
Percent	20.0	5.0	15.0	15.0	5.0	60.0
Std. Error	9.2	5.0	8.2	8.2	5.0	11.2
Female						
Sample Size			6		2	8
Percent			30.0		10.0	40.0
Std. Error			10.5		6.9	11.2
All Fish						
Sample Size	4	1	9	3	3	20
Percent	20.0	5.0	45.0	15.0	15.0	100.0
Std. Error	9.2	5.0	11.4	8.2	8.2	

Appendix F.72. Length composition of sockeye salmon in the Tuskwa Slough (Taku River) escapement by sex and age class, 1989.

		Brood Year and Age Class					
		1986		1985		1984	
		0.2	1.1	0.3	1.2	1.3	Total
Sample Date:	September 20						
Male	Avg. Length	438	330	602	460	600	489
	Std. Error	7.5		6.0	13.2		26.2
	Sample Size	4	1	3	3	1	12
Female	Avg. Length			568		580	571
	Std. Error			6.0		10.0	5.2
	Sample Size			6		2	8
All Fish	Avg. Length	438	330	579	460	587	522
	Std. Error	7.5		7.0	13.2	8.8	18.1
	Sample Size	4	1	9	3	3	20

Appendix F.73. Age composition of sockeye salmon in the Yonakina Slough (Taku River) escapement by sex and age class, 1989.

	Brood Year and Age Class						
	1987	1986		1985		1984	
	0.1	0.2	1.1	0.3	1.2	1.3	Total
Sample Date: September 20							
Male							
Sample Size	2	7	1	2	12	27	51
Percent	2.6	9.0	1.3	2.6	15.4	34.6	65.4
Std. Error	1.8	3.2	1.3	1.8	4.1	5.4	5.4
Female							
Sample Size				7		20	27
Percent				9.0		25.6	34.6
Std. Error				3.2		5.0	5.4
All Fish							
Sample Size	2	7	1	9	12	47	78
Percent	2.6	9.0	1.3	11.5	15.4	60.3	100.0
Std. Error	1.8	3.2	1.3	3.6	4.1	5.6	

Appendix F.74. Length composition of sockeye salmon in the Yonakina Slough (Taku River) escapement by sex and age class, 1989.

		Brood Year and Age Class						
		1987	1986		1985		1984	
		0.1	0.2	1.1	0.3	1.2	1.3	Total
Sample Date:	September 20							
Male	Avg. Length	393	427	395	610	433	609	530
	Std. Error	2.5	6.4			6.6	3.9	13.2
	Sample Size	2	7	1	2	12	27	51
Female	Avg. Length				562		567	566
	Std. Error				7.2		4.4	3.7
	Sample Size				7		20	27
All Fish	Avg. Length	393	427	395	573	433	591	542
	Std. Error	2.5	6.4		8.9	6.6	4.3	8.9
	Sample Size	2	7	1	9	12	47	78

Appendix F.75. Age composition of sockeye salmon in the Speel Lake escapement by sex, age class, and escapement period, 1989.

	Brood Year and Age Class						
	1986	1985	1984		1983		
	0.2	1.2	1.3	2.2	1.4	2.3	Total
Escapement Dates:	(July 12 - 29)						
Sample Dates:	(July 16, 23)						
Male							
Sample Size	1	61	29	3		4	98
Percent	0.6	34.9	16.6	1.7		2.3	56.0
Std. Error	0.5	3.0	2.3	0.8		0.9	3.1
Number	3	199	95	10		13	320
Female							
Sample Size		14	54	1		8	77
Percent		8.0	30.9	0.6		4.6	44.0
Std. Error		1.7	2.9	0.5		1.3	3.1
Number		46	176	3		26	251
All Fish							
Sample Size	1	75	83	4		12	175
Percent	0.6	42.9	47.4	2.3		6.9	100.0
Std. Error	0.5	3.1	3.2	0.9		1.6	
Number	3	245	271	13		39	571
Escapement Dates:	(July 30 - August 5)						
Sample Dates:	(July 30)						
Male							
Sample Size		52	49	5		6	112
Percent		22.5	21.2	2.2		2.6	48.5
Std. Error		2.7	2.6	0.9		1.0	3.2
Number		1,340	1,261	129		155	2,885
Female							
Sample Size		12	91	1		15	119
Percent		5.2	39.4	0.4		6.5	51.5
Std. Error		1.4	3.2	0.4		1.6	3.2
Number		309	2,345	26		386	3,066
All Fish							
Sample Size		64	140	6		21	231
Percent		27.7	60.6	2.6		9.1	100.0
Std. Error		2.9	3.2	1.0		1.9	
Number		1,649	3,606	155		541	5,951
Escapement Dates:	(August 6 - 12)						
Sample Dates:	(August 6)						
Male							
Sample Size		62	30	6			98
Percent		30.4	14.7	2.9			48.0
Std. Error		3.1	2.4	1.1			3.3
Number		656	318	63			1,037
Female							
Sample Size		14	81	1		10	106
Percent		6.9	39.7	0.5		4.9	52.0
Std. Error		1.7	3.3	0.5		1.4	3.3
Number		148	856	11		106	1,121
All Fish							
Sample Size		76	111	7		10	204
Percent		37.3	54.4	3.4		4.9	100.0
Std. Error		3.2	3.3	1.2		1.4	
Number		804	1,174	74		106	2,158

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Appendix F.75. (page 2 of 2).

	Brood Year and Age Class						
	1986	1985	1984		1983		
	0.2	1.2	1.3	2.2	1.4	2.3	Total
Escapement Dates:	(August 13 - 19)						
Sample Dates:	(August 13)						
Male							
Sample Size		44	30	3		2	79
Percent		19.6	13.4	1.3		0.9	35.3
Std. Error		1.4	1.2	0.4		0.3	1.7
Number		61	41	4		3	109
Female							
Sample Size		13	121	1	1	9	145
Percent		5.8	54.0	0.4	0.4	4.0	64.7
Std. Error		0.8	1.7	0.2	0.2	0.7	1.7
Number		17	167	2	1	12	199
All Fish							
Sample Size		57	151	4	1	11	224
Percent		25.4	67.4	1.8	0.4	4.9	100.0
Std. Error		1.5	1.6	0.5	0.2	0.8	
Number		78	208	6	1	15	308
Escapement Dates:	(August 20 - September 2)						
Sample Dates:	(August 20, 27)						
Male							
Sample Size		35	42	6		3	86
Percent		11.9	14.3	2.0		1.0	29.3
Std. Error		1.8	1.9	0.8		0.6	2.5
Number		386	463	66		33	948
Female							
Sample Size		16	176	1		15	208
Percent		5.4	59.9	0.3		5.1	70.7
Std. Error		1.3	2.7	0.3		1.2	2.5
Number		176	1,941	11		165	2,293
All Fish							
Sample Size		51	218	7		18	294
Percent		17.3	74.1	2.4		6.1	100.0
Std. Error		2.1	2.4	0.8		1.3	
Number		562	2,404	77		198	3,241
Combined Periods (Percentages are weighted by period escapements)							
Male							
Sample Size	1	254	180	23		15	473
Percent	<0.1	21.6	17.8	2.2		1.7	43.3
Std. Error	<0.1	1.5	1.5	0.5		0.5	1.8
Number	3	2,642	2,178	272		204	5,299
Female							
Sample Size		69	523	5	1	57	655
Percent		5.7	44.8	0.4	<0.1	5.7	56.7
Std. Error		0.8	1.8	0.2	<0.1	0.9	1.8
Number		696	5,485	53	1	695	6,930
All Fish							
Sample Size	1	323	703	28	1	72	1,128
Percent	<0.1	27.3	62.7	2.7	<0.1	7.4	100.0
Std. Error	<0.1	1.6	1.8	0.6	<0.1	1.0	
Number	3	3,338	7,663	325	1	899	12,229

Appendix F.76. Test for significant changes among periods in the age composition of sockeye salmon in the Speel Lake escapement by age class, 1989.

	Brood Year and Age Class					
	1986	1985	1984		1983	
	0.2	1.2	1.3	2.2	1.4	2.3
Periods Compared						
1 , 2		S**	S**			
1 , 3						
1 , 4		S**	S**			
1 , 5		S**	S**			
2 , 3		S*				
2 , 4						
2 , 5		S**	S**			
3 , 4		S**	S**			
3 , 5		S**	S**			
4 , 5		S*				

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.77. Length composition of sockeye salmon in the Speel Lake escapement by sex, age class, and escapement period, 1989.

		Brood Year and Age Class						
		1986	1985	1984		1983		
		0.2	1.2	1.3	2.2	1.4	2.3	Total
Escapement Dates: (July 12 - 29)								
Sample Dates: (July 16, 23)								
Male	Avg. Length	482	458	578	463		556	498
	Std. Error		3.0	10.2	16.9		13.8	6.7
	Sample Size	1	61	29	3		4	98
Female	Avg. Length		489	578	527		565	560
	Std. Error		12.4	2.7			5.5	4.9
	Sample Size		14	54	1		8	77
All Fish	Avg. Length	482	464	578	479		562	525
	Std. Error		3.6	3.9	19.9		5.6	4.9
	Sample Size	1	75	83	4		12	175
Escapement Dates: (July 30 - August 5)								
Sample Dates: (July 30)								
Male	Avg. Length		464	606	449		604	533
	Std. Error		4.1	4.5	11.2		7.3	7.3
	Sample Size		52	49	5		6	112
Female	Avg. Length		487	582	444		586	572
	Std. Error		7.6	2.5			6.1	3.6
	Sample Size		12	91	1		15	119
All Fish	Avg. Length		468	590	449		591	553
	Std. Error		3.8	2.4	9.1		5.1	4.2
	Sample Size		64	140	6		21	231
Escapement Dates: (August 6 - 12)								
Sample Dates: (August 6)								
Male	Avg. Length		470	602	460			510
	Std. Error		4.1	6.6	7.8			7.1
	Sample Size		62	30	6			98
Female	Avg. Length		494	587	506		591	575
	Std. Error		7.6	2.2			7.7	3.8
	Sample Size		14	81	1		10	106
All Fish	Avg. Length		474	591	467		591	543
	Std. Error		3.8	2.5	9.3		7.7	4.5
	Sample Size		76	111	7		10	204
Escapement Dates: (August 13 - 19)								
Sample Dates: (August 13)								
Male	Avg. Length		473	611	475		586	528
	Std. Error		4.1	4.8	17.7		21.0	8.2
	Sample Size		44	30	3		2	79
Female	Avg. Length		516	584	530	640	586	578
	Std. Error		11.7	2.0			8.8	2.7
	Sample Size		13	121	1	1	9	145
All Fish	Avg. Length		482	590	489	640	586	561
	Std. Error		4.7	2.0	18.7		7.7	3.7
	Sample Size		57	151	4	1	11	224

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Appendix F.77. (page 2 of 2).

		Brood Year and Age Class						
		1986	1985	1984		1983		
		0.2	1.2	1.3	2.2	1.4	2.3	Total
Escapement Dates: (August 20 - September 2)								
Sample Dates: (August 20, 27)								
Male	Avg. Length		467	597	490		573	536
	Std. Error		4.2	3.1	13.6		13.6	7.2
	Sample Size		35	42	6		3	86
Female	Avg. Length		513	580	472		569	574
	Std. Error		8.7	1.7			5.7	2.1
	Sample Size		16	176	1		15	208
All Fish	Avg. Length		482	583	488		570	563
	Std. Error		4.9	1.5	11.8		5.1	2.8
	Sample Size		51	218	7		18	294
Combined Periods (Lengths weighted by period escapements)								
Male	Avg. Length	482	466	602	463		591	528
	Std. Error		1.8	2.6	6.1		7.5	3.3
	Sample Size	1	254	180	23		15	473
Female	Avg. Length		496	582	468	640	581	572
	Std. Error		4.5	1.0	16.6		3.2	1.4
	Sample Size		69	523	5	1	57	655
All Fish	Avg. Length	482	473	588	465	640	584	553
	Std. Error		1.9	1.0	6.0		3.0	1.8
	Sample Size	1	323	703	28	1	72	1128

Appendix F.78. Test for significant changes among periods in the length composition of sockeye in the Speel Lake escapement by age class, 1989.

	Brood Year and Age Class					
	1986	1985	1984		1983	
	0.2	1.2	1.3	2.2	1.4	2.3
Periods Compared						
1 , 2			S**			S**
1 , 3		S*	S**			S**
1 , 4		S**	S**			S**
1 , 5		S**				
2 , 3						
2 , 4		S*		S		
2 , 5		S*	S**	S**		S**
3 , 4						
3 , 5			S**			S*
4 , 5			S**			S

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.79. Daily sockeye salmon counts and associated statistics from Speel Lake weir, 1989.

Date		Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
July	12	0	0	0.0000	0.0000
July	13	0	0	0.0000	0.0000
July	14	0	0	0.0000	0.0000
July	15	0	0	0.0000	0.0000
July	16	0	0	0.0000	0.0000
July	17	0	0	0.0000	0.0000
July	18	0	0	0.0000	0.0000
July	19	1	1	0.0001	0.0001
July	20	0	1	0.0000	0.0001
July	21	0	1	0.0000	0.0001
July	22	3	4	0.0002	0.0003
July	23	0	4	0.0000	0.0003
July	24	5	9	0.0004	0.0007
July	25	14	23	0.0011	0.0019
July	26	21	44	0.0017	0.0036
July	27	2	46	0.0002	0.0038
July	28	101	147	0.0083	0.0120
July	29	424	571	0.0347	0.0467
July	30	459	1030	0.0375	0.0842
July	31	343	1373	0.0280	0.1123
Aug.	1	368	1741	0.0301	0.1424
Aug.	2	331	2072	0.0271	0.1694
Aug.	3	4253	6325	0.3478	0.5172
Aug.	4	28	6353	0.0023	0.5195
Aug.	5	169	6522	0.0138	0.5333
Aug.	6	5	6527	0.0004	0.5337
Aug.	7	199	6726	0.0163	0.5500
Aug.	8	133	6859	0.0109	0.5609
Aug.	9	222	7081	0.0182	0.5790
Aug.	10	229	7310	0.0187	0.5978
Aug.	11	182	7492	0.0149	0.6126
Aug.	12	1188	8680	0.0971	0.7098
Aug.	13	47	8727	0.0038	0.7136
Aug.	14	95	8822	0.0078	0.7214
Aug.	15	40	8862	0.0033	0.7247
Aug.	16	15	8877	0.0012	0.7259
Aug.	17	93	8970	0.0076	0.7335
Aug.	18	8	8978	0.0007	0.7342
Aug.	19	10	8988	0.0008	0.7350
Aug.	20	88	9076	0.0072	0.7422
Aug.	21	894	9970	0.0731	0.8153
Aug.	22	400	10370	0.0327	0.8480
Aug.	23	123	10493	0.0101	0.8580
Aug.	24	60	10553	0.0049	0.8629
Aug.	25	138	10691	0.0113	0.8742
Aug.	26	166	10857	0.0136	0.8878
Aug.	27	85	10942	0.0070	0.8948
Aug.	28	38	10980	0.0031	0.8979
Aug.	29	3	10983	0.0002	0.8981
Aug.	30	0	10983	0.0000	0.8981
Aug.	31	34	11017	0.0028	0.9009
Sept.	1	0	11017	0.0000	0.9009
Sept.	2	20	11037	0.0016	0.9025
Sept.	3	1114	12151	0.0911	0.9936
Sept.	4	18	12169	0.0015	0.9951
Sept.	5	60	12229	0.0049	1.0000

Mean Day of Migration = Aug. 10 Variance = 122.4 Days squared

Appendix F.80. Age composition of sockeye salmon in the Crescent Lake escapement by sex, age class, and escapement period, 1989.

	Brood Year and Age Class						
	1986	1985		1984		1983	
	0.2	0.3	1.2	1.3	2.2	2.3	Total
Escapement Dates:	(July 16 - August 5)						
Sample Dates:	(July 18 - August 5)						
Male							
Sample Size		1	31	65	10	1	108
Percent		0.3	9.4	19.6	3.0	0.3	32.6
Std. Error		0.2	0.9	1.2	0.5	0.2	1.5
Number		1	46	96	15	1	159
Female							
Sample Size		1	3	187	3	29	223
Percent		0.3	0.9	56.5	0.9	8.8	67.4
Std. Error		0.2	0.3	1.6	0.3	0.9	1.5
Number		1	4	277	4	43	329
All Fish							
Sample Size		2	34	253	13	30	332
Percent		0.6	10.2	76.2	3.9	9.0	100.0
Std. Error		0.2	0.9	1.3	0.6	0.9	
Number		2	50	375	19	44	490
Escapement Dates:	(August 6 - 19)						
Sample Dates:	(August 6 - 19)						
Male							
Sample Size	2		10	70	6	3	91
Percent	0.5		2.5	17.4	1.5	0.7	22.6
Std. Error	0.2		0.4	1.0	0.3	0.2	1.1
Number	3		14	97	8	4	126
Female							
Sample Size		2	2	271	9	27	311
Percent		0.5	0.5	67.4	2.2	6.7	77.4
Std. Error		0.2	0.2	1.2	0.4	0.7	1.1
Number		3	3	374	12	37	429
All Fish							
Sample Size	2	2	12	341	15	30	402
Percent	0.5	0.5	3.0	84.8	3.7	7.5	100.0
Std. Error	0.2	0.2	0.4	0.9	0.5	0.7	
Number	3	3	17	471	20	41	555

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Appendix F.80. (page 2 of 2).

	Brood Year and Age Class						
	1986	1985		1984		1983	
	0.2	0.3	1.2	1.3	2.2	2.3	Total
Escapement Dates:	(August 20 - 27)						
Sample Dates:	(August 20 - 27)						
Male							
Sample Size			1	13	1	4	19
Percent			2.2	28.9	2.2	8.9	42.2
Std. Error			0.9	2.8	0.9	1.8	3.0
Number			1	16	1	5	23
Female							
Sample Size		1		17	1	7	26
Percent		2.2		37.8	2.2	15.6	57.8
Std. Error		0.9		3.0	0.9	2.2	3.0
Number		1		21	1	8	31
All Fish							
Sample Size		1	1	30	2	11	45
Percent		2.2	2.2	66.7	4.4	24.4	100.0
Std. Error		0.9	0.9	2.9	1.3	2.6	
Number		1	1	37	2	13	54
Combined Periods (Percentages are weighted by period escapements)							
Male							
Sample Size	2	1	42	148	17	8	218
Percent	0.3	0.1	5.5	19.0	2.2	0.9	28.0
Std. Error	0.1	0.1	0.5	0.8	0.3	0.2	0.9
Number	3	1	61	209	24	10	308
Female							
Sample Size		4	5	475	13	63	560
Percent		0.5	0.7	61.1	1.6	8.1	72.0
Std. Error		0.1	0.2	0.9	0.2	0.5	0.9
Number		5	7	672	17	88	790
All Fish							
Sample Size	2	5	47	624	30	71	779
Percent	0.3	0.6	6.2	80.1	3.8	9.0	100.0
Std. Error	0.1	0.1	0.5	0.8	0.4	0.5	
Number	3	6	68	883	41	98	1,099

Appendix F.81. Test for significant changes among periods in the age composition of sockeye salmon in the Crescent Lake escapement by age class, 1989.

	Brood Year and Age Class					
	1986	1985		1984		1983
	0.2	0.3	1.2	1.3	2.2	2.3
Periods Compared						
1 , 2			S**	S**		
1 , 3						S**
2 , 3				S**		S**

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.82. Length composition of sockeye salmon in the Crescent Lake escapement by sex, age class, and escapement period, 1989.

		Brood Year and Age Class						
		1986	1985		1984		1983	
		0.2	0.3	1.2	1.3	2.2	2.3	Total
Escapement Dates: (July 16 - August 5)								
Sample Dates: (July 18 - August 5)								
Male	Avg. Length		595	439	604	447	570	542
	Std. Error			5.3	2.9	8.9		8.0
	Sample Size		1	31	65	10	1	108
Female	Avg. Length		570	492	560	483	570	560
	Std. Error			21.7	1.7	6.0	3.3	1.8
	Sample Size		1	3	187	3	29	223
All Fish	Avg. Length		583	444	572	455	570	554
	Std. Error		12.5	5.7	1.9	8.1	3.2	2.9
	Sample Size		2	34	253	13	30	332
Escapement Dates: (August 6 - 19)								
Sample Dates: (August 6 - 19)								
Male	Avg. Length	480		479	603	488	612	579
	Std. Error	40.0		11.9	3.7	19.1	6.7	6.1
	Sample Size	2		10	70	6	3	91
Female	Avg. Length		565	525	564	494	564	562
	Std. Error		20.0	10.0	1.3	8.9	4.4	1.4
	Sample Size		2	2	271	9	27	311
All Fish	Avg. Length	480	565	486	572	492	568	566
	Std. Error	40.0	20.0	11.2	1.5	8.9	4.8	1.8
	Sample Size	2	2	12	341	15	30	402
Escapement Dates: (August 20 - 27)								
Sample Dates: (August 20 - 27)								
Male	Avg. Length			530	587	490	579	577
	Std. Error				8.7		12.5	8.5
	Sample Size			1	13	1	4	19
Female	Avg. Length		565		565	520	563	563
	Std. Error				6.6		7.1	5.0
	Sample Size		1		17	1	7	26
All Fish	Avg. Length		565	530	575	505	569	569
	Std. Error				5.6	15.0	6.5	4.7
	Sample Size		1	1	30	2	11	45
Combined Periods (Lengths weighted by period escapements)								
Male	Avg. Length	480	595	464	603	470	591	562
	Std. Error	40.0		5.7	2.3	9.6	8.9	4.9
	Sample Size	2	1	42	148	17	8	218
Female	Avg. Length		567	509	563	490	566	561
	Std. Error		8.3	14.7	1.0	6.7	2.5	1.1
	Sample Size		4	5	475	13	63	560
All Fish	Avg. Length	480	573	470	572	476	569	561
	Std. Error	40.0	8.6	5.9	1.2	6.6	2.6	1.6
	Sample Size	2	5	47	624	30	71	779

Appendix F.83. Test for significant changes among periods in the length composition of sockeye salmon in the Crescent Lake escapement by age class, 1989.

	Brood Year and Age Class					
	1986	1985		1984		1983
	0.2	0.3	1.2	1.3	2.2	2.3
Periods Compared						
1 , 2			S**		S**	
1 , 3					S**	
2 , 3						

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.84. Daily sockeye salmon counts and associated statistics from Crescent Lake weir, 1989.

Date		Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
July	16	0	0	0.0000	0.0000
July	17	0	0	0.0000	0.0000
July	18	4	4	0.0036	0.0036
July	19	3	7	0.0027	0.0064
July	20	0	7	0.0000	0.0064
July	21	3	10	0.0027	0.0091
July	22	9	19	0.0082	0.0173
July	23	25	44	0.0227	0.0400
July	24	2	46	0.0018	0.0419
July	25	7	53	0.0064	0.0482
July	26	10	63	0.0091	0.0573
July	27	14	77	0.0127	0.0701
July	28	26	103	0.0237	0.0937
July	29	51	154	0.0464	0.1401
July	30	10	164	0.0091	0.1492
July	31	50	214	0.0455	0.1947
Aug.	1	40	254	0.0364	0.2311
Aug.	2	2	256	0.0018	0.2329
Aug.	3	48	304	0.0437	0.2766
Aug.	4	128	432	0.1165	0.3931
Aug.	5	58	490	0.0528	0.4459
Aug.	6	29	519	0.0264	0.4722
Aug.	7	32	551	0.0291	0.5014
Aug.	8	70	621	0.0637	0.5651
Aug.	9	17	638	0.0155	0.5805
Aug.	10	36	674	0.0328	0.6133
Aug.	11	61	735	0.0555	0.6688
Aug.	12	91	826	0.0828	0.7516
Aug.	13	59	885	0.0537	0.8053
Aug.	14	37	922	0.0337	0.8389
Aug.	15	17	939	0.0155	0.8544
Aug.	16	19	958	0.0173	0.8717
Aug.	17	47	1005	0.0428	0.9145
Aug.	18	8	1013	0.0073	0.9217
Aug.	19	32	1045	0.0291	0.9509
Aug.	20	8	1053	0.0073	0.9581
Aug.	21	6	1059	0.0055	0.9636
Aug.	22	12	1071	0.0109	0.9745
Aug.	23	8	1079	0.0073	0.9818
Aug.	24	6	1085	0.0055	0.9873
Aug.	25	6	1091	0.0055	0.9927
Aug.	26	4	1095	0.0036	0.9964
Aug.	27	4	1099	0.0036	1.0000

Mean Day of Migration = Aug. 7 Variance = 58.3 Days squared

Appendix F.85. Age composition of sockeye salmon in the Windfall Lake escapement by sex and age class, 1989.

	Brood Year and Age Class					
	1985	1984		1983		
	1.2	1.3	2.2	1.4	2.3	Total
Escapement Dates:	(June 12 - Aug. 22)					
Male						
Sample Size	40	398		2	6	446
Percent	4.7	46.8		0.2	0.7	52.4
Std. Error	0.6	1.5		0.1	0.3	1.5
Number	182	1807		9	27	2025
Female						
Sample Size	6	388	1	4	5	404
Percent	0.7	45.6	0.1	0.5	0.6	47.5
Std. Error	0.3	1.5	0.1	0.2	0.2	1.5
Number	27	1762	5	18	23	1834
All Fish						
Sample Size	46	787	1	6	11	851
Percent	5.4	92.5	0.1	0.7	1.3	100.0
Std. Error	0.7	0.8	0.1	0.3	0.3	
Number	209	3573	5	27	50	3864

Appendix F.86. Length composition of sockeye salmon in the Windfall Lake escapement by sex and age class, 1989.

	Brood Year and Age Class					
	1985	1984		1983		
	1.2	1.3	2.2	1.4	2.3	Total
Escapement Dates:	(June 12 - Aug. 22)					
Male						
Avg. Length	481	608		637	608	597
Std. Error	0.7	0.2		0.2	0.8	52.4
Sample Size	40	398		2	6	446
Female						
Avg. Length	495	575	491	590	577	574
Std. Error	2.4	0.1		1.2	0.6	47.5
Sample Size	6	388	1	4	5	404
All Fish						
Avg. Length	483	592	491	606	594	586
Std. Error	0.7	0.1		1.3	0.7	
Sample Size	46	787	1	6	11	851

Appendix F.87. Daily sockeye salmon counts and associated statistics from Windfall Lake weir, 1989.

Date		Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
June	12	0	0	0.0000	0.0000
June	13	0	0	0.0000	0.0000
June	14	0	0	0.0000	0.0000
June	15	0	0	0.0000	0.0000
June	16	0	0	0.0000	0.0000
June	17	35	35	0.0091	0.0091
June	18	25	60	0.0065	0.0155
June	19	31	91	0.0080	0.0236
June	20	109	200	0.0282	0.0518
June	21	127	327	0.0329	0.0846
June	22	0	327	0.0000	0.0846
June	23	254	581	0.0657	0.1504
June	24	68	649	0.0176	0.1680
June	25	0	649	0.0000	0.1680
June	26	78	727	0.0202	0.1881
June	27	101	828	0.0261	0.2143
June	28	0	828	0.0000	0.2143
June	29	0	828	0.0000	0.2143
June	30	152	980	0.0393	0.2536
July	1	465	1445	0.1203	0.3740
July	2	864	2309	0.2236	0.5976
July	3	91	2400	0.0236	0.6211
July	4	86	2486	0.0223	0.6434
July	5	0	2486	0.0000	0.6434
July	6	15	2501	0.0039	0.6473
July	7	0	2501	0.0000	0.6473
July	8	77	2578	0.0199	0.6672
July	9	142	2720	0.0367	0.7039
July	10	0	2720	0.0000	0.7039
July	11	7	2727	0.0018	0.7057
July	12	0	2727	0.0000	0.7057
July	13	8	2735	0.0021	0.7078
July	14	0	2735	0.0000	0.7078
July	15	0	2735	0.0000	0.7078
July	16	0	2735	0.0000	0.7078
July	17	0	2735	0.0000	0.7078
July	18	0	2735	0.0000	0.7078
July	19	0	2735	0.0000	0.7078
July	20	0	2735	0.0000	0.7078
July	21	0	2735	0.0000	0.7078
July	22	65	2800	0.0168	0.7246
July	23	0	2800	0.0000	0.7246
July	24	0	2800	0.0000	0.7246
July	25	0	2800	0.0000	0.7246
July	26	543	3343	0.1405	0.8652
July	27	285	3628	0.0738	0.9389
July	28	7	3635	0.0018	0.9407
July	29	30	3665	0.0078	0.9485
July	30	6	3671	0.0016	0.9501
July	31	1	3672	0.0003	0.9503
Aug.	1	0	3672	0.0000	0.9503
Aug.	2	0	3672	0.0000	0.9503
Aug.	3	0	3672	0.0000	0.9503
Aug.	4	0	3672	0.0000	0.9503
Aug.	5	0	3672	0.0000	0.9503
Aug.	6	0	3672	0.0000	0.9503
Aug.	7	2	3674	0.0005	0.9508
Aug.	8	0	3674	0.0000	0.9508
Aug.	9	0	3674	0.0000	0.9508
Aug.	10	180	3854	0.0466	0.9974
Aug.	11	8	3862	0.0021	0.9995
Aug.	12	0	3862	0.0000	0.9995
Aug.	13	0	3862	0.0000	0.9995
Aug.	14	0	3862	0.0000	0.9995
Aug.	15	0	3862	0.0000	0.9995
Aug.	16	0	3862	0.0000	0.9995
Aug.	17	0	3862	0.0000	0.9995
Aug.	18	0	3862	0.0000	0.9995
Aug.	19	0	3862	0.0000	0.9995
Aug.	20	0	3862	0.0000	0.9995
Aug.	21	0	3862	0.0000	0.9995
Aug.	22	2	3864	0.0005	1.0000

Mean Day of Migration = July 8 Variance = 205.1 Days squared

Appendix F.88. Age composition of sockeye salmon in the Auke Lake escapement by sex and age class, 1989.

	Brood Year and Age Class								
	1986	1985		1984		1983	1982		
	1.1	1.2	2.1	1.3	2.2	2.3	2.4	3.3	Total
Escapement Dates:	(July 10 - Sept. 25)								
Sample Dates:	(July 10 - Aug. 4)								
Male									
Sample Size	10	5	4	39	31	54	1	1	145
Percent	4.1	2.1	1.6	16.0	12.8	22.2	0.4	0.4	59.7
Std. Error	1.2	0.9	0.8	2.3	2.0	2.6	0.4	0.4	3.0
Number	114	57	46	444	353	614	11	11	1,650
Female									
Sample Size		1		29	6	60		2	98
Percent		0.4		11.9	2.5	24.7		0.8	40.3
Std. Error		0.4		2.0	1.0	2.6		0.6	3.0
Number		11		330	68	683		23	1,115
All Fish									
Sample Size	11	6	4	68	37	114	1	3	244
Percent	4.5	2.5	1.6	27.9	15.2	46.7	0.4	1.2	100.0
Std. Error	1.3	0.9	0.8	2.7	2.2	3.1	0.4	0.7	
Number	125	68	46	774	421	1,297	11	34	2,776

Appendix F.89. Length composition of sockeye salmon in the Auke Lake escapement by sex and age class, 1989.

		Brood Year and Age Class								
		1986	1985		1984		1983	1982		
		1.1	1.2	2.1	1.3	2.2	2.3	2.4	3.3	Total
Escapement Dates:		(July 10 - Sept. 25)								
Sample Dates:		(July 10 - Aug. 4)								
Male	Avg. Length	313	488	343	558	488	557	550	555	517
	Std. Error	3.3	23.5	6.3	4.3	5.5	3.6			6.3
	Sample Size	10	5	4	39	31	54	1	1	145
Female	Avg. Length		540		546	493	548		520	543
	Std. Error				3.0	4.9	2.2		30.0	2.2
	Sample Size		1		29	6	60		2	98
All Fish	Avg. Length	313	497	343	553	489	552	550	532	527
	Std. Error	3.0	21.0	6.3	2.8	4.7	2.1		20.9	4.0
	Sample Size	11	6	4	68	37	114	1	3	244

Appendix F.90. Daily sockeye salmon counts and associated statistics from Auke Lake weir, 1989.

Date		Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
July	10	242	242	0.0872	0.0872
July	11	160	402	0.0576	0.1448
July	12	55	457	0.0198	0.1646
July	13	0	457	0.0000	0.1646
July	14	2	459	0.0007	0.1653
July	15	333	792	0.1200	0.2853
July	16	21	813	0.0076	0.2929
July	17	22	835	0.0079	0.3008
July	18	10	845	0.0036	0.3044
July	19	0	845	0.0000	0.3044
July	20	0	845	0.0000	0.3044
July	21	1103	1948	0.3973	0.7017
July	22	159	2107	0.0573	0.7590
July	23	114	2221	0.0411	0.8001
July	24	73	2294	0.0263	0.8264
July	25	12	2306	0.0043	0.8307
July	26	5	2311	0.0018	0.8325
July	27	0	2311	0.0000	0.8325
July	28	0	2311	0.0000	0.8325
July	29	0	2311	0.0000	0.8325
July	30	0	2311	0.0000	0.8325
July	31	5	2316	0.0018	0.8343
Aug.	1	9	2325	0.0032	0.8375
Aug.	2	10	2335	0.0036	0.8411
Aug.	3	22	2357	0.0079	0.8491
Aug.	4	224	2581	0.0807	0.9298
Aug.	5	42	2623	0.0151	0.9449
Aug.	6	16	2639	0.0058	0.9506
Aug.	7	11	2650	0.0040	0.9546
Aug.	8	6	2656	0.0022	0.9568
Aug.	9	4	2660	0.0014	0.9582
Aug.	10	0	2660	0.0000	0.9582
Aug.	11	0	2660	0.0000	0.9582
Aug.	12	0	2660	0.0000	0.9582
Aug.	13	0	2660	0.0000	0.9582
Aug.	14	2	2662	0.0007	0.9589
Aug.	15	0	2662	0.0000	0.9589
Aug.	16	0	2662	0.0000	0.9589
Aug.	17	1	2663	0.0004	0.9593
Aug.	18	0	2663	0.0000	0.9593
Aug.	19	0	2663	0.0000	0.9593
Aug.	20	2	2665	0.0007	0.9600
Aug.	21	4	2669	0.0014	0.9615
Aug.	22	3	2672	0.0011	0.9625
Aug.	23	12	2684	0.0043	0.9669
Aug.	24	2	2686	0.0007	0.9676
Aug.	25	0	2686	0.0000	0.9676
Aug.	26	2	2688	0.0007	0.9683
Aug.	27	1	2689	0.0004	0.9687
Aug.	28	0	2689	0.0000	0.9687
Aug.	29	0	2689	0.0000	0.9687
Aug.	30	0	2689	0.0000	0.9687
Aug.	31	0	2689	0.0000	0.9687

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Appendix F.90. (page 2 of 2).

Date	Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
Sept. 1	3	2692	0.0011	0.9697
Sept. 2	0	2692	0.0000	0.9697
Sept. 3	1	2693	0.0004	0.9701
Sept. 4	38	2731	0.0137	0.9838
Sept. 5	8	2739	0.0029	0.9867
Sept. 6	4	2743	0.0014	0.9881
Sept. 7	2	2745	0.0007	0.9888
Sept. 8	2	2747	0.0007	0.9896
Sept. 9	1	2748	0.0004	0.9899
Sept. 10	0	2748	0.0000	0.9899
Sept. 11	0	2748	0.0000	0.9899
Sept. 12	0	2748	0.0000	0.9899
Sept. 13	0	2748	0.0000	0.9899
Sept. 14	3	2751	0.0011	0.9910
Sept. 15	11	2762	0.0040	0.9950
Sept. 16	5	2767	0.0018	0.9968
Sept. 17	1	2768	0.0004	0.9971
Sept. 18	2	2770	0.0007	0.9978
Sept. 19	0	2770	0.0000	0.9978
Sept. 20	2	2772	0.0007	0.9986
Sept. 21	1	2773	0.0004	0.9989
Sept. 22	1	2774	0.0004	0.9993
Sept. 23	0	2774	0.0000	0.9993
Sept. 24	1	2775	0.0004	0.9996
Sept. 25	1	2776	0.0004	1.0000

Mean Day of Migration = July 22 Variance = 135.3 Days squared

Appendix F.91. Age composition of sockeye salmon in the Steep Creek escapement by sex and age class, 1989.

	Brood Year and Age Class							
	1986	1985		1984	1983		1982	
	1.1	1.2	2.1	1.3	1.4	2.3	3.3	Total
Escapement Dates: (August 8, 17)								
Male								
Sample Size	2	11	1	78		4		96
Percent	0.8	4.2	0.4	29.7		1.5		36.5
Std. Error	0.5	1.2	0.4	2.8		0.7		2.9
Female								
Sample Size		7		146	1	12	1	167
Percent		2.7		55.5	0.4	4.6	0.4	63.5
Std. Error		1.0		3.0	0.4	1.3	0.4	2.9
All Fish								
Sample Size	2	18	1	224	1	16	1	263
Percent	0.8	6.8	0.4	85.2	0.4	6.1	0.4	100.0
Std. Error	0.5	1.5	0.4	2.2	0.4	1.5	0.4	

Appendix F.92. Length composition of sockeye salmon in the Steep Creek escapement by sex and age class, 1989.

		Brood Year and Age Class							
		1986	1985		1984	1983		1982	
		1.1	1.2	2.1	1.3	1.4	2.3	3.3	Total
Escapement Dates: (August 8, 17)									
Male	Avg. Length	363	445	320	597		613		573
	Std. Error	32.5	7.9		3.3		9.7		7.1
	Sample Size	2	11	1	78		4		96
Female	Avg. Length		519		566	620	563	610	565
	Std. Error		10.6		2.1		6.8		2.1
	Sample Size		7		146	1	12	1	167
All Fish	Avg. Length	363	474	320	577	620	576	610	567
	Std. Error	32.5	10.7		2.0		7.7		2.9
	Sample Size	2	18	1	224	1	16	1	263

Appendix F.93. Age composition of sockeye salmon in the Hasselborg River escapement by sex and age class, 1989.

	Brood Year and Age Class				
	1986	1985		1984	
	0.2	0.3	1.2	1.3	Total
Sampling Dates:	(September 8, 15)				
Male					
Sample Size	1	80	2	16	99
Percent	0.7	59.3	1.5	11.9	73.3
Std. Error	0.7	4.2	1.0	2.8	3.8
Female					
Sample Size		32	2	2	36
Percent		23.7	1.5	1.5	26.7
Std. Error		3.6	1.0	1.0	3.8
All Fish					
Sample Size	1	112	4	18	135
Percent	0.7	83.0	3.0	13.3	100.0
Std. Error	0.7	3.2	1.5	2.9	

Appendix F.94. Length composition of sockeye salmon in the Hasselborg River escapement by sex and age class, 1989.

		Brood Year and Age Class			
		1985	1985	1984	
		0.3	1.2	1.3	Total
Sampling Dates:	(September 8, 15)				
Male	Avg. Length	557	520	550	555
	Std. Error	2.6	25.0	7.2	2.5
	Sample Size	80	2	16	98
Female	Avg. Length	513	503	520	512
	Std. Error	3.6	12.5	10.0	3.3
	Sample Size	32	2	2	36
All Fish	Avg. Length	544	511	547	543
	Std. Error	2.9	12.5	6.8	2.6
	Sample Size	112	4	18	134

Appendix F.95. Age composition of sockeye salmon in the Redoubt Lake escapement by sex, age class, and escapement period, 1989.

	Brood Year and Age Class									
	1986	1985		1984			1983		1982	
	1.1	1.2	2.1	1.3	2.2	3.1	2.3	3.2	3.3	Total
Escapement Dates:	(June 16 - July 8)									
Sample Dates:	(June 17 - July 8)									
Male										
Sample Size		22	2	101	76		13	1		215
Percent		5.7	0.5	26.4	19.8		3.4	0.3		56.1
Std. Error		1.1	0.3	2.1	1.9		0.9	0.2		2.4
Number		165	15	756	570		97	7		1,610
Female										
Sample Size		17	4	65	62		19	1		168
Percent		4.4	1.0	17.0	16.2		5.0	0.3		43.9
Std. Error		1.0	0.5	1.8	1.8		1.0	0.2		2.4
Number		127	30	487	464		143	7		1,258
All Fish										
Sample Size		39	6	166	139		32	2		384
Percent		10.2	1.6	43.2	36.2		8.3	0.5		100.0
Std. Error		1.4	0.6	2.4	2.3		1.3	0.3		
Number		292	45	1,243	1,041		240	14		2,875
Escapement Dates:	(July 9 - 15)									
Sample Dates:	(July 9 - 15)									
Male										
Sample Size		8	1	37	88	1	1		1	137
Percent		3.4	0.4	15.8	37.6	0.4	0.4		0.4	58.5
Std. Error		1.2	0.4	2.3	3.1	0.4	0.4		0.4	3.2
Number		199	25	920	2,189	25	25		25	3,408
Female										
Sample Size		8	2	16	62		7	2		97
Percent		3.4	0.9	6.8	26.5		3.0	0.9		41.5
Std. Error		1.2	0.6	1.6	2.8		1.1	0.6		3.2
Number		199	50	398	1,542		174	50		2,413
All Fish										
Sample Size		16	3	53	150	1	8	2	1	234
Percent		6.8	1.3	22.6	64.1	0.4	3.4	0.9	0.4	100.0
Std. Error		1.6	0.7	2.7	3.1	0.4	1.2	0.6	0.4	
Number		398	75	1,318	3,731	25	199	50	25	5,821
Escapement Dates:	(July 16 - 22)									
Sample Dates:	(July 16 - 22)									
Male										
Sample Size	1	9	2	34	79		6	2		133
Percent	0.4	3.9	0.9	14.7	34.2		2.6	0.9		57.6
Std. Error	0.4	1.2	0.6	2.3	3.0		1.0	0.6		3.2
Number	18	161	36	608	1,411		107	36		2,377
Female										
Sample Size	1	2	11	25	49		10			98
Percent	0.4	0.9	4.8	10.8	21.2		4.3			42.4
Std. Error	0.4	0.6	1.4	2.0	2.6		1.3			3.2
Number	18	36	196	447	876		179			1,752
All Fish										
Sample Size	2	11	13	59	128		16	2		231
Percent	0.9	4.8	5.6	25.5	55.4		6.9	0.9		100.0
Std. Error	0.6	1.4	1.5	2.8	3.2		1.6	0.6		
Number	36	197	232	1,055	2,287		286	36		4,129
Escapement Dates:	(July 23 - 29)									
Sample Dates:	(July 23 - 29)									
Male										
Sample Size	2	7	3	18	100		8	1		139
Percent	0.9	3.0	1.3	7.8	43.1		3.4	0.4		59.9
Std. Error	0.6	1.1	0.7	1.7	3.2		1.2	0.4		3.2
Number	53	187	80	481	2,675		214	27		3,717
Female										
Sample Size	1	3	4	13	59		13			93
Percent	0.4	1.3	1.7	5.6	25.4		5.6			40.1
Std. Error	0.4	0.7	0.8	1.5	2.8		1.5			3.2
Number	27	80	107	348	1,577		348			2,487
All Fish										
Sample Size	3	10	7	31	159		21	1		232
Percent	1.3	4.3	3.0	13.4	68.5		9.1	0.4		100.0
Std. Error	0.7	1.3	1.1	2.2	3.0		1.9	0.4		
Number	80	267	187	829	4,252		562	27		6,204

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Appendix F.95. (page 2 of 2).

	Brood Year and Age Class									
	1986	1985		1984			1983		1982	
	1.1	1.2	2.1	1.3	2.2	3.1	2.3	3.2	3.3	Total
Escapement Dates:	(July 30 - August 5)									
Sample Dates:	(July 30 - August 5)									
Male										
Sample Size	1	1	1	18	85		12	1		119
Percent	0.4	0.4	0.4	7.6	35.9		5.1	0.4		50.2
Std. Error	0.4	0.4	0.4	1.7	3.0		1.4	0.4		3.2
Number	21	21	21	369	1,744		246	21		2,443
Female										
Sample Size	1	4	3	17	70		23			118
Percent	0.4	1.7	1.3	7.2	29.5		9.7			49.8
Std. Error	0.4	0.8	0.7	1.6	2.9		1.9			3.2
Number	20	82	62	349	1,437		472			2,422
All Fish										
Sample Size	2	5	5	35	158		35	1		241
Percent	0.8	2.1	2.1	14.5	65.6		14.5	0.4		100.0
Std. Error	0.6	0.9	0.9	2.2	3.0		2.2	0.4		
Number	41	103	103	718	3,243		718	21		4,947
Escapement Dates:	(August 6 - 12)									
Sample Dates:	(August 6 - 12)									
Male										
Sample Size	1	2		10	48		13			74
Percent	0.5	1.0		4.8	23.0		6.2			35.4
Std. Error	0.5	0.7		1.4	2.8		1.6			3.2
Number	18	36		180	863		234			1,331
Female										
Sample Size		2	5	16	80		32			135
Percent		1.0	2.4	7.7	38.3		15.3			64.6
Std. Error		0.7	1.0	1.8	3.3		2.4			3.2
Number		36	90	288	1,439		575			2,428
All Fish										
Sample Size	1	4	5	26	128		45			209
Percent	0.5	1.9	2.4	12.4	61.2		21.5			100.0
Std. Error	0.5	0.9	1.0	2.2	3.3		2.8			
Number	18	72	90	468	2,302		809			3,759
Escapement Dates:	(August 13 - 19)									
Sample Dates:	(August 13 - 19)									
Male										
Sample Size		3	2	11	26		8			50
Percent		2.1	1.4	7.9	18.6		5.7			35.7
Std. Error		1.2	0.9	2.1	3.1		1.8			3.8
Number		26	17	93	221		68			425
Female										
Sample Size		5	7	5	50		22	1		90
Percent		3.6	5.0	3.6	35.7		15.7	0.7		64.3
Std. Error		1.5	1.7	1.5	3.8		2.9	0.7		3.8
Number		42	59	43	425		187	8		764
All Fish										
Sample Size		8	9	16	76		30	1		140
Percent		5.7	6.4	11.4	54.3		21.4	0.7		100.0
Std. Error		1.8	2.0	2.5	4.0		3.3	0.7		
Number		68	76	136	646		255	8		1,189
Combined Periods (Percentages are weighted by period escapements)										
Male										
Sample Size	5	52	11	229	502	1	61	5	1	867
Percent	0.4	2.8	0.7	11.8	33.5	0.1	3.4	0.3	0.1	53.1
Std. Error	0.2	0.4	0.2	0.8	1.2	0.1	0.5	0.1	0.1	1.3
Number	110	795	194	3,407	9,673	25	991	91	25	15,311
Female										
Sample Size	3	41	36	157	432		126	4		799
Percent	0.2	2.1	2.1	8.2	26.9		7.2	0.2		46.9
Std. Error	0.1	0.4	0.4	0.7	1.1		0.6	0.1		1.3
Number	65	602	594	2,360	7,760		2,078	65		13,524
All Fish										
Sample Size	8	93	48	386	938	1	187	9	1	1,671
Percent	0.6	4.8	2.8	19.9	60.5	0.1	10.6	0.5	0.1	100.0
Std. Error	0.2	0.5	0.4	1.0	1.2	0.1	0.8	0.2	0.1	
Number	175	1,397	808	5,767	17,502	25	3,069	156	25	28,924 [a]

[a] Total escapement expanded at end of season to account for missed fish. Expansion was based on the percent of average weir counts from 1953, 1983, and 1984 after the wier was dismantled.

Appendix F.96. Test for significant changes among periods in the age composition of sockeye salmon in the Redoubt Lake escapement by age class, 1989.

	Brood Year and Age Class								
	1986	1985		1984			1983		1982
	1.1	1.2	2.1	1.3	2.2	3.1	2.3	3.2	3.3
Periods Compared									
1 , 2				S**	S**		S*		
1 , 3		S*	S**	S**	S**				
1 , 4		S**		S**	S**				
1 , 5		S**		S**	S**		S*		
1 , 6		S**		S**	S**		S**		
1 , 7			S**	S**	S**		S**		
2 , 3			S*		S				
2 , 4				S**			S*		
2 , 5		S*		S*			S**		
2 , 6		S*		S**			S**		
2 , 7			S**	S**	S		S**		
3 , 4				S**	S**				
3 , 5			S	S**	S*		S**		
3 , 6				S**			S**		
3 , 7				S**			S**		
4 , 5							S		
4 , 6							S**		
4 , 7					S**		S**		
5 , 6							S		
5 , 7			S		S*				
6 , 7									

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.97. Length composition of sockeye salmon in the Redoubt Lake escapement by sex, age class, and escapement period, 1989.

		Brood Year and Age Class									
		1986	1985		1984			1983		1982	
		1.1	1.2	2.1	1.3	2.2	3.1	2.3	3.2	3.3	Total
Escapement Dates: (June 16 - July 8)											
Sample Dates: (June 17 - July 8)											
Male	Avg. Length		527	405	590	517		585	520		555
	Std. Error		11.1	45.0	2.6	2.9		7.6			3.3
	Sample Size		22	2	101	76		13	1		215
Female	Avg. Length		490	374	558	500		537	472		522
	Std. Error		10.9	3.0	3.3	2.8		6.8			3.5
	Sample Size		17	4	65	62		19	1		168
All Fish	Avg. Length		511	384	578	509		557	496		541
	Std. Error		8.3	13.5	2.4	2.1		6.6	24.0		2.6
	Sample Size		39	6	166	138		32	2		383
Escapement Dates: (July 9 - 15)											
Sample Dates: (June 9 - 15)											
Male	Avg. Length		505	595	579	522	358	541		611	536
	Std. Error		10.1		7.7	2.8					3.9
	Sample Size		8	1	37	88	1	1		1	137
Female	Avg. Length		497	369	536	495		516	495		501
	Std. Error		9.4	12.5	13.5	2.9		10.9	5.5		3.9
	Sample Size		8	2	16	62		7	2		97
All Fish	Avg. Length		501	444	566	511	358	519	495	611	522
	Std. Error		6.8	75.8	7.2	2.3		10.0	5.5		3.0
	Sample Size		16	3	53	150	1	8	2	1	234
Escapement Dates: (July 16 - 22)											
Sample Dates: (July 16 - 22)											
Male	Avg. Length	388	532	385	587	531		577	518		544
	Std. Error		4.7	35.5	4.4	2.9		13.3	32.5		3.7
	Sample Size	1	9	2	34	79		6	2		133
Female	Avg. Length	385	489	374	559	500		560			506
	Std. Error		10.5	6.3	4.6	3.0		8.0			6.1
	Sample Size	1	2	11	25	49		10			98
All Fish	Avg. Length	387	524	375	575	519		566	518		528
	Std. Error	1.5	6.7	6.8	3.7	2.5		7.1	32.5		3.6
	Sample Size	2	11	13	59	128		16	2		231
Escapement Dates: (July 23 - 29)											
Sample Dates: (July 23 - 29)											
Male	Avg. Length	387	493	386	584	522		556	504		525
	Std. Error	13.5	13.9	10.8	5.0	2.5		6.1			3.7
	Sample Size	2	7	3	18	100		8	1		139
Female	Avg. Length	350	514	388	538	501		539			506
	Std. Error		13.7	3.0	5.8	3.6		6.2			4.4
	Sample Size	1	3	4	13	59		13			93
All Fish	Avg. Length	374	499	387	564	514		545	504		517
	Std. Error	14.4	10.6	4.4	5.6	2.2		4.8			2.9
	Sample Size	3	10	7	31	159		21	1		232
Escapement Dates: (July 30 - August 5)											
Sample Dates: (July 30 - August 5)											
Male	Avg. Length	520	546	398	571	519		569	520		531
	Std. Error				5.4	2.7		7.4			3.2
	Sample Size	1	1	1	18	85		12	1		119
Female	Avg. Length	391	489	381	535	488		532			500
	Std. Error		5.4	12.9	8.1	2.8		9.0			3.9
	Sample Size	1	4	3	17	70		23			118
All Fish	Avg. Length	456	500	412	554	505		545	520		516
	Std. Error	64.5	12.2	28.0	5.7	2.3		7.1			2.7
	Sample Size	2	5	5	35	158		35	1		241

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Appendix F.97. (page 2 of 2).

		Brood Year and Age Class									
		1986	1985		1984			1983		1982	
		1.1	1.2	2.1	1.3	2.2	3.1	2.3	3.2	3.3	Total
Escapement Dates: (August 6 - 12)											
Sample Dates: (August 6 - 12)											
Male	Avg. Length	421	505		563	512		551			525
	Std. Error		30.0		11.5	3.8		10.7			4.4
	Sample Size	1	2		10	48		13			74
Female	Avg. Length		489	391	534	498		535			507
	Std. Error		3.5	18.3	9.1	3.0		5.0			3.5
	Sample Size		2	5	16	80		32			135
All Fish	Avg. Length	421	497	391	545	503		540			513
	Std. Error		13.2	18.3	7.5	2.4		4.7			2.8
	Sample Size	1	4	5	26	128		45			209
Escapement Dates: (August 13 - 19)											
Sample Dates: (August 13 - 19)											
Male	Avg. Length		496	391	571	512		543			524
	Std. Error		10.7	11.0	7.6	5.5		13.6			6.6
	Sample Size		3	2	11	26		8			50
Female	Avg. Length		477	383	524	488		537	470		493
	Std. Error		3.9	19.2	21.1	2.8		5.6			4.9
	Sample Size		5	7	5	50		22	1		90
All Fish	Avg. Length		484	385	557	496		538	470		504
	Std. Error		5.5	14.8	9.7	2.9		5.4			4.1
	Sample Size		8	9	16	76		30	1		140
Combined Periods (Lengths weighted by period escapements)											
Male	Avg. Length	428	515	439	578	521	358	560	514	611	534
	Std. Error	26.1	5.7	20.4	2.1	1.2		4.2	10.7		1.5
	Sample Size	5	52	11	229	502	1	61	5	1	867
Female	Avg. Length	373	495	380	541	497		535	485		505
	Std. Error	12.8	5.1	4.9	2.7	1.2		2.8	7.2		1.6
	Sample Size	3	41	36	157	432		126	4		799
All Fish	Avg. Length	407	503	401	563	510	358	543	505	611	521
	Std. Error	18.1	4.1	6.7	1.9	0.9		2.5	8.6		1.2
	Sample Size	8	93	48	386	937	1	187	9	1	1670

Appendix F.98. Test for significant changes among periods in the length composition of sockeye salmon in the Redoubt Lake escapement by age class, 1989.

	Brood Year and Age Class								
	1986	1985		1984			1983		1982
	1.1	1.2	2.1	1.3	2.2	3.1	2.3	3.2	3.3
Periods Compared									
1 , 2							S**		
1 , 3					S**				
1 , 4				S*					
1 , 5				S**					
1 , 6				S**	S		S*		
1 , 7		S**		S*	S**		S*		
2 , 3		S**			S**		S**		
2 , 4							S**		
2 , 5					S		S*		
2 , 6				S*	S*		S		
2 , 7		S*			S**		S		
3 , 4		S*					S**		
3 , 5		S		S**	S**		S*		
3 , 6		S		S**	S**		S**		
3 , 7		S**		S	S**		S**		
4 , 5					S**				
4 , 6				S*	S**				
4 , 7					S**				
5 , 6									
5 , 7					S**				
6 , 7					S				

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.99. Daily sockeye salmon counts and associated statistics from Redoubt Lake weir, 1989.

Redoubt.tab

Date		Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
June	16	0	0	0.0000	0.0000
June	17	4	4	0.0001	0.0001
June	18	23	27	0.0008	0.0009
June	19	25	52	0.0009	0.0018
June	20	11	63	0.0004	0.0022
June	21	11	74	0.0004	0.0026
June	22	11	85	0.0004	0.0030
June	23	18	103	0.0006	0.0036
June	24	24	127	0.0008	0.0044
June	25	4	131	0.0001	0.0046
June	26	2	133	0.0001	0.0046
June	27	17	150	0.0006	0.0052
June	28	29	179	0.0010	0.0062
June	29	44	223	0.0015	0.0078
June	30	23	246	0.0008	0.0086
July	1	9	255	0.0003	0.0089
July	2	586	841	0.0204	0.0293
July	3	16	857	0.0006	0.0299
July	4	258	1115	0.0090	0.0389
July	5	410	1525	0.0143	0.0532
July	6	327	1852	0.0114	0.0646
July	7	52	1904	0.0018	0.0664
July	8	971	2875	0.0339	0.1003
July	9	455	3330	0.0159	0.1162
July	10	898	4228	0.0313	0.1475
July	11	605	4833	0.0211	0.1686
July	12	231	5064	0.0081	0.1766
July	13	1847	6911	0.0644	0.2411
July	14	1321	8232	0.0461	0.2871
July	15	209	8441	0.0073	0.2944
July	16	207	8648	0.0072	0.3016
July	17	241	8889	0.0084	0.3101
July	18	174	9063	0.0061	0.3161
July	19	920	9983	0.0321	0.3482
July	20	964	10947	0.0336	0.3818
July	21	740	11687	0.0258	0.4077
July	22	883	12570	0.0308	0.4385
July	23	2210	14780	0.0771	0.5155
July	24	1908	16688	0.0666	0.5821
July	25	568	17256	0.0198	0.6019
July	26	602	17858	0.0210	0.6229
July	27	264	18122	0.0092	0.6321
July	28	54	18176	0.0019	0.6340
July	29	598	18774	0.0209	0.6549
July	30	739	19513	0.0258	0.6806
July	31	703	20216	0.0245	0.7052
Aug.	1	982	21198	0.0343	0.7394
Aug.	2	186	21384	0.0065	0.7459
Aug.	3	1516	22900	0.0529	0.7988
Aug.	4	569	23469	0.0198	0.8186
Aug.	5	252	23721	0.0088	0.8274
Aug.	6	468	24189	0.0163	0.8437
Aug.	7	365	24554	0.0127	0.8565
Aug.	8	443	24997	0.0155	0.8719
Aug.	9	437	25434	0.0152	0.8872
Aug.	10	1800	27234	0.0628	0.9499
Aug.	11	43	27277	0.0015	0.9514
Aug.	12	203	27480	0.0071	0.9585
Aug.	13	301	27781	0.0105	0.9690
Aug.	14	148	27929	0.0052	0.9742
Aug.	15	91	28020	0.0032	0.9774
Aug.	16	593	28613	0.0207	0.9980
Aug.	17	56	28669	0.0020	1.0000

Mean Day of Migration = July 24 Variance = 138.3 Days squared

Appendix F.100. Age composition of sockeye salmon in the Ford Arm Lake escapement by sex and age class, 1989.

	Brood Year and Age Class								
	1986		1985		1984			1983	
	0.2	1.1	1.2	2.1	1.3	2.2	3.1	2.3	Total
Sample Dates: (August 20 - Sept. 25)									
Male									
Sample Size	1	35	27	33	20	12	4	5	137
Percent	0.3	11.1	8.6	10.5	6.3	3.8	1.3	1.6	43.5
Std. Error	0.3	1.5	1.4	1.5	1.2	0.9	0.6	0.6	2.4
Number	4	148	114	139	85	51	17	21	579
Female									
Sample Size			10		126	10		32	178
Percent			3.2		40.0	3.2		10.2	56.5
Std. Error			0.9		2.4	0.9		1.5	2.4
Number			42		533	42		135	752
All Fish									
Sample Size	1	35	37	33	146	22	4	37	315
Percent	0.3	11.1	11.7	10.5	46.3	7.0	1.3	11.7	100.0
Std. Error	0.3	1.5	1.6	1.5	2.5	1.3	0.6	1.6	
Number	4	148	156	139	618	93	17	156	1,331

Appendix F.101. Length composition of sockeye salmon in the Ford Arm Lake escapement by sex and age class, 1989.

		Brood Year and Age Class								
		1986		1985		1984			1983	
		0.2	1.1	1.2	2.1	1.3	2.2	3.1	2.3	Total
Sample Dates: (August 20 - Sept. 25)										
Male	Avg. Length	523	352	491	350	571	500	359	577	434
	Std. Error		6.0	4.8	2.9	5.5	7.2	2.1	10.5	8.0
	Sample Size	1	35	27	33	20	12	4	5	137
Female	Avg. Length			471		531	471		533	524
	Std. Error			4.6		2.0	5.7		5.3	2.2
	Sample Size			10		125	10		32	177
All Fish	Avg. Length	523	352	486	350	536	487	359	539	485
	Std. Error		6.0	4.0	2.9	2.2	5.6	2.1	5.4	4.5
	Sample Size	1	35	37	33	145	22	4	37	314

Appendix F.102. Age composition of sockeye salmon in the Berners, Antler/Gilkey, and Lace River (Berners Bay) escapements by sex and age class, 1989.

	Brood Year and Age Class								
	1986		1985			1984		1983	
	0.2	1.1	0.3	1.2	2.1	1.3	2.2	2.3	Total
Sample Dates:	(August 8 - 10)								
Male									
Sample Size	5	3		18	1	118	2	1	148
Percent	1.8	1.1		6.3	0.4	41.4	0.7	0.4	51.9
Std. Error	0.8	0.6		1.4	0.3	2.9	0.5	0.3	2.9
Female									
Sample Size			6	1		125		5	137
Percent			2.1	0.4		43.9		1.8	48.1
Std. Error			0.8	0.3		2.9		0.8	2.9
All Fish									
Sample Size	5	3	6	19	1	243	2	6	285
Percent	1.8	1.1	2.1	6.7	0.4	85.3	0.7	2.1	100.0
Std. Error	0.8	0.6	0.8	1.5	0.3	2.1	0.5	0.8	

Appendix F.103. Length composition of sockeye salmon in the Berners, Antler/Gilkey, and Lace River (Berners Bay) escapements by sex and age class, 1989.

		Brood Year and Age Class								
		1986		1985			1984		1983	
		0.2	1.1	0.3	1.2	2.1	1.3	2.2	2.3	Total
Sample Dates:	(August 8 - 10)									
Male	Avg. Length	470	332		458	320	605	468	570	573
	Std. Error	17.6	6.0		5.9		2.4	12.5		6.0
	Sample Size	5	3		18	1	117	2	1	147
Female	Avg. Length			568	505		573		560	572
	Std. Error			11.5			2.2		19.7	2.3
	Sample Size			6	1		125		5	137
All Fish	Avg. Length	470	332	568	460	320	589	468	562	573
	Std. Error	17.6	6.0	11.5	6.1		1.9	12.5	16.2	3.3
	Sample Size	5	3	6	19	1	242	2	6	284

Appendix F.104. Age composition of sockeye salmon in the Chilkat Lake escapement by sex, age class, and escapement period, 1989.

	Brood Year and Age Class								
	1985	1984		1983			1982	1981	
	1.2	1.3	2.2	1.4	2.3	3.2	3.3	4.3	Total
Escapement Dates:	(June 4 - 18)								
Sample Dates:	(June 9 - 17)								
Male									
Sample Size	2	157	1		43				203
Percent	0.7	55.5	0.4		15.2				71.7
Std. Error	0.4	2.3	0.3		1.7				2.1
Number	5	417	3		114				539
Female									
Sample Size		59			21				80
Percent		20.8			7.4				28.3
Std. Error		1.9			1.2				2.1
Number		156			56				212
All Fish									
Sample Size	2	216	1		64				283
Percent	0.7	76.3	0.4		22.6				100.0
Std. Error	0.4	2.0	0.3		2.0				
Number	5	573	3		170				751
Escapement Dates:	(June 19 - 25)								
Sample Dates:	(June 18 - 23)								
Male									
Sample Size	1	140	2		44				187
Percent	0.3	49.0	0.7		15.4				65.4
Std. Error	0.3	2.9	0.5		2.1				2.7
Number	20	2,840	41		893				3,794
Female									
Sample Size		71	1	1	26				99
Percent		24.8	0.3	0.3	9.1				34.6
Std. Error		2.5	0.3	0.3	1.7				2.7
Number		1,441	20	20	527				2,008
All Fish									
Sample Size	1	211	3	1	70				286
Percent	0.3	73.8	1.0	0.3	24.5				100.0
Std. Error	0.3	2.5	0.6	0.3	2.5				
Number	20	4,281	61	20	1,420				5,802
Escapement Dates:	(June 26 - July 2)								
Sample Dates:	(June 25 - 30)								
Male									
Sample Size		103	2		54				159
Percent		41.0	0.8		21.5				63.3
Std. Error		3.1	0.6		2.6				3.0
Number		4,387	85		2,300				6,772
Female									
Sample Size		54	2		36				92
Percent		21.5	0.8		14.3				36.7
Std. Error		2.6	0.6		2.2				3.0
Number		2,300	85		1,533				3,918
All Fish									
Sample Size		157	4		90				251
Percent		62.5	1.6		35.9				100.0
Std. Error		3.0	0.8		3.0				
Number		6,687	170		3,833				10,690
Escapement Dates:	(July 3 - 16)								
Sample Dates:	(July 4 - 14)								
Male									
Sample Size	3	108	3	1	66				181
Percent	1.1	39.1	1.1	0.4	23.9				65.6
Std. Error	0.6	2.9	0.6	0.4	2.5				2.8
Number	110	3,968	110	37	2,425				6,650
Female									
Sample Size		43	1		51				95
Percent		15.6	0.4		18.5				34.4
Std. Error		2.2	0.4		2.3				2.8
Number		1,580	37		1,873				3,490
All Fish									
Sample Size	3	151	4	1	117				276
Percent	1.1	54.7	1.4	0.4	42.4				100.0
Std. Error	0.6	3.0	0.7	0.4	2.9				
Number	110	5,548	147	37	4,298				10,140

-continued-

Appendix F.104. (page 2 of 3).

	Brood Year and Age Class								
	1985	1984		1983			1982	1981	
	1.2	1.3	2.2	1.4	2.3	3.2	3.3	4.3	Total
Escapement Dates:	(July 17 - 23)								
Sample Dates:	(July 17 - 22)								
Male									
Sample Size		108	5		47				160
Percent		44.6	2.1		19.4				66.1
Std. Error		3.2	0.9		2.5				3.0
Number		3,627	168		1,578				5,373
Female									
Sample Size	3	47	2		30				82
Percent	1.2	19.4	0.8		12.4				33.9
Std. Error	0.7	2.5	0.6		2.1				3.0
Number	101	1,578	67		1,007				2,753
All Fish									
Sample Size	3	155	7		77				242
Percent	1.2	64.0	2.9		31.8				100.0
Std. Error	0.7	3.0	1.1		3.0				
Number	101	5,205	235		2,585				8,126
Escapement Dates:	(July 24 - August 6)								
Sample Dates:	(July 23 - August 4)								
Male									
Sample Size	2	238	5	1	71				317
Percent	0.4	45.6	1.0	0.2	13.6				60.7
Std. Error	0.3	2.2	0.4	0.2	1.5				2.1
Number	73	8,650	182	36	2,580				11,521
Female									
Sample Size		149	4	1	51				205
Percent		28.5	0.8	0.2	9.8				39.3
Std. Error		2.0	0.4	0.2	1.3				2.1
Number		5,415	145	37	1,853				7,450
All Fish									
Sample Size	2	387	9	2	122				522
Percent	0.4	74.1	1.7	0.4	23.4				100.0
Std. Error	0.3	1.9	0.6	0.3	1.8				
Number	73	14,065	327	73	4,433				18,971
Escapement Dates:	(August 7 - 27)								
Sample Dates:	(August 7 - 26)								
Male									
Sample Size	4	103	14		15				136
Percent	1.5	38.7	5.3		5.6				51.1
Std. Error	0.7	2.9	1.3		1.4				3.0
Number	114	2,926	398		426				3,864
Female									
Sample Size	1	81	8		40				130
Percent	0.4	30.5	3.0		15.0				48.9
Std. Error	0.4	2.8	1.0		2.2				3.0
Number	28	2,302	227		1,137				3,694
All Fish									
Sample Size	5	184	22		55				266
Percent	1.9	69.2	8.3		20.7				100.0
Std. Error	0.8	2.8	1.7		2.4				
Number	142	5,228	625		1,563				7,558
Escapement Dates:	(August 28 - Sept. 17)								
Sample Dates:	(August 30 - Sept. 15)								
Male									
Sample Size	7	72	151		83	1			314
Percent	1.3	13.5	28.3		15.5	0.2			58.8
Std. Error	0.5	1.5	1.9		1.6	0.2			2.1
Number	406	4,177	8,760		4,816	58			18,217
Female									
Sample Size	1	70	80		69				220
Percent	0.2	13.1	15.0		12.9				41.2
Std. Error	0.2	1.4	1.5		1.4				2.1
Number	58	4,061	4,641		4,003				12,763
All Fish									
Sample Size	8	142	231		152	1			534
Percent	1.5	26.6	43.3		28.5	0.2			100.0
Std. Error	0.5	1.9	2.1		1.9	0.2			
Number	464	8,238	13,401		8,819	58			30,980

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Appendix F.104. (page 3 of 3).

	Brood Year and Age Class								
	1985	1984		1983			1982	1981	
	1.2	1.3	2.2	1.4	2.3	3.2	3.3	4.3	Total
Escapement Dates:	(Sept. 18 - 24)								
Sample Dates:	(Sept. 17 - 23)								
Male									
Sample Size	2	17	167		41		1		228
Percent	0.4	3.5	34.0		8.4		0.2		46.4
Std. Error	0.3	0.8	2.1		1.2		0.2		2.2
Number	139	1,183	11,617		2,852		69		15,860
Female									
Sample Size		22	169		70		1	1	263
Percent		4.5	34.4		14.3		0.2	0.2	53.6
Std. Error		0.9	2.1		1.6		0.2	0.2	2.2
Number		1,530	11,756		4,869		70	70	18,295
All Fish									
Sample Size	2	39	336		111		2	1	491
Percent	0.4	7.9	68.4		22.6		0.4	0.2	100.0
Std. Error	0.3	1.2	2.1		1.9		0.3	0.2	
Number	139	2,713	23,373		7,721		139	70	34,155
Escapement Dates:	(Sept. 25 - October 28)								
Sample Dates:	(Sept. 27 - October 25)								
Male									
Sample Size	1	5	224		63				293
Percent	0.1	0.7	32.2		9.1				42.1
Std. Error	0.1	0.3	1.7		1.1				1.8
Number	18	92	4,122		1,159				5,391
Female									
Sample Size	1	13	257		132				403
Percent	0.1	1.9	36.9		19.0				57.9
Std. Error	0.1	0.5	1.8		1.4				1.8
Number	18	239	4,729		2,429				7,415
All Fish									
Sample Size	2	18	502		201				723
Percent	0.3	2.5	69.4		27.8				100.0
Std. Error	0.2	0.6	1.7		1.6				
Number	37	331	9,236		3,698				13,302
Combined Periods	(Percentages are weighted by period escapements)								
Male									
Sample Size	22	1,051	574	2	527	1	1		2,178
Percent	0.6	23.1	18.2	0.1	13.7	<0.1	<0.1		55.7
Std. Error	0.1	0.6	0.7	<0.1	0.6	<0.1	<0.1		0.9
Number	885	32,267	25,486	73	19,143	58	69		77,981
Female									
Sample Size	6	609	524	2	526		1	1	1,669
Percent	0.1	14.7	15.5	<0.1	13.8		<0.1	<0.1	44.3
Std. Error	0.1	0.6	0.6	<0.1	0.6		<0.1	<0.1	0.9
Number	205	20,602	21,707	57	19,287		70	70	61,998
All Fish									
Sample Size	28	1,660	1,119	4	1,059	1	2	1	3,874
Percent	0.8	37.6	33.9	0.1	27.4	<0.1	0.1	<0.1	100.0
Std. Error	0.2	0.7	0.7	<0.1	0.8	<0.1	0.1	<0.1	
Number	1,091	52,869	47,578	130	38,540	58	139	70	140,475

Appendix F.105. Test for significant changes among periods in the age composition of sockeye salmon in the Chilkat Lake escapement by age class, 1989.

	Brood Year and Age Class							
	1985	1984		1983			1982	1981
	1.2	1.3	2.2	1.4	2.3	3.2	3.3	4.3
Periods Compared								
1 , 2								
1 , 3		S**			S**			
1 , 4		S**			S**			
1 , 5		S**	S*		S*			
1 , 6								
1 , 7		S	S**					
1 , 8		S**	S**		S			
1 , 9		S**	S**					
1 , 10		S**	S**					
2 , 3		S**			S**			
2 , 4		S**			S**			
2 , 5		S*			S			
2 , 6								
2 , 7			S**					
2 , 8		S**	S**					
2 , 9		S**	S**					
2 , 10		S**	S**					
3 , 4		S						
3 , 5								
3 , 6		S**			S**			
3 , 7	S		S**		S**			
3 , 8		S**	S**		S*			
3 , 9		S**	S**		S**			
3 , 10		S**	S**		S*			
4 , 5		S*			S**			
4 , 6		S**			S**			
4 , 7		S**	S**		S**			
4 , 8		S**	S**		S**			
4 , 9		S**	S**		S**			
4 , 10		S**	S**		S**			
5 , 6		S**			S**			
5 , 7			S**		S**			
5 , 8		S**	S**					
5 , 9		S**	S**		S**			
5 , 10		S**	S**					
6 , 7	S		S**					
6 , 8		S**	S**		S			
6 , 9		S**	S**					
6 , 10		S**	S**		S			
7 , 8		S**	S**		S*			
7 , 9		S**	S**					
7 , 10	S*	S**	S**		S*			
8 , 9		S**	S**		S*			
8 , 10	S*	S**	S**					
9 , 10		S**			S*			

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.106. Length composition of sockeye salmon in the Chilkat Lake escapement by sex, age class, and escapement period, 1989.

		Brood Year and Age Class								
		1985	1984		1983			1982	1981	
		1.2	1.3	2.2	1.4	2.3	3.2	3.3	4.3	Total
Escapement Dates: (June 4 - 18) Sample Dates: (June 9 - 17)										
Male	Avg. Length	523	592	480		572				587
	Std. Error	52.5	3.6			7.8				3.3
	Sample Size	2	157	1		43				203
Female	Avg. Length		584			583				584
	Std. Error		3.4			5.8				2.9
	Sample Size		59			21				80
All Fish	Avg. Length	523	590	480		576				586
	Std. Error	52.5	2.8			5.6				2.5
	Sample Size	2	216	1		64				283
Escapement Dates: (June 19 - 25) Sample Dates: (June 18 - 23)										
Male	Avg. Length	505	583	558		554				576
	Std. Error		3.8	2.5		6.2				3.3
	Sample Size	1	140	2		44				187
Female	Avg. Length		582	565	525	578				580
	Std. Error		2.8			5.6				2.5
	Sample Size		71	1	1	26				99
All Fish	Avg. Length	505	583	560	525	563				577
	Std. Error		2.7	2.9		4.6				2.3
	Sample Size	1	211	3	1	70				286
Escapement Dates: (June 26 - July 2) Sample Dates: (June 25 - 30)										
Male	Avg. Length		582	548		563				575
	Std. Error		4.5	7.5		5.5				3.6
	Sample Size		103	2		54				159
Female	Avg. Length		585	540		591				586
	Std. Error		3.1	20.0		3.6				2.4
	Sample Size		54	2		36				92
All Fish	Avg. Length		583	544		575				579
	Std. Error		3.2	9.0		3.9				2.4
	Sample Size		157	4		90				251
Escapement Dates: (July 3 - 16) Sample Dates: (July 4 - 14)										
Male	Avg. Length	580	616	527	550	607				610
	Std. Error	40.7	3.4	8.8		4.6				2.8
	Sample Size	3	108	3	1	66				181
Female	Avg. Length		582	580		586				584
	Std. Error		4.7			3.9				3.0
	Sample Size		42	1		51				94
All Fish	Avg. Length	580	606	540	550	598				601
	Std. Error	40.7	3.0	14.7		3.2				2.3
	Sample Size	3	150	4	1	117				275
Escapement Dates: (July 17 - 23) Sample Dates: (July 17 - 22)										
Male	Avg. Length		619	522		598				610
	Std. Error		2.7	18.6		6.7				3.1
	Sample Size		108	5		47				160
Female	Avg. Length	567	593	583		580				587
	Std. Error	3.3	4.2	2.5		4.5				3.0
	Sample Size	3	47	2		30				82
All Fish	Avg. Length	567	611	539		591				602
	Std. Error	3.3	2.5	17.0		4.6				2.4
	Sample Size	3	155	7		77				242
Escapement Dates: (July 24 - August 6) Sample Dates: (July 23 - August 4)										
Male	Avg. Length	555	622	545	610	607				617
	Std. Error	35.0	1.5	10.6		4.2				1.6
	Sample Size	2	238	5	1	71				317
Female	Avg. Length		597	546	595	588				594
	Std. Error		1.8	12.6		3.3				1.7
	Sample Size		148	4	1	51				204
All Fish	Avg. Length	555	613	546	603	599				608
	Std. Error	35.0	1.3	7.6	7.5	2.9				1.3
	Sample Size	2	386	9	2	122				521

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Appendix F.106. (page 2 of 2).

		Brood Year and Age Class								
		1985	1984			1983		1982	1981	
		1.2	1.3	2.2	1.4	2.3	3.2	3.3	4.3	Total
Escapement Dates: (August 7 - 27)										
Sample Dates: (August 7 - 26)										
Male	Avg. Length	505	611	553		620				603
	Std. Error	24.1	2.6	5.0		9.8				3.2
	Sample Size	4	102	14		15				135
Female	Avg. Length	445	586	549		581				581
	Std. Error		2.2	6.0		3.7				2.2
	Sample Size	1	81	8		40				130
All Fish	Avg. Length	493	600	551		592				592
	Std. Error	22.2	2.0	3.8		4.4				2.1
	Sample Size	5	183	22		55				265
Escapement Dates: (August 28 - Sept. 17)										
Sample Dates: (August 30 - Sept. 15)										
Male	Avg. Length	544	608	549		614	480			579
	Std. Error	8.5	2.4	2.4		3.0				2.4
	Sample Size	7	72	151		82	1			313
Female	Avg. Length	550	586	538		588				569
	Std. Error		2.5	2.9		3.2				2.3
	Sample Size	1	70	80		69				220
All Fish	Avg. Length	545	597	545		602	480			575
	Std. Error	7.4	2.0	1.9		2.4				1.7
	Sample Size	8	142	231		151	1			533
Escapement Dates: (Sept. 18 - 24)										
Sample Dates: (Sept. 17 - 23)										
Male	Avg. Length	528	597	544		609		530		560
	Std. Error	12.5	6.0	2.0		4.0				2.5
	Sample Size	2	17	167		41		1		228
Female	Avg. Length		589	540		582		620	600	556
	Std. Error		4.3	1.7		3.3				2.0
	Sample Size		22	169		70		1	1	263
All Fish	Avg. Length	528	593	542		592		575	600	558
	Std. Error	12.5	3.6	1.3		2.8		45.0		1.6
	Sample Size	2	39	336		111		2	1	491
Escapement Dates: (Sept. 25 - October 28)										
Sample Dates: (Sept. 27 - October 25)										
Male	Avg. Length	535	602	550		608				563
	Std. Error		12.1	1.9		3.7				2.2
	Sample Size	1	5	224		63				293
Female	Avg. Length	510	581	540		584				556
	Std. Error		7.4	1.5		2.2				1.6
	Sample Size	1	13	257		132				403
All Fish	Avg. Length	523	587	544		592				558
	Std. Error	12.5	6.5	1.2		2.0				1.3
	Sample Size	2	18	502		201				723
Combined Periods (Lengths weighted by period escapements)										
Male	Avg. Length	539	605	544	589	604	480	530		583
	Std. Error	9.4	1.2	1.2	30.0	1.8				1.0
	Sample Size	22	1,050	574	2	526	1	1		2,176
Female	Avg. Length	530	588	547	579	585		620	600	572
	Std. Error	20.0	1.0	1.0	35.0	1.1				0.8
	Sample Size	6	607	524	2	526		1	1	1,667
All Fish	Avg. Length	539	597	544	574	593	480	575	600	578
	Std. Error	8.3	0.8	0.8	19.7	1.1		45.0		0.7
	Sample Size	28	1,657	1,119	4	1,058	1	2	1	3,870

Appendix F.107. Test for significant changes among periods in the length composition of sockeye salmon in the Chilkat Lake escapement by age class, 1989.

	Brood Year and Age Class							
	1985	1984		1983			1982	1981
	1.2	1.3	2.2	1.4	2.3	3.2	3.3	4.3
Periods Compared								
1 , 2		S			S			
1 , 3		S						
1 , 4		S**			S**			
1 , 5		S**			S*			
1 , 6		S**			S**			
1 , 7		S**			S*			
1 , 8		S*			S**			
1 , 9					S**			
1 , 10					S**			
2 , 3			S		S			
2 , 4		S**			S**			
2 , 5		S**			S**			
2 , 6		S**	S		S**			
2 , 7		S**	S		S**			
2 , 8		S**	S**		S**			
2 , 9		S*	S**		S**			
2 , 10			S**		S**			
3 , 4		S**			S**			
3 , 5		S**			S**			
3 , 6		S**			S**			
3 , 7		S**			S**			
3 , 8		S**			S**			
3 , 9		S*			S**			
3 , 10					S**			
4 , 5								
4 , 6		S						
4 , 7	S	S						
4 , 8		S**						
4 , 9		S**						
4 , 10		S**						
5 , 6								
5 , 7	S**	S**						
5 , 8	S**	S**			S*			
5 , 9	S**	S**						
5 , 10	S**	S**						
6 , 7		S**						
6 , 8		S**						
6 , 9		S**			S			
6 , 10		S**			S*			
7 , 8	S*				S*			
7 , 9		S	S**					
7 , 10		S	S					
8 , 9					S**			
8 , 10					S**			
9 , 10								

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.108. Daily sockeye salmon counts and associated statistics from Chilkat Lake weir, 1989.

Date		Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
June	7	7	7	0.0000	0.0000
June	8	0	7	0.0000	0.0000
June	9	2	9	0.0000	0.0001
June	10	28	37	0.0002	0.0003
June	11	25	62	0.0002	0.0004
June	12	54	116	0.0004	0.0008
June	13	19	135	0.0001	0.0010
June	14	12	147	0.0001	0.0010
June	15	107	254	0.0008	0.0018
June	16	164	418	0.0012	0.0030
June	17	318	736	0.0023	0.0052
June	18	15	751	0.0001	0.0053
June	19	34	785	0.0002	0.0056
June	20	102	887	0.0007	0.0063
June	21	287	1174	0.0020	0.0084
June	22	337	1511	0.0024	0.0108
June	23	501	2012	0.0036	0.0143
June	24	2205	4217	0.0157	0.0300
June	25	2336	6553	0.0166	0.0466
June	26	2707	9260	0.0193	0.0659
June	27	2520	11780	0.0179	0.0839
June	28	1136	12916	0.0081	0.0919
June	29	1774	14690	0.0126	0.1046
June	30	0	14690	0.0000	0.1046
July	1	1145	15835	0.0082	0.1127
July	2	1408	17243	0.0100	0.1227
July	3	863	18106	0.0061	0.1289
July	4	2507	20613	0.0178	0.1467
July	5	454	21067	0.0032	0.1500
July	6	980	22047	0.0070	0.1569
July	7	1380	23427	0.0098	0.1668
July	8	1661	25088	0.0118	0.1786
July	9	0	25088	0.0000	0.1786
July	10	30	25118	0.0002	0.1788
July	11	578	25696	0.0041	0.1829
July	12	745	26441	0.0053	0.1882
July	13	87	26528	0.0006	0.1888
July	14	149	26677	0.0011	0.1899
July	15	101	26778	0.0007	0.1906
July	16	605	27383	0.0043	0.1949
July	17	164	27547	0.0012	0.1961
July	18	834	28381	0.0059	0.2020
July	19	1007	29388	0.0072	0.2092
July	20	2613	32001	0.0186	0.2278
July	21	845	32846	0.0060	0.2338
July	22	1604	34450	0.0114	0.2452
July	23	1059	35509	0.0075	0.2528
July	24	3048	38557	0.0217	0.2745
July	25	3402	41959	0.0242	0.2987
July	26	4218	46177	0.0300	0.3287
July	27	1368	47545	0.0097	0.3385
July	28	2314	49859	0.0165	0.3549
July	29	1460	51319	0.0104	0.3653
July	30	0	51319	0.0000	0.3653
July	31	0	51319	0.0000	0.3653
Aug.	1	138	51457	0.0010	0.3663
Aug.	2	784	52241	0.0056	0.3719
Aug.	3	193	52434	0.0014	0.3733
Aug.	4	225	52659	0.0016	0.3749
Aug.	5	895	53554	0.0064	0.3812
Aug.	6	926	54480	0.0066	0.3878
Aug.	7	600	55080	0.0043	0.3921
Aug.	8	1118	56198	0.0080	0.4001
Aug.	9	142	56340	0.0010	0.4011
Aug.	10	1034	57374	0.0074	0.4084
Aug.	11	306	57680	0.0022	0.4106
Aug.	12	1140	58820	0.0081	0.4187
Aug.	13	0	58820	0.0000	0.4187
Aug.	14	0	58820	0.0000	0.4187
Aug.	15	0	58820	0.0000	0.4187
Aug.	16	0	58820	0.0000	0.4187

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Appendix F.108. (page 2 of 2).

Date		Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
Aug.	17	0	58820	0.0000	0.4187
Aug.	18	0	58820	0.0000	0.4187
Aug.	19	6	58826	0.0000	0.4188
Aug.	20	5	58831	0.0000	0.4188
Aug.	21	19	58850	0.0001	0.4189
Aug.	22	19	58869	0.0001	0.4191
Aug.	23	219	59088	0.0016	0.4206
Aug.	24	0	59088	0.0000	0.4206
Aug.	25	693	59781	0.0049	0.4256
Aug.	26	579	60360	0.0041	0.4297
Aug.	27	1678	62038	0.0119	0.4416
Aug.	28	2313	64351	0.0165	0.4581
Aug.	29	1305	65656	0.0093	0.4674
Aug.	30	780	66436	0.0056	0.4729
Aug.	31	454	66890	0.0032	0.4762
Sept.	1	1024	67914	0.0073	0.4835
Sept.	2	1207	69121	0.0086	0.4921
Sept.	3	499	69620	0.0036	0.4956
Sept.	4	255	69875	0.0018	0.4974
Sept.	5	6283	76158	0.0447	0.5421
Sept.	6	895	77053	0.0064	0.5485
Sept.	7	763	77816	0.0054	0.5539
Sept.	8	183	77999	0.0013	0.5553
Sept.	9	0	77999	0.0000	0.5553
Sept.	10	0	77999	0.0000	0.5553
Sept.	11	0	77999	0.0000	0.5553
Sept.	12	0	77999	0.0000	0.5553
Sept.	13	270	78269	0.0019	0.5572
Sept.	14	423	78692	0.0030	0.5602
Sept.	15	1154	79846	0.0082	0.5684
Sept.	16	9063	88909	0.0645	0.6329
Sept.	17	4109	93018	0.0293	0.6622
Sept.	18	9178	102196	0.0653	0.7275
Sept.	19	10774	112970	0.0767	0.8042
Sept.	20	7053	120023	0.0502	0.8544
Sept.	21	5321	125344	0.0379	0.8923
Sept.	22	1829	127173	0.0130	0.9053
Sept.	23	0	127173	0.0000	0.9053
Sept.	24	0	127173	0.0000	0.9053
Sept.	25	0	127173	0.0000	0.9053
Sept.	26	0	127173	0.0000	0.9053
Sept.	27	0	127173	0.0000	0.9053
Sept.	28	50	127223	0.0004	0.9057
Sept.	29	919	128142	0.0065	0.9122
Sept.	30	228	128370	0.0016	0.9138
Oct.	1	1516	129886	0.0108	0.9246
Oct.	2	0	129886	0.0000	0.9246
Oct.	3	83	129969	0.0006	0.9252
Oct.	4	1573	131542	0.0112	0.9364
Oct.	5	651	132193	0.0046	0.9410
Oct.	6	569	132762	0.0041	0.9451
Oct.	7	60	132822	0.0004	0.9455
Oct.	8	0	132822	0.0000	0.9455
Oct.	9	0	132822	0.0000	0.9455
Oct.	10	424	133246	0.0030	0.9485
Oct.	11	155	133401	0.0011	0.9496
Oct.	12	791	134192	0.0056	0.9553
Oct.	13	355	134547	0.0025	0.9578
Oct.	14	1087	135634	0.0077	0.9655
Oct.	15	241	135875	0.0017	0.9673
Oct.	16	95	135970	0.0007	0.9679
Oct.	17	1073	137043	0.0076	0.9756
Oct.	18	1051	138094	0.0075	0.9831
Oct.	19	365	138459	0.0026	0.9856
Oct.	20	837	139296	0.0060	0.9916
Oct.	21	187	139483	0.0013	0.9929
Oct.	22	74	139557	0.0005	0.9935
Oct.	23	565	140122	0.0040	0.9975
Oct.	24	68	140190	0.0005	0.9980
Oct.	25	26	140216	0.0002	0.9982
Oct.	26	76	140292	0.0005	0.9987
Oct.	27	77	140369	0.0005	0.9992
Oct.	28	106	140475	0.0008	1.0000
Oct.	29	0	140475	0.0000	1.0000

Mean Day of Migration = Aug. 22 Variance = 1224.9 Days squared

Appendix F.109. Age composition of sockeye salmon in the Chilkat River Mainstem escapement by sex and age class, 1989.

	Brood Year and Age Class					
	1986	1985		1984	1983	
	0.2	0.3	1.2	1.3	2.3	Total
Sample Dates:	(Sept. 29 and October 4)					
Male						
Sample Size	7	34	2	14		57
Percent	8.0	39.1	2.3	16.1		65.5
Std. Error	2.9	5.3	1.6	4.0		5.1
Female						
Sample Size		15		14	1	30
Percent		17.2		16.1	1.1	34.5
Std. Error		4.1		4.0	1.1	5.1
All Fish						
Sample Size	7	50	2	28	1	88
Percent	8.0	56.8	2.3	31.8	1.1	100.0
Std. Error	2.9	5.3	1.6	5.0	1.1	

Appendix F.110. Length composition of sockeye salmon in the Chilkat River Mainstem escapement by sex and age class, 1989.

		Brood Year and Age Class				
		1986	1985		1984	
		0.2	0.3	1.2	1.3	Total
Sample Dates:		(Sept. 29 and October 4)				
Male	Avg. Length	443	575	420	605	550
	Std. Error	13.7	6.4		10.2	10.5
	Sample Size	7	27	2	6	42
Female	Avg. Length		548		559	552
	Std. Error		5.9		13.4	5.7
	Sample Size		13		6	19
All Fish	Avg. Length	443	567	420	582	551
	Std. Error	13.7	5.1		10.6	7.4
	Sample Size	7	40	2	12	61

Appendix F.111. Age composition of sockeye salmon in the Chilkoot Lake escapement by sex, age class, and escapement period, 1989.

	Brood Year and Age Class							
	1985	1984		1983		1982		
	1.2	1.3	2.2	1.4	2.3	2.4	3.3	Total
Escapement Dates:	(June 4 - 17)							
Sample Dates:	(June 6 - 17)							
Male								
Sample Size		101		5	43	2		151
Percent		43.2		2.1	18.4	0.9		64.5
Std. Error		3.2		0.9	2.5	0.6		3.1
Number		2,088		103	889	41		3,121
Female								
Sample Size		54		1	26	1	1	83
Percent		23.1		0.4	11.1	0.4	0.4	35.5
Std. Error		2.7		0.4	2.0	0.4	0.4	3.1
Number		1,116		21	537	21	21	1,716
All Fish								
Sample Size		155		6	69	3	1	234
Percent		66.2		2.6	29.5	1.3	0.4	100.0
Std. Error		3.0		1.0	2.9	0.7	0.4	
Number		3,204		124	1,426	62	21	4,837
Escapement Dates:	(June 18 - 24)							
Sample Dates:	(June 19 - 24)							
Male								
Sample Size	3	124	8	1	58	2		196
Percent	0.9	36.2	2.3	0.3	16.9	0.6		57.1
Std. Error	0.5	2.6	0.8	0.3	2.0	0.4		2.7
Number	186	7,700	497	62	3,602	124		12,171
Female								
Sample Size		88		3	54		2	147
Percent		25.7		0.9	15.7		0.6	42.9
Std. Error		2.3		0.5	2.0		0.4	2.7
Number		5,466		186	3,353		124	9,129
All Fish								
Sample Size	3	212	8	4	112	2	2	343
Percent	0.9	61.8	2.3	1.2	32.7	0.6	0.6	100.0
Std. Error	0.5	2.6	0.8	0.6	2.5	0.4	0.4	
Number	186	13,166	497	248	6,955	124	124	21,300
Escapement Dates:	(June 25 - July 8)							
Sample Dates:	(June 25 - July 8)							
Male								
Sample Size	3	102	1	4	51	1		162
Percent	1.0	33.8	0.3	1.3	16.9	0.3		53.6
Std. Error	0.5	2.6	0.3	0.6	2.1	0.3		2.7
Number	35	1,172	12	46	587	12		1,864
Female								
Sample Size	1	78	3	1	57			140
Percent	0.3	25.8	1.0	0.3	18.9			46.4
Std. Error	0.3	2.4	0.5	0.3	2.2			2.7
Number	11	898	34	12	656			1,611
All Fish								
Sample Size	4	180	4	5	108	1		302
Percent	1.3	59.6	1.3	1.7	35.8	0.3		100.0
Std. Error	0.6	2.7	0.6	0.7	2.6	0.3		
Number	46	2,070	46	58	1,243	12		3,475
Escapement Dates:	(July 9 - 22)							
Sample Dates:	(July 9 - 22)							
Male								
Sample Size	17	135	7	2	41	1		203
Percent	5.0	40.1	2.1	0.6	12.2	0.3		60.2
Std. Error	1.1	2.5	0.7	0.4	1.7	0.3		2.5
Number	153	1,216	63	18	369	9		1,828
Female								
Sample Size	4	84	8	2	34	1	1	134
Percent	1.2	24.9	2.4	0.6	10.1	0.3	0.3	39.8
Std. Error	0.6	2.2	0.8	0.4	1.5	0.3	0.3	2.5
Number	36	757	72	18	306	9	9	1,207
All Fish								
Sample Size	21	219	15	4	75	2	1	337
Percent	6.2	65.0	4.5	1.2	22.3	0.6	0.3	100.0
Std. Error	1.2	2.5	1.1	0.6	2.1	0.4	0.3	
Number	189	1,973	135	36	675	18	9	3,035

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Appendix F.111. (page 2 of 3).

	Brood Year and Age Class							
	1985	1984		1983		1982		
	1.2	1.3	2.2	1.4	2.3	2.4	3.3	Total
Escapement Dates:	(July 23 - 29)							
Sample Dates:	(July 23 - 29)							
Male								
Sample Size	24	78	20	3	23			148
Percent	9.6	31.2	8.0	1.2	9.2			59.2
Std. Error	1.8	2.8	1.6	0.7	1.8			3.0
Number	283	918	235	35	271			1,742
Female								
Sample Size	4	64	6		28			102
Percent	1.6	25.6	2.4		11.2			40.8
Std. Error	0.8	2.6	0.9		1.9			3.0
Number	47	753	71		329			1,200
All Fish								
Sample Size	28	142	26	3	51			250
Percent	11.2	56.8	10.4	1.2	20.4			100.0
Std. Error	1.9	3.0	1.9	0.7	2.4			
Number	330	1,671	306	35	600			2,942
Escapement Dates:	(July 30 - August 5)							
Sample Dates:	(July 30 - August 5)							
Male								
Sample Size	10	81	12	1	23			127
Percent	4.5	36.3	5.4	0.4	10.3			57.0
Std. Error	1.3	3.1	1.5	0.4	2.0			3.2
Number	162	1,313	194	16	373			2,058
Female								
Sample Size	4	54	3	1	34			96
Percent	1.8	24.2	1.3	0.4	15.2			43.0
Std. Error	0.9	2.8	0.7	0.4	2.3			3.2
Number	65	875	49	16	551			1,556
All Fish								
Sample Size	14	135	15	2	57			223
Percent	6.3	60.5	6.7	0.9	25.6			100.0
Std. Error	1.6	3.2	1.6	0.6	2.8			
Number	227	2,188	243	32	924			3,614
Escapement Dates:	(August 6 - 19)							
Sample Dates:	(August 6 - 17)							
Male								
Sample Size	22	99	22	4	76		1	224
Percent	5.4	24.3	5.4	1.0	18.6		0.2	54.9
Std. Error	1.1	2.1	1.1	0.5	1.9		0.2	2.4
Number	349	1,570	349	63	1,206		15	3,552
Female								
Sample Size	5	108	15		53		3	184
Percent	1.2	26.5	3.7		13.0		0.7	45.1
Std. Error	0.5	2.1	0.9		1.6		0.4	2.4
Number	79	1,713	238		840		48	2,918
All Fish								
Sample Size	27	207	37	4	129		4	408
Percent	6.6	50.7	9.1	1.0	31.6		1.0	100.0
Std. Error	1.2	2.4	1.4	0.5	2.2		0.5	
Number	428	3,283	587	63	2,046		63	6,470
Escapement Dates:	(August 20 - 26)							
Sample Dates:	(August 21 - 26)							
Male								
Sample Size	1	35	4	1	36			77
Percent	0.7	25.0	2.9	0.7	25.7			55.0
Std. Error	0.7	3.6	1.4	0.7	3.6			4.1
Number	20	698	80	20	718			1,536
Female								
Sample Size	5	29	4		25			63
Percent	3.6	20.7	2.9		17.9			45.0
Std. Error	1.5	3.4	1.4		3.2			4.1
Number	100	578	80		499			1,257
All Fish								
Sample Size	6	64	8	1	61			140
Percent	4.3	45.7	5.7	0.7	43.6			100.0
Std. Error	1.7	4.1	1.9	0.7	4.1			
Number	120	1,276	160	20	1,217			2,793

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Appendix F.111. (page 3 of 3).

	Brood Year and Age Class							
	1985	1984		1983		1982		
	1.2	1.3	2.2	1.4	2.3	2.4	3.3	Total
Escapement Dates:	(August 27 - Sept. 2)							
Sample Dates:	(August 27 - Sept. 2)							
Male								
Sample Size	4	39	8		56		2	109
Percent	2.0	19.2	3.9		27.6		1.0	53.7
Std. Error	0.9	2.7	1.3		3.0		0.7	3.4
Number	61	589	121		846		30	1,647
Female								
Sample Size	1	30	4	1	55	1	2	94
Percent	0.5	14.8	2.0	0.5	27.1	0.5	1.0	46.3
Std. Error	0.5	2.4	0.9	0.5	3.0	0.5	0.7	3.4
Number	15	454	60	15	831	15	30	1,420
All Fish								
Sample Size	5	69	12	1	111	1	4	203
Percent	2.5	34.0	5.9	0.5	54.7	0.5	2.0	100.0
Std. Error	1.1	3.2	1.6	0.5	3.4	0.5	0.9	
Number	76	1,043	181	15	1,677	15	60	3,067
Escapement Dates:	(Sept. 3 - October 21)							
Sample Dates:	(Sept. 4 - 10)							
Male								
Sample Size	5	16	2	1	44		2	70
Percent	3.4	11.0	1.4	0.7	30.1		1.4	47.9
Std. Error	1.5	2.5	0.9	0.7	3.7		0.9	4.1
Number	115	369	46	23	1,015		46	1,614
Female								
Sample Size	3	20	3		49	1		76
Percent	2.1	13.7	2.1		33.6	0.7		52.1
Std. Error	1.2	2.8	1.2		3.8	0.7		4.1
Number	69	461	69		1,131	23		1,753
All Fish								
Sample Size	8	36	5	1	93	1	2	146
Percent	5.5	24.7	3.4	0.7	63.7	0.7	1.4	100.0
Std. Error	1.8	3.5	1.5	0.7	3.9	0.7	0.9	
Number	184	830	115	23	2,146	23	46	3,367
Combined Periods (Percentages are weighted by period escapements)								
Male								
Sample Size	89	810	84	22	451	6	5	1,467
Percent	2.5	32.1	2.9	0.7	18.0	0.3	0.2	56.7
Std. Error	0.3	1.2	0.4	0.2	0.9	0.2	0.1	1.2
Number	1,364	17,633	1,597	386	9,876	186	91	31,133
Female								
Sample Size	27	609	46	9	415	4	9	1,119
Percent	0.8	23.8	1.2	0.5	16.5	0.1	0.4	43.3
Std. Error	0.1	1.1	0.2	0.2	0.9	0.1	0.2	1.2
Number	422	13,071	673	268	9,033	68	232	23,767
All Fish								
Sample Size	116	1,419	130	31	866	10	14	2,586
Percent	3.3	55.9	4.1	1.2	34.4	0.5	0.6	100.0
Std. Error	0.3	1.2	0.4	0.3	1.1	0.2	0.2	
Number	1,786	30,704	2,270	654	18,909	253	324	54,900

Appendix F.112. Test for significant changes among periods in the age composition of sockeye salmon in the Chilkoot Lake escapement by age class, 1989.

	Brood Year and Age Class						
	1985	1984		1983		1982	
	1.2	1.3	2.2	1.4	2.3	2.4	3.3
Periods Compared							
1 , 2			S*				
1 , 3							
1 , 4	S**		S**		S*		
1 , 5	S**	S	S**		S**		
1 , 6	S**		S**				
1 , 7	S**	S**	S**				
1 , 8	S**	S**	S**		S**		
1 , 9	S*	S**	S**		S**		
1 , 10	S**	S**	S**		S**		
2 , 3							
2 , 4	S**				S**		
2 , 5	S**		S**		S**		
2 , 6	S**		S**		S		
2 , 7	S**	S**	S**				
2 , 8	S*	S**			S*		
2 , 9		S**	S		S**		
2 , 10	S**	S**			S**		
3 , 4	S**		S*		S**		
3 , 5	S**		S**		S**		
3 , 6	S**		S**		S**		
3 , 7	S**	S*	S**				
3 , 8		S**	S**				
3 , 9		S**	S**		S**		S
3 , 10	S*	S**			S**		
4 , 5	S*	S	S**				
4 , 6							
4 , 7		S**	S*		S**		
4 , 8		S**			S**		
4 , 9	S	S**			S**		
4 , 10		S**			S**		
5 , 6	S						
5 , 7	S				S**		
5 , 8	S*	S*			S**		
5 , 9	S**	S**			S**		S
5 , 10	S	S**	S*		S**		
6 , 7		S*					
6 , 8		S**			S**		
6 , 9	S	S**			S**		
6 , 10		S**			S**		
7 , 8					S**		
7 , 9	S*	S**			S**		
7 , 10		S**	S*		S**		
8 , 9		S*			S		
8 , 10		S**			S**		
9 , 10		S					

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.113. Length composition of sockeye salmon in the Chilkoot Lake escapement by sex, age class, and escapement period, 1989.

		Brood Year and Age Class							
		1985	1984		1983		1982		
		1.2	1.3	2.2	1.4	2.3	2.4	3.3	Total
Escapement Dates: (June 4 - 17)									
Sample Dates: (June 6 - 17)									
Male	Avg. Length		592		614	594	608		594
	Std. Error		2.9		10.7	4.4	12.5		2.4
	Sample Size		101		5	43	2		151
Female	Avg. Length		576		620	566	620	575	574
	Std. Error		2.6			3.2			2.2
	Sample Size		53		1	26	1	1	82
All Fish	Avg. Length		587		615	583	612	575	587
	Std. Error		2.2		8.8	3.4	8.3		1.8
	Sample Size		154		6	69	3	1	233
Escapement Dates: (June 18 - 24)									
Sample Dates: (June 19 - 24)									
Male	Avg. Length	512	594	487	620	589	590		587
	Std. Error	4.4	2.5	25.7		3.4	30.0		2.7
	Sample Size	3	124	8	1	58	2		196
Female	Avg. Length		569		612	566		570	569
	Std. Error		2.3		1.7	3.3		10.0	1.9
	Sample Size		88		3	54		2	147
All Fish	Avg. Length	512	583	487	614	578	590	570	579
	Std. Error	4.4	1.9	25.7	2.4	2.6	30.0	10.0	1.8
	Sample Size	3	212	8	4	112	2	2	343
Escapement Dates: (June 25 - July 8)									
Sample Dates: (June 25 - July 8)									
Male	Avg. Length	517	591	485	613	589	620		589
	Std. Error	16.7	2.2		15.6	4.3			2.3
	Sample Size	3	102	1	4	51	1		162
Female	Avg. Length	495	573	492	570	566			568
	Std. Error		2.6	10.1		3.7			2.4
	Sample Size	1	78	3	1	57			140
All Fish	Avg. Length	511	583	490	604	576	620		579
	Std. Error	13.0	1.8	7.4	14.8	3.0			1.7
	Sample Size	4	180	4	5	108	1		302
Escapement Dates: (July 9 - 22)									
Sample Dates: (July 9 - 22)									
Male	Avg. Length	465	589	458	615	582	545		573
	Std. Error	8.0	1.9	12.4	15.0	4.8			3.4
	Sample Size	17	135	7	2	41	1		203
Female	Avg. Length	504	567	501	573	571	570	565	562
	Std. Error	9.0	2.6	10.0	17.5	5.0			2.7
	Sample Size	4	84	8	2	34	1	1	134
All Fish	Avg. Length	472	581	481	594	577	558	565	569
	Std. Error	7.5	1.7	9.5	15.5	3.5	12.5		2.3
	Sample Size	21	219	15	4	75	2	1	337
Escapement Dates: (July 23 - 29)									
Sample Dates: (July 23 - 29)									
Male	Avg. Length	458	591	467	622	587			552
	Std. Error	5.0	2.5	8.1	19.2	3.3			5.3
	Sample Size	24	78	20	3	23			148
Female	Avg. Length	480	567	478		564			558
	Std. Error	14.0	3.3	5.4		5.0			3.6
	Sample Size	4	64	6		28			102
All Fish	Avg. Length	461	580	469	622	575			555
	Std. Error	4.9	2.2	6.3	19.2	3.5			3.4
	Sample Size	28	142	26	3	51			250
Escapement Dates: (July 30 - August 5)									
Sample Dates: (July 30 - August 5)									
Male	Avg. Length	456	584	470	605	585			564
	Std. Error	13.0	2.5	10.7		3.9			4.7
	Sample Size	10	81	12	1	23			127
Female	Avg. Length	481	569	498	585	566			562
	Std. Error	10.1	2.6	4.4		3.2			2.9
	Sample Size	4	54	3	1	34			96
All Fish	Avg. Length	463	578	476	595	574			563
	Std. Error	10.0	2.0	9.0	10.0	2.8			2.9
	Sample Size	14	135	15	2	57			223

-continued-

Appendix F.113. (page 2 of 2).

		Brood Year and Age Class							
		1985	1984		1983		1982		
		1.2	1.3	2.2	1.4	2.3	2.4	3.3	Total
Escapement Dates: (August 6 - 19) Sample Dates: (August 6 - 17)									
Male	Avg. Length	450	588	470	573	588		625	563
	Std. Error	6.8	2.0	9.4	13.8	2.9			3.8
	Sample Size	22	99	22	4	76		1	224
Female	Avg. Length	488	565	484		559		548	554
	Std. Error	10.8	2.2	6.3		3.3		8.8	2.5
	Sample Size	5	108	15		53		3	184
All Fish	Avg. Length	457	576	476	573	576		568	559
	Std. Error	6.5	1.7	6.2	13.8	2.5		20.2	2.4
	Sample Size	27	207	37	4	129		4	408
Escapement Dates: (August 20 - 26) Sample Dates: (August 21 - 26)									
Male	Avg. Length	445	591	490	620	588			583
	Std. Error		3.0	38.6		3.3			4.1
	Sample Size	1	35	4	1	36			77
Female	Avg. Length	470	568	503		565			555
	Std. Error	10.4	4.0	19.4		6.3			5.0
	Sample Size	5	29	4		25			63
All Fish	Avg. Length	466	581	496	620	579			570
	Std. Error	9.4	2.8	20.1		3.5			3.4
	Sample Size	6	64	8	1	61			140
Escapement Dates: (August 27 - Sept. 2) Sample Dates: (August 27 - Sept. 2)									
Male	Avg. Length	503	588	484		585		570	575
	Std. Error	19.8	3.7	18.2		2.1		15.0	3.7
	Sample Size	4	39	8		56		2	109
Female	Avg. Length	495	573	515	605	567	560	563	566
	Std. Error		3.8	30.5		2.9		12.5	2.8
	Sample Size	1	30	4	1	54	1	2	93
All Fish	Avg. Length	501	581	495	605	576	560	566	571
	Std. Error	15.4	2.8	15.6		2.0		8.3	2.4
	Sample Size	5	69	12	1	110	1	4	202
Escapement Dates: (Sept. 3 - October 21) Sample Dates: (Sept. 4 - 10)									
Male	Avg. Length	457	590	523	620	584		578	575
	Std. Error	16.8	4.3	12.5		4.8		17.5	5.4
	Sample Size	5	16	2	1	44		2	70
Female	Avg. Length	497	570	513		565	610		562
	Std. Error	10.9	3.8	12.0		2.5			2.8
	Sample Size	3	20	3		49	1		76
All Fish	Avg. Length	472	579	517	620	574	610	578	568
	Std. Error	12.9	3.3	8.0		2.8		17.5	3.0
	Sample Size	8	36	5	1	93	1	2	146
Combined Periods (Lengths weighted by period escapements)									
Male	Avg. Length	486	591	483	612	588	592	600	579
	Std. Error	3.7	0.8	5.0	6.0	1.2	13.6	12.7	1.2
	Sample Size	89	810	84	22	451	6	5	1,467
Female	Avg. Length	489	569	496	603	565	594	566	565
	Std. Error	4.3	0.9	4.3	7.4	1.2	14.7	5.1	0.9
	Sample Size	27	608	46	9	414	4	9	1,117
All Fish	Avg. Length	490	581	486	607	577	592	570	573
	Std. Error	3.2	0.7	3.6	4.8	0.9	9.6	6.1	0.8
	Sample Size	116	1,418	130	31	865	10	14	2,584

Appendix F.114. Test for significant changes among periods in the length composition of sockeye salmon in the Chilkoot Lake escapement by age class, 1989.

	Brood Year and Age Class						
	1985	1984		1983		1982	
	1.2	1.3	2.2	1.4	2.3	2.4	3.3
Periods Compared							
1 , 2					S		
1 , 3					S		
1 , 4		S**				S**	
1 , 5		S*			S*		
1 , 6		S**			S**		
1 , 7		S**		S**	S*		
1 , 8		S					
1 , 9					S*		
1 , 10		S*			S**		
2 , 3							
2 , 4	S**						
2 , 5	S**						
2 , 6	S**	S		S			
2 , 7	S**	S**		S**			
2 , 8	S**						
2 , 9							
2 , 10	S**						
3 , 4	S**						
3 , 5	S**		S*				
3 , 6	S**	S					
3 , 7	S**	S**					
3 , 8	S**						
3 , 9							
3 , 10	S*		S**				
4 , 5							
4 , 6							
4 , 7		S*					
4 , 8							
4 , 9	S						
4 , 10			S**				
5 , 6							
5 , 7				S*			
5 , 8							
5 , 9	S**						
5 , 10			S**				
6 , 7							
6 , 8							
6 , 9	S*						
6 , 10			S**				
7 , 8							
7 , 9	S**	S					
7 , 10			S**				
8 , 9	S						
8 , 10							
9 , 10							

S = significant at alpha = 0.10
S* = significant at alpha = 0.05
S** = significant at alpha = 0.01

Appendix F.115. Daily sockeye salmon counts and associated statistics from Chilkoot Lake weir, 1989.

Date		Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
June	4	170	170	0.0031	0.0031
June	5	114	284	0.0021	0.0052
June	6	51	335	0.0009	0.0061
June	7	58	393	0.0011	0.0072
June	8	63	456	0.0011	0.0083
June	9	43	499	0.0008	0.0091
June	10	72	571	0.0013	0.0104
June	11	36	607	0.0007	0.0111
June	12	127	734	0.0023	0.0134
June	13	1328	2062	0.0242	0.0376
June	14	1065	3127	0.0194	0.0570
June	15	1036	4163	0.0189	0.0758
June	16	488	4651	0.0089	0.0847
June	17	186	4837	0.0034	0.0881
June	18	28	4865	0.0005	0.0886
June	19	1011	5876	0.0184	0.1070
June	20	180	6056	0.0033	0.1103
June	21	6031	12087	0.1099	0.2202
June	22	12106	24193	0.2205	0.4407
June	23	1636	25829	0.0298	0.4705
June	24	308	26137	0.0056	0.4761
June	25	354	26491	0.0064	0.4825
June	26	810	27301	0.0148	0.4973
June	27	384	27685	0.0070	0.5043
June	28	162	27847	0.0030	0.5072
June	29	513	28360	0.0093	0.5166
June	30	36	28396	0.0007	0.5172
July	1	207	28603	0.0038	0.5210
July	2	334	28937	0.0061	0.5271
July	3	124	29061	0.0023	0.5293
July	4	224	29285	0.0041	0.5334
July	5	159	29444	0.0029	0.5363
July	6	43	29487	0.0008	0.5371
July	7	45	29532	0.0008	0.5379
July	8	80	29612	0.0015	0.5394
July	9	175	29787	0.0032	0.5426
July	10	134	29921	0.0024	0.5450
July	11	42	29963	0.0008	0.5458
July	12	19	29982	0.0003	0.5461
July	13	13	29995	0.0002	0.5464
July	14	106	30101	0.0019	0.5483
July	15	424	30525	0.0077	0.5560
July	16	565	31090	0.0103	0.5663
July	17	240	31330	0.0044	0.5707
July	18	263	31593	0.0048	0.5755
July	19	538	32131	0.0098	0.5853
July	20	215	32346	0.0039	0.5892
July	21	115	32461	0.0021	0.5913
July	22	186	32647	0.0034	0.5947
July	23	178	32825	0.0032	0.5979
July	24	903	33728	0.0164	0.6144
July	25	537	34265	0.0098	0.6241
July	26	204	34469	0.0037	0.6279
July	27	234	34703	0.0043	0.6321
July	28	304	35007	0.0055	0.6377
July	29	582	35589	0.0106	0.6483
July	30	679	36268	0.0124	0.6606
July	31	662	36930	0.0121	0.6727
Aug.	1	1123	38053	0.0205	0.6931
Aug.	2	118	38171	0.0021	0.6953
Aug.	3	186	38357	0.0034	0.6987
Aug.	4	350	38707	0.0064	0.7050
Aug.	5	496	39203	0.0090	0.7141
Aug.	6	521	39724	0.0095	0.7236
Aug.	7	116	39840	0.0021	0.7257
Aug.	8	631	40471	0.0115	0.7372
Aug.	9	946	41417	0.0172	0.7544
Aug.	10	1301	42718	0.0237	0.7781
Aug.	11	511	43229	0.0093	0.7874
Aug.	12	287	43516	0.0052	0.7926
Aug.	13	306	43822	0.0056	0.7982
Aug.	14	534	44356	0.0097	0.8079
Aug.	15	462	44818	0.0084	0.8164
Aug.	16	368	45186	0.0067	0.8231
Aug.	17	175	45361	0.0032	0.8262

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Appendix F.115. (page 2 of 2).

Date		Daily Count	Cumulative Count	Daily Proportion of Total	Cumulative Proportion of Total
Aug.	18	281	45642	0.0051	0.8314
Aug.	19	31	45673	0.0006	0.8319
Aug.	20	95	45768	0.0017	0.8337
Aug.	21	1235	47003	0.0225	0.8562
Aug.	22	356	47359	0.0065	0.8626
Aug.	23	164	47523	0.0030	0.8656
Aug.	24	186	47709	0.0034	0.8690
Aug.	25	251	47960	0.0046	0.8736
Aug.	26	506	48466	0.0092	0.8828
Aug.	27	240	48706	0.0044	0.8872
Aug.	28	709	49415	0.0129	0.9001
Aug.	29	716	50131	0.0130	0.9131
Aug.	30	423	50554	0.0077	0.9208
Aug.	31	297	50851	0.0054	0.9262
Sept.	1	452	51303	0.0082	0.9345
Sept.	2	230	51533	0.0042	0.9387
Sept.	3	502	52035	0.0091	0.9478
Sept.	4	571	52606	0.0104	0.9582
Sept.	5	207	52813	0.0038	0.9620
Sept.	6	201	53014	0.0037	0.9656
Sept.	7	101	53115	0.0018	0.9675
Sept.	8	122	53237	0.0022	0.9697
Sept.	9	136	53373	0.0025	0.9722
Sept.	10	92	53465	0.0017	0.9739
Sept.	11	123	53588	0.0022	0.9761
Sept.	12	133	53721	0.0024	0.9785
Sept.	13	151	53872	0.0028	0.9813
Sept.	14	157	54029	0.0029	0.9841
Sept.	15	133	54162	0.0024	0.9866
Sept.	16	87	54249	0.0016	0.9881
Sept.	17	59	54308	0.0011	0.9892
Sept.	18	31	54339	0.0006	0.9898
Sept.	19	15	54354	0.0003	0.9901
Sept.	20	23	54377	0.0004	0.9905
Sept.	21	19	54396	0.0003	0.9908
Sept.	22	75	54471	0.0014	0.9922
Sept.	23	10	54481	0.0002	0.9924
Sept.	24	25	54506	0.0005	0.9928
Sept.	25	29	54535	0.0005	0.9934
Sept.	26	24	54559	0.0004	0.9938
Sept.	27	28	54587	0.0005	0.9943
Sept.	28	40	54627	0.0007	0.9950
Sept.	29	56	54683	0.0010	0.9960
Sept.	30	14	54697	0.0003	0.9963
Oct.	1	26	54723	0.0005	0.9968
Oct.	2	8	54731	0.0001	0.9969
Oct.	3	23	54754	0.0004	0.9973
Oct.	4	12	54766	0.0002	0.9976
Oct.	5	10	54776	0.0002	0.9977
Oct.	6	4	54780	0.0001	0.9978
Oct.	7	37	54817	0.0007	0.9985
Oct.	8	3	54820	0.0001	0.9985
Oct.	9	26	54846	0.0005	0.9990
Oct.	10	7	54853	0.0001	0.9991
Oct.	11	27	54880	0.0005	0.9996
Oct.	12	7	54887	0.0001	0.9998
Oct.	13	3	54890	0.0001	0.9998
Oct.	14	3	54893	0.0001	0.9999
Oct.	15	1	54894	0.0000	0.9999
Oct.	16	1	54895	0.0000	0.9999
Oct.	17	5	54900	0.0001	1.0000
Oct.	18	0	54900	0.0000	1.0000
Oct.	19	0	54900	0.0000	1.0000
Oct.	20	0	54900	0.0000	1.0000
Oct.	21	0	54900	0.0000	1.0000
Oct.	22	0	54900	0.0000	1.0000
Oct.	23	0	54900	0.0000	1.0000
Oct.	24	0	54900	0.0000	1.0000
Oct.	25	0	54900	0.0000	1.0000
Oct.	26	0	54900	0.0000	1.0000
Oct.	27	0	54900	0.0000	1.0000
Oct.	28	0	54900	0.0000	1.0000
Oct.	29	0	54900	0.0000	1.0000
Oct.	30	0	54900	0.0000	1.0000

Mean Day of Migration = July 15 Variance = 841.3 Days squared

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