2188
DFO - Library / MPO - Bibliothèque
12022557

Scientific Excellence • Resource Protection & Conservation • Benefits for Canadians
Excellence scientifique • Protection et conservation des ressources • Bénéfices aux Canadiens

1992 Wannock River Chinook Salmon Mark-Recapture Experiment

I. Winther

Department of Fisheries and Oceans
Fisheries Branch
417 2nd Avenue West
Prince Rupert, B.C.
V8J 1G8

June 1993

SH
223
F55
#2188
c.1

Canadian Manuscript Report of Fisheries and Aquatic Sciences No. 2188

Fisheries and Oceans Pêches et Océans

Canada

Canadian Manuscript Report of Fisheries and Aquatic Sciences

Manuscript reports contain scientific and technical information that contributes to existing knowledge but which deals with national or regional problems. Distribution is restricted to institutions or individuals located in particular regions of Canada. However, no restriction is placed on subject matter, and the series reflects the broad interests and policies of the Department of Fisheries and Oceans, namely, fisheries and aquatic sciences.

Manuscript reports may be cited as full publications. The correct citation appears above the abstract of each report. Each report is abstracted in *Aquatic Sciences and Fisheries Abstracts* and indexed in the Department's annual index to scientific and technical publications.

Numbers 1 900 in this series were issued as Manuscript Reports (Biological Series) of the Biological Board of Canada, and subsequent to 1937 when the name of the Board was changed by Act of Parliament, as Manuscript Reports (Biological Series) of the Fisheries Research Board of Canada. Numbers 901 1425 were issued as Manuscript Reports of the Fisheries Research Board of Canada. Numbers 1426 1550 were issued as Department of Fisheries and the Environment, Fisheries and Marine Service Manuscript Reports. The current series name was changed with report number 1551.

Manuscript reports are produced regionally but are numbered nationally. Requests for individual reports will be filled by the issuing establishment listed on the front cover and title page. Out-of-stock reports will be supplied for a fee by commercial agents.

Rapport manuscrit canadien des sciences halieutiques et aquatiques

Les rapports manuscrits contiennent des renseignements scientifiques et techniques qui constituent une contribution aux connaissances actuelles, mais qui traitent de problèmes nationaux ou régionaux. La distribution en est limitée aux organismes et aux personnes de régions particulières du Canada. Il n'y a aucune restriction quant au sujet; de fait, la série reflète la vaste gamme des intérêts et des politiques du ministère des Pêches et des Océans, c'est-à-dire les sciences halieutiques et aquatiques.

Les rapports manuscrits peuvent être cités comme des publications complètes. Le titre exact paraît au-dessus du résumé de chaque rapport. Les rapports manuscrits sont résumés dans la revue *Résumés des sciences aquatiques et halieutiques*, et ils sont classés dans l'index annuel des publications scientifiques et techniques du Ministère.

Les numéros 1 à 900 de cette série ont été publiés à titre de manuscrits (série biologique) de l'Office de biologie du Canada, et après le changement de la désignation de cet organisme par décret du Parlement, en 1937, ont été classés comme manuscrits (série biologique) de l'Office des recherches sur les pêcheries du Canada. Les numéros 901 à 1425 ont été publiés à titre de rapports manuscrits de l'Office des recherches sur les pêcheries du Canada. Les numéros 1426 à 1550 sont parus à titre de rapports manuscrits du Service des pêches et de la mer, ministère des Pêches et de l'Environnement. Le nom actuel de la série a été établi lors de la parution du numéro 1551.

Les rapports manuscrits sont produits à l'échelon régional, mais numérotés à l'échelon national. Les demandes de rapports seront satisfaites par l'établissement auteur dont le nom figure sur la couverture et la page du titre. Les rapports épuisés seront fournis contre rétribution par des agents commerciaux.

835.

Canadian Manuscript Report of
Fisheries and Aquatic Sciences No. 2188

June 1993

1992 Wannock River Chinook Salmon Mark-Recapture Experiment

Department of Fisheries & Oceans
SEP 7 1993
Ministère des Pêches et des Océans
OTTAWA

by

Ivan Winther

Department of Fisheries and Oceans
Fisheries Branch
Prince Rupert, B.C.
V8J-1G8

© Minister of Supply and Services Canada 1993
Cat. No. Fs 97-4/2188E ISSN 0706-6473

Correct citation for this publication:

Winther, I. 1993. 1992 Wannock River chinook salmon mark-recapture experiment. Can. Manuscr. Rep. Fish. Aquat. Sci. 2188: iv + 56 p.

ABSTRACT

Winther, I. 1993. 1992 Wannock River chinook salmon mark-recapture experiment. Can. Manuscr. Rep. Fish. Aquat. Sci. 2188: iv + 56 p.

A mark-recapture experiment was implemented in 1992 as part of the continued assessment of chinook salmon *(Onchorynchus tshawytscha)* escapements to the Wannock River. The Canadian Department of Fisheries and Oceans committed to halting the decline of chinook salmon stocks as part of the Pacific Salmon Treaty of 1985. This study provides information to the evaluation of the stock. The escapement of female chinook salmon to the Wannock River in 1992 was estimated at 5200 to 5400 using Bayesian techniques. Length, age and fin clip information are presented.

RESUME

Winther, I. 1993. 1992 Wannock River chinook salmon mark-recapture experiment. Can. Manuscr. Rep. Fish. Aquat. Sci. 2188: iv + 56 p.

Une expérience de capture-recapture a été effectuée en 1992, dans le cadre du programme d'évaluation des échappées de saumon quinnat (*Onchorynchus tshawytscha*) dans la rivière Wannock. Le ministère des Pêches et des Océans du Canada s'est engagé à freiner le déclin des stocks de saumon quinnat, dans le cadre du Traité concernant le saumon du Pacifique (1985). Cette étude fournit de l'information pour l'évaluation des stocks. En 1992, on a estimé que le nombre d'échappées de quinnats femelles dans la rivière Wannock se situait entre 5 200 et 5 400 (méthodes bayesiennes). L'étude donne de l'information sur la taille, l'âge et le rognage des nageoires.

TABLE OF CONTENTS

Abstract/Resume iii
Introduction 1
Methods 1
Results 4
Discussion 9
Acknowledgements 12
References 12

List of Tables:
Table 1. Seine catch 15
Table 2. Male chinook length frequency summary. 16
Table 3. Female chinook length frequency summary 17
Table 4. Sexual composition of chinook samples. 18
Table 5. Female recoveries by condition on release. 18
Table 6. Female recoveries by number of seine recaptures. . 20
Table 7. Recoveries by dead pitch area. 21
Table 8. Female recoveries by week of mark application. . . 21
Table 9. Female recoveries by week of dead pitch. 21
Table 10. Female recovery matrix, week of application verses week of dead pitch. 22
Table 11. Egg retention in dead pitch recoveries. 22
Table 12. Male recoveries by treatment on release. 22
Table 13. Male recoveries by number of seine recaptures. . . 24
Table 14. Male recoveries by week of mark application. . . . 24
Table 15. Male recoveries by week of dead pitch. 24
Table 16. Incidence of chinook fin clips. 25
Table 17. Coded wire tag data. 26
Table 18. Length at age data for chinook samples. 27
Table 19. Weather and water conditions. 28

List of Figures:
Figure 1. Wannock River, Rivers Inlet, British Columbia. . . 13
Figure 2. Female chinook population posterior probability distribution. 14
Figure 3. Length frequency distribution of seine caught female chinook. 19
Figure 4. Length frequency distribution of dead pitched female chinook 19
Figure 5. Length frequency distribution of seine caught male chinook 23
Figure 6. Length frequency distribution of dead pitched male chinook. 23

List of Appendices:
Appendix 1. Chinook marking data. 29
Appendix 2. Chinook dead pitch data. 44
Appendix 3. Data for male chinook mark recoveries. 55
Appendix 4. Data for female chinook mark recoveries. 56

INTRODUCTION

A mark-recapture experiment was conducted on Wannock River chinook salmon in 1992 to estimate the size of the spawning population.

The Wannock River flows into the head of Rivers Inlet from Owikeno Lake. Rivers Inlet is located in the Central Coast of British Columbia approximately 400 km north of Vancouver. Winther (1992) provides a full description of the study area (Figure 1).

The Wannock River has the largest chinook salmon stock in the stock complex referred to as Rivers Inlet by the Pacific Salmon Commission Joint Chinook Technical Committee (Anon. 1991). Wannock River escapements have historically contributed over 80% of chinook to the Rivers Inlet stock complex (Goruk & Winther 1992). The goal set by the Pacific Salmon Treaty Chinook Rebuilding Program was to reach a spawning escapement of 4950 chinook to Rivers Inlet stocks. The goal was derived from twice the average escapement for the period of 1979 to 1982 (Anon. 1991). Winther (1992) reviewed historical methods of determining escapement to the Wannock River with the conclusion that changes in method have made the determination of population trends difficult.

Mark-recapture experiments on chinook salmon have a 20 year history in the Wannock River but were rarely sufficient in magnitude to provide information on population trends (Winther 1992). The following report details the second year of live marking and carcass recovery programs designed to determine chinook population trends in the Wannock River. Revisions to the program design were based on recommendations made by Winther (1992).

METHODS

Mark Application

Chinook were captured from the Spring Pool of the Wannock River with a beach seine. Seining took place on 17 days between October 6 to October 31, 1992.

The seine net was 84 m long and 10 m deep. A purse line was located 45 cm above the lead line to form a skirt. This minimized snagging obstructions on the river bottom while preventing most fish from escaping under the lead line. The net was composed of three strips of web running longitudinally below the cork line, 3.8 cm mesh at the top, 5 cm mesh in the middle and 3.8 cm mesh at the bottom.

The net was employed by towing it with a jet boat into the river along an anchor line, then in an arc downstream to the beach. A chain saw winch was used to assist in pulling the net to the

beach. The net was pursed against the beach, trapping fish in a bag of web.

Data were recorded on waterproof forms. Date, weather, river level and secchi disk depth was recorded for each day of marking. Time, set number and catch were recorded for each set.

Captured chinook were measured for POH length, sexed by external morphology, checked for fin clips, marked, and released. Condition on release was noted as 1) good, 2) required resuscitation, 3) bleeding, 4) killed for adipose clip sampling or 5) spawned out. Additional comments were recorded on the presence of hooks, fungal growth or seal scars. Marking consisted of punching a 7 mm hole and applying a tag to the left operculum. Tags were individually numbered metal Kurl Lock tags designed for sheep ear tagging by Ketchum Manufacturing Company. The tags were applied with specially modified pliers. Two tag sizes were used: a 30 mm tag for females and large males and a 25 mm tag for small males. (Tag lengths are approximate, measured after application.) Set number, tag number, POH length, sex, condition, and fin clip data were recorded for each new fish encountered. Set number and tag number were recorded for recaptured fish. New tags were applied to fish recaptured with an opercular punch and no tag.

Adipose clipped chinook less than 65 cm POH length caught in the seine were kept for coded wire tag (CWT) sampling. CWT sampling consisted of measuring POH length, collecting scales and collecting the head. Scales were forwarded to the Fish Morphology Laboratory in Vancouver for ageing and heads were forwarded to the Snootli Hatchery in Bella Coola for dissection and CWT identification.

Carcass Recovery

Carcasses were collected daily from the banks of the Wannock River from October 27 to November 27, 1992. Data were recorded on waterproof forms. Date, weather and area surveyed were recorded daily. Each fish was sampled, cut in half and returned to the river or bank. The river was divided into four zones and separated by the north and south bank for eight possible areas of carcass recovery (Figure 1). The area of recovery was noted for each chinook carcass. Carcasses were measured for POH length, incised to determine sex, and checked for tags, opercular punches and fin clips. The number of eggs retained in females was estimated. Scale samples were collected with the guideline of 25 fish for the weeks beginning November 1 and November 28, and 50 fish per week for the three weeks of November 7 to November 28. Actual scale collections were more sporadic than the guidelines. Heads were collected from all fin clipped chinook carcasses recovered.

Analysis

1) Population Estimation

Female population size was estimated using a sequential Bayes algorithm as described by Gazey & Staley (1986). Calculations of the Bayesian estimation of posterior probability were based on 91 (K=91) discrete population levels in increments of 100 between 1000 and 14000 female chinook (N_1=1000, N_2=1100,..., N_{91}=14000) for a single time period (T=1). The probability of observing all R_t's given the population size N_i over T sampling intervals given:

M_t = total marked fish at the start of sampling interval t;
C_t = total number of fish sampled during interval t; and
R_t = number of recaptures in the sample C_t was:

$$P(N_t | R_1, R_2, \ldots R_T) = \frac{\prod_{t=1}^{T} \left(\frac{1}{N_t}\right)^{R_t} \left(1-\frac{M_t}{N_t}\right)^{C_t-R_t}}{\sum_{I=1}^{K} \prod_{t=1}^{T} \left(\frac{1}{N_T}\right)^{R_t} \left(1-\frac{M_t}{N_t}\right)^{C_t-R_t}}$$

The 95% standardized probability region was calculated as the interval between bounds a and b such that $P(N<a)=0.025$ and $P(N>b)=0.025$. The highest probability density was calculated as the narrowest interval between a and b (ie. $b-a$ was minimal) with $P(a<N<b)=0.95$.

The Chapman modification of Petersen mark recapture analysis (Ricker 1975) was presented for comparison. The formula used for the population estimate was:

$$N = \frac{(M+1)\,(C+1)}{(R+1)}$$

where: N = the population estimate;
M = total fish marked;
C = total fish caught in the recovery sample;
R = the number of marked fish recaptured in sample C.

The 95% confidence limits about the Petersen population estimate was calculated by inserting values for R from tables of confidence limits for variables distributed in a Poisson frequency distribution (Ricker 1975, p. 343).

The Schaefer method of stratified tagging and recovery (Ricker 1975) was performed as a check of variability of conditions during the mark-recovery procedures using the formula:

$$N=\Sigma\left(R_{ij}\frac{M_iC_j}{R_iC_j}\right)$$

The notation was the same as for the Petersen estimate with subscripts i and j referring to the weeks of application and recovery respectively.

2) Identification of Bias

Tests were performed to identify potential sources of bias to the population estimation procedure to assess generally whether the samples met the assumption of equal probability of selection. Sample statistics of sex, time and size were compared with the expectation that random samples of the same population would have the same characteristics. Similarly, the characteristics of marked and unmarked components of the recovery sample were expected to be the same, as were the recovered and not recovered components of the application sample.

Kolmogorov-Smirnov two sample tests (Sokal & Rohlf 1981) were used to compare length frequency distributions of the application and recovery samples, of marked and unmarked components of the recovery sample, and of recovered and not recovered components of the application samples.

Chi squared contingency tables (Zar 1985) were used to determine sexual, temporal and spatial bias in the application and recovery samples. All tests were made to the 5% level of probability ($p < .05$).

RESULTS

Data collection

Field staff captured and marked chinook for 17 days from October 6 to October 31. Additional seining took place to November 7 for the collection of brood stock. Mark and recapture histories for every chinook handled in the seine to October 31 appear in Appendix 1. The numbers of marked chinook recaptured per set were recorded but records were not kept of the individual tag identification numbers of chinook recaptured after October 31. Seine catch per set appears in Table 1.

Chinook dead pitch data are listed in Appendix 2. Data for dead pitch recoveries of marked males and females respectively appear in Appendices 3 and 4.

The total number of unique chinook encountered in the seining procedure was not calculable because marking was terminated on

October 31. A minimum number of unique individuals seined was determined by the total number of mark releases, less the number of retags, plus the number unmarked chinook killed for brood stock and adipose clip sampling. At least 668 male and 552 female chinook were encountered during marking and brood stock collection. Dead pitch recoveries were 247 male, 363 female and 8 unknown sex chinook encountered. A total of 51 marked fish were recovered in the dead pitch. Assuming no marks were missed, a minimum of 1787 unique chinook were encountered in the study.

Tables 2 and 3 are length frequency summaries of seine catch and dead pitch samples for male and female chinook respectively. These tables also provide an account of chinook of unknown length. The only chinook encountered in the study that do not appear in Tables 2 and 3 are 8 chinook of unknown sex from the dead pitch. Only 1 of these chinook was in good enough condition to have POH length measured; it was 730 mm long.

Population Estimation

The spawning population estimate of female chinook in the Wannock River in 1992 was 5200 to 5400. This reflects the mode of the posterior probability distribution presented in Figure 2. Estimates were based on 439 prespawn females marked and released, 363 females dead pitched and 30 marked females recovered. The interval between each probability evaluation was 100 fish, thus the mode of the probability distribution was within plus or minus one interval of the population evaluation with the highest probability, 5300. The 95% probability quantiles were 4000 and 8000. The 95% highest probability density was between 3800 and 7700.

The Petersen population estimate was 5166 female chinook with a 95% confidence interval of 3657 to 7555.

An unbiased estimate of the male chinook population was impossible due to sample selectivity (see bias tests on male chinook below).

Bias Testing

Actual population parameters of the Wannock River chinook were unknown so sample statistics were compared between the seine catch (mark application) and the dead pitch (mark recovery) samples to determine bias direction and type. The analytical procedure was to identify bias and, if possible, stratify the samples to remove it.

The seine and dead pitch samples were found to be different in sexual composition. Sexual composition of the samples and sample components are summarized in Table 4. Significantly more males than females were caught in the seine than were recovered in the dead pitch thus the samples were stratified by sex. The removal of brood stock did not induce sexual bias as the sexual composition of

chinook marked releases (brood stock removed) was not different from the seine catch.

Bias Tests on Female Chinook

POH length comparisons suggest no size selectivity due to sampling for female chinook. The length frequency distribution (LFD) of female chinook in the dead pitch was not different from that of females in the seine catch. The LFD of female chinook marked and released (brood stock removed) was not different from that of the dead pitch sample. This suggests that the brood stock removal did not bias the LFD of the female marked releases. Female LFD's are compared in Figures 3 and 4.

The comparison of the LFD's of marked to unmarked female chinook in the dead pitch sample were not different. Also, the LFD of female chinook released and recovered in the dead pitch was not different from the LFD of female chinook released and not recovered. The removal of females marked after spawning from the chinook releases did not affect any of the results of the analyses of LFD.

Marked chinook received one of four condition/treatment codes prior to release; 1) good condition, 2) bleeding, 3) spawned out, and 4) held for brood stock. A fifth possibility (resuscitated) was not used as none of the marked fish required resuscitation on release. Table 5 examines the recovery of females for each type of treatment. The incidence of recovery was higher for females marked after spawning than for other treatments. They were left out of the final female population analysis. Although none of the females that were bleeding or held for brood stock were recovered, this did not differ significantly from the recoveries of females in good condition when compared using a chi squared contingency table. Chinook coded as bleeding most often suffered from a slight bleed due to the opercular punch and were not bleeding from the gills. Several of the chinook originally coded as bleeding were recaptured in good condition. Marked chinook released from brood stock holding pens were in good condition. Females held for brood stock before release and bleeding females were not removed from the final population analysis.

Chinook were recaptured as many as 7 times during the mark application process. Recovery in the dead pitch was independent of the number of times the chinook were recaptured in the seine. Table 6 depicts recovery by number of recaptures in the seine for the four treatments indicated in Table 5.

The numbers of marked and unmarked carcasses collected were compared by the area in the river that they were recovered (Table 7). The ratio of marked to unmarked chinook dead pitched did not differ significantly by area indicating no spatial bias.

Temporal bias was not indicated for either the mark application or recovery samples of female chinook. Female chinook mark recoveries by week of mark application are noted in Table 8. The proportion of females recovered did not differ significantly by week of mark application. Female chinook mark recoveries by week of dead pitch are noted in Table 9. The proportion of females recovered did not differ significantly by week of recovery.

An estimate of the female population size using the Schaefer method could not be compared directly with other estimates as the period of mark application could not be determined for 5 females recovered with marks. This resulted form either loss of the tag, leaving the recovered chinook with only an opercular punch, or abrasion of the tag obliterating the identification number. The Schaefer method provided an indication of the lack of temporal bias when compared with a Petersen estimate using the same data (only 25 recoveries). The stratification of female recoveries into week of mark application and week of recovery did not significantly change the population estimate. The Petersen and Schaefer methods were within 1 percent, providing estimates of 6168 and 6228 respectively. Table 10 shows the matrix of female chinook recoveries for week of mark application by week of recovery.

Egg Retention

The marking process did not affect egg retention in females collected in the dead pitch. Chi squared analysis of the data in Table 11 showed egg retention to be independent of mark incidence. There was no evidence of female prespawn mortality due to the capture and marking process.

Bias tests on Male Chinook

Male bias was associated with size. The LFD of male chinook captured in the seine differed significantly from the LFD of chinook in the dead pitch (Figures 5 and 6.) Chinook below 650 mm POH length had a very small representation in the dead pitch sample but comprised a significant portion of the seine catch. The brood stock removal did not affect the LFD of the final male chinook mark releases as the LFD of the seine catch did not differ from the LFD of the mark releases. LFD comparison of marked to unmarked components of the dead pitch differed as did comparison of LFD's of recovered and non recovered components of the seine catch.

Male chinook received the same classification of treatments as females before being released (good, bleeding, spawned out and held for brood stock). There was no significant difference in the relative number of marked males recovered as compared to mark releases by treatment (Table 12).

Male chinook recoveries in the dead pitch were not associated with the number of times the fish were captured in the seine for

marking. Data are presented in Table 13.

Male chinook recoveries were not associated with area of recovery in the dead pitch, as observed for females (Table 7).

There was no time bias associated with the male data. Recoveries were not associated with the week of mark application (Table 14) and were not associated with the week of dead pitch (Table 15).

Tag Loss

Three female and 15 male chinook recaptured in the seine were missing tags. Most of the chinook that needed to be retagged were small males that had been marked with smaller tags (Table 2). No test was made of the number of marks that were missed. Procedures required that field personnel measure and mark every fish captured in the seine making it unlikely that an opercular punch was missed in the process of applying a new punch and tag.

Only 2 females and 1 male recovered during the dead pitch were missing tags (opercular punches only). No repitches were performed to determine the number of marks missed. Field personnel were required to measure every carcass to provide length information and reduce the chance of missing marks.

Some tag numbers were difficult to identify because of abrasion. It was unclear whether the abrasion occurred before or after the fish died.

Some tag loss may be attributable to scavengers. Gulls were observed picking at the tags of marked carcasses.

Sexing by external morphology

Thirty-one marked females recovered in the dead pitch had sex data for both marking and recovery. Only 1 was misidentified in the tagging procedure. It was a 650 mm POH length female originally sexed as a male from external morphology. All of the 12 males with marking and dead pitch data were sexed correctly.

Sex verification data available from brood stock collections showed 2 females were misidentified as males in the tagging process. The misidentified females were 745 and 800 mm POH length. Data were available for 46 females and 32 males. All males were sexed correctly.

The error in identification of sex from external morphology appeared to be less than 4%. In all cases females were misidentified as males.

Fin clips

Table 16 breaks down fin clip recoveries by sample, sex and clip type. CWT pins were present in 11 of 14 heads dissected from adipose clip recoveries. CWT data are presented in Table 17.

Age Data

Table 18 presents length and age data of chinook sampled as part of the brood stock (from seine catch) and dead pitch operations. There was no difference in female age composition between samples. Samples were composed of approximately two thirds age 4_1 and one third age 5_1 female chinook. Age 6_1 female chinook formed a small component (less than 4 percent) of the dead pitch sample. Age sub samples of female chinook appeared representative of the total samples as the length frequencies were similar.

The age composition of male chinook was unclear. The difference in length frequency distributions between seine and dead pitch samples predicated differences in age composition. Age 2_1 and 3_1 males were not present in the dead pitch sub sample. The age sub sample from the dead pitch appeared representative but the age sub sample (brood stock) of the seine catch was not. The LFD of brood stock males differed from the LFD for the total seine catch. Male chinook less than 500 mm POH length composed a smaller proportion of the brood stock sub sample than the total seine catch. When the length at age data from Table 18 were compared with the total seine catch (Figure 5) it was evident that age 2_1 and 3_1 males composed more significant proportions of the catch. Both seine and dead pitch samples show a predominance of age 4_1 male chinook with smaller age 5_1 and 6_1 components.

Environmental conditions

Weather and water levels for the duration of the study are presented in Table 19. Conditions were generally unstable. Heavy rains elevated the river to levels where beach seining was no longer effective at capturing chinook. Seining was difficult at levels over 10 feet with catches declining to nil as the level reached 12 feet. Historically, flood events have been common during October and November and have adversely affected the ability to capture chinook and recover carcasses (Winther 1992).

DISCUSSION

Overestimation is common to closed model population estimates like this one. Although a major objective of the program was to determine population size for the purpose of determining trends, the estimate produced cannot be considered absolute and should only be compared to estimates produced using similar methods. Consequently, comparisons to visual estimates made prior to 1991

are impossible without some calibration of the various methods used historically.

The 1992 population of female chinook in the Wannock River was not significantly different from 1991. Winther (1992) estimated the 1991 Wannock River spawning population at approximately 4000 female chinook. The information provided by this study estimates the 1992 population of female chinook at approximately 5300. Although the mode of the 1992 probability distribution was higher than 1991, the distributions overlap considerably. The 95% highest probability density was between 2250 and 7700 in 1991 and was between 3800 and 7700 in 1992. The broader standardized probability region in 1991 was the result of fewer mark recoveries (12).

Winther (1992) discussed basic mark recapture assumptions as they applied to the situation of Wannock River chinook salmon. Minor changes to the program in 1992 were aimed at providing further information to whether basic assumptions were met.

Although there was no measurable temporal bias, the high seine catch at the beginning of the program suggests that chinook from the start of the run may not have been marked. Future marking programs might start earlier as there appeared to be an opportunity to apply marks before October 6.

Bias was measured in the POH length data for male chinook but length frequency analyses of the male mark recoveries suffered from the small sample size (12). The LFD of male chinook marked and recovered differed form the LFD of male chinook marked and not recovered. This was expected as small males were not represented in the dead pitch. The LFD of marked males recovered in the dead pitch differed form the LFD of unmarked males in the dead pitch. If mark application was random, the size selection process evident in the dead pitch sample should have affected marked and unmarked fish equally with LFD's being similar for the two components. Either the small sample size didn't allow for an adequate representation of the LFD of the male mark recoveries or there was some process of selection in the application of marks.

Chinook less than approximately 650 mm POH length were not represented in the dead pitch sample. In an attempt to provide an unbiased estimate for large chinook, comparisons were made of the POH length data truncated at a lower bound of 650 mm. Bias (although less) still existed between the length frequencies of the seine and dead pitch samples. The marked and unmarked components of the truncated dead pitch sample had different length frequencies and the recovered and non recovered components of the truncated seine releases had different length frequencies. Bias in the male length data was not corrected by excluding small chinook. Similarly, size bias did not allow for an estimate of the male population in 1991 (Winther, 1992).

If the sources of selectivity were independent and/or the seine sample was non selective, (selection being obvious in the dead pitch sample) a population estimate for males could have met the assumption of equal probability of selection. (Junge 1963) Assuming size bias was not evident in the seine sample, the male population estimate would have been between 11,000 and 12,000. (Based on 583 marked releases of prespawn male chinook and examination of 247 male chinook carcasses for 12 mark recoveries.) If seine catch was non selective by sex, the male:female ratio could be used to derive an estimate of the male population from the female population estimate. The sex ratio in the seine catch was 1.2 males per female. Assuming no sexual bias and 5300 females, the male estimate would have been 6360. The male population estimate based on mark recoveries was twice the estimate based on sex ratio. It was evident that in making either assumption the male population estimate became subject to gross errors.

An attempt was made to use recaptures in the mark application procedure as a sequential mark-recapture experiment using the Bayesian algorithm described by Gazey and Staley (1986). Comparisons of plots of the posterior population distribution were made between days and between weeks of mark application. The result, regardless of the time period used for each iteration, was a continuous upward trend in the most probable population estimate at each iteration. This was the case for both males and females. A basic assumption had been violated; either the population was increasing through the sample period, or the marked fish were not mixing with the rest of the population, or both. It was reasonable to expect that new fish were arriving throughout the period of marking and that marked fish did not distribute themselves through the population immediately upon release.

ACKNOWLEDGEMENTS

Thanks to K. Hansen for supervising the project and entering the data. S. Cox assisted with data entry. The field survey crew consisted of W.V. Sampson, C. Johnson, F. Smith, F. Hanuse, P. Johnson, B. Hamilton, and A. Johnson.

The project proposal was reviewed by the Oweekeno Band and R.D. Goruk, G.J. Savard, D.D. Bailey, R.G. Bonnell, S.J. MacLaurin, and R. Tupniak of the Department of Fisheries and Oceans.

REFERENCES

Anon. 1991. Pacific Salmon Commission Joint Chinook Technical Committee 1990 annual report: Report TCChinook (91)-3: xiv + 49 p. + appendices.

Gazey, W.J. and M.J. Staley. 1986. Population estimation from mark-recapture experiments using a sequential Bayes algorithm. Ecology 67(4): 941-951.

Goruk, R.D. and I. Winther. 1992. Salmon escapement and timing data for statistical areas 6 to 10 of the Central Coast of British Columbia: Supplement edition II. Department of Fisheries and Oceans unpublished report.

Junge, C.O. 1963. A quantitative evaluation of the bias in population estimates based on selective samples. In North Atlantic Fish Marking Symposium. Int. Comm. North Atl. Fish. Spec. Publ. 4: 26-28.

Ricker, W.E. 1975. Computation and interpretation of biological statistics of fish populations. Bull. Fish. Res. Board Can. 191: 382 p.

Sokal, R.R. and F.J. Rohlf. 1981. Biometry. Second edition. W.H. Freeman and Co. San Francisco. 859 p.

Winther, I. 1992. 1991 Wannock River chinook salmon mark-recapture experiment. Can. Manuscr. Rep. Fish. Aquat. Sci. 2168. iv + 37 p.

Zar, J.H. 1984. Biostatistical Analysis. Second edition. Prentice Hall, Inc. Englewood Cliffs N.J. 718 p.

Figure 1. Wannock River, Rivers Inlet, British Columbia.

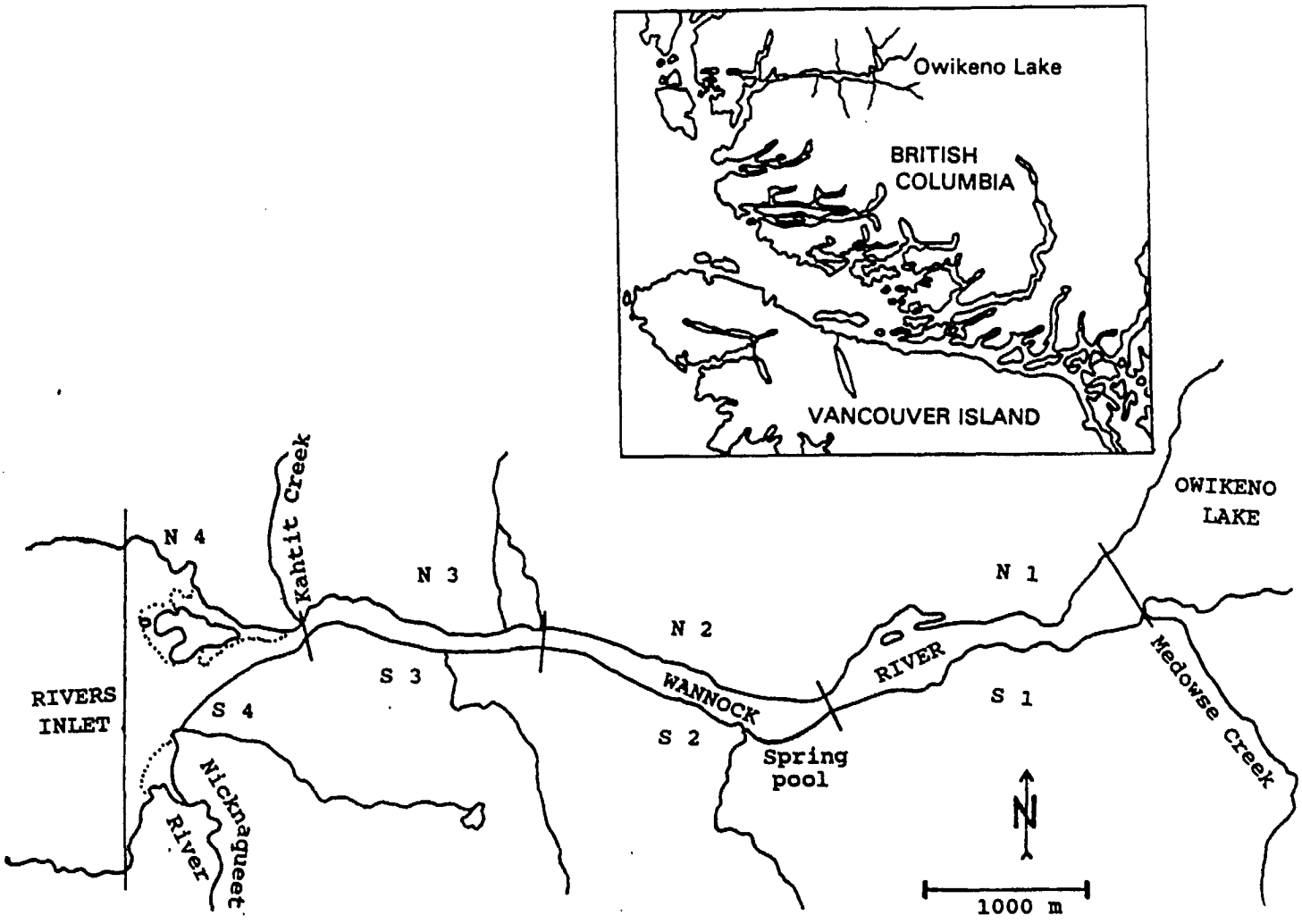


Figure 2. Female chinook population

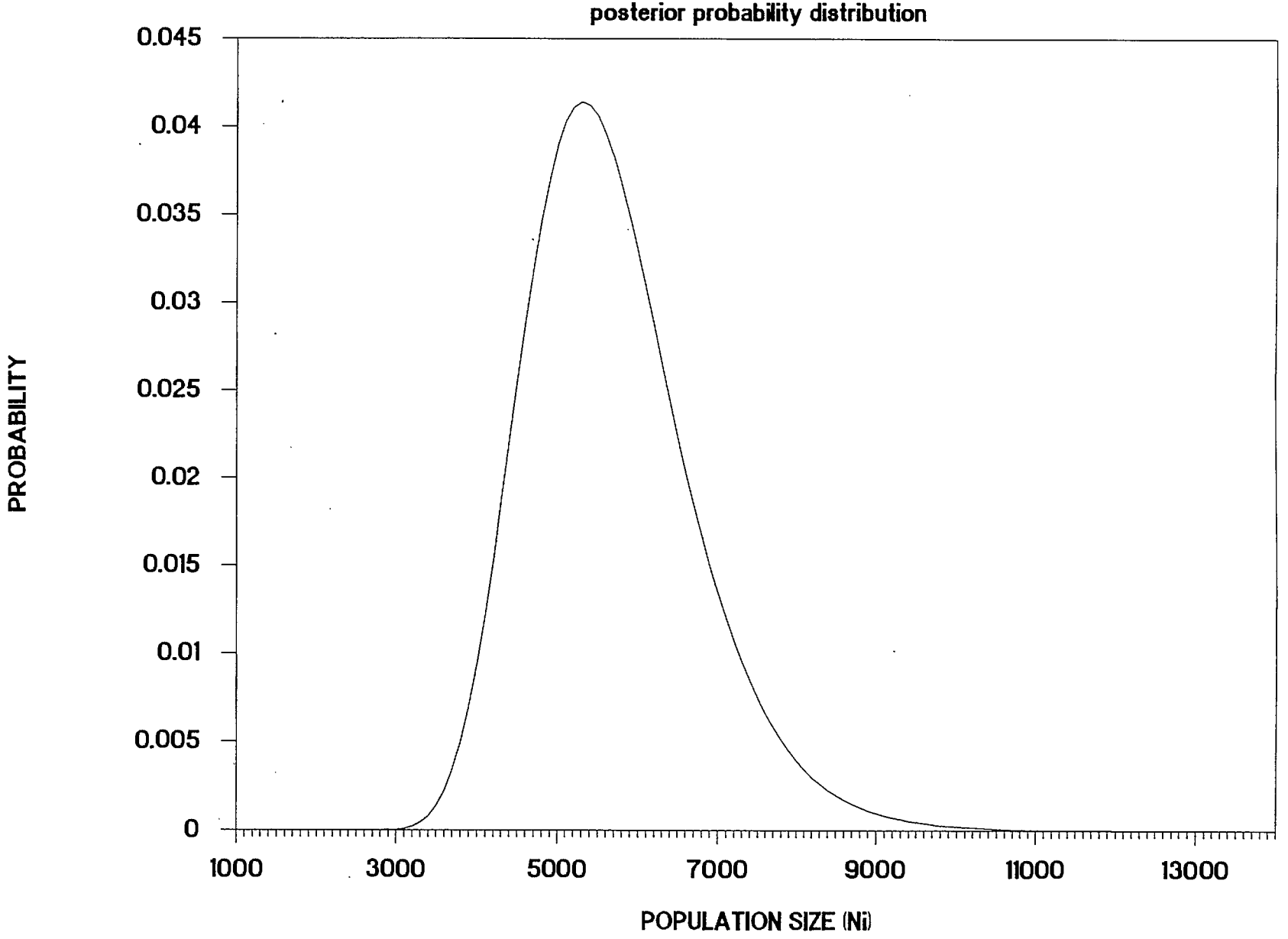


Table 1. 1992 Wannock River beach seine catch per set. NEW = not marked previously, REC = recaptured, STHD = steelhead, SOCK = sockeye, DOLLY = dolly varden. All NEW chinook caught prior to Oct 31 received tags.

DATE	SET	CHINOOK FEMALES		CHINOOK MALES		CHINOOK TOTAL	SOCK	COHO	PINK	CHUM	DOLLY	STHD
		NEW	REC	NEW	REC							
06-Oct	1	27		41		68	95	12	10	1	5	
06-Oct	2	35	8	69	14	126	63	13	18	1	5	1
07-Oct	3	20	9	31	14	74	13	1	15	1	5	
07-Oct	4	24	7	36	13	80	10	2	4	0	5	
08-Oct	5	17	6	32	9	64	27	4	19	0	9	
08-Oct	6	12	4	20	8	44	9	3	9	0	4	
11-Oct	7	0	0	0	0	0	0	0	0	0	0	
11-Oct	8	17	3	32	2	54	23	13	6	0	5	
11-Oct	9	38	3	53	8	102	15	12	8	1	4	
13-Oct	10	50	6	53	9	118	53	19	2	0	7	
13-Oct	11	16	3	20	21	60	24	12	1	0	10	
13-Oct	12	18	14	20	9	61	31	10	0	0	5	
14-Oct	13	25	7	32	14	78	49	9	1	0	16	
14-Oct	14	10	1	14	11	36	13	0	2	0	9	
14-Oct	15	17	8	21	16	62	45	4	1	0	3	
16-Oct	16	24	8	30	12	74	35	4	3	0	19	
16-Oct	17	26	14	27	16	83	50	9	1	0	30	
18-Oct	18	6	3	6	3	18	23	3	0	1	20	
18-Oct	19	12	6	9	3	30	31	2	0	0	12	
18-Oct	20	7	5	4	3	19	30	8	1	0	9	
20-Oct	21	2		2	0	4	11	6	0	1	4	
20-Oct	22	7	4	3	0	14	11	3	0	0	9	
20-Oct	23	8	3	6	1	18	15	3	1	0	5	
22-Oct	24	5	2	5	0	12	58	2	0	0	9	
22-Oct	25	3	1	8	0	12	91	2	0	0	7	
22-Oct	26	3	2	10	3	18	58	0	0	0	8	
22-Oct	27	8	5	5	2	20	27	2	0	0	6	
22-Oct	28	5		3	1	9	25	5	0	0	3	
22-Oct	29	1		0	0	1	38	0	0	1	28	
23-Oct	30	1		2	0	3	52	3	0	0	19	
23-Oct	31	11	1	4	1	17	54	0	0	0	13	
23-Oct	32	2		5	2	9	50	3	0	0	6	
26-Oct	37	5	1	0	0	6	84	0	0	2	11	
26-Oct	38	3	3	1	0	7	99	1	0	0	20	
27-Oct	39	2		0	0	2	66	3	0	0	0	
27-Oct	40	4	2	5	0	11	88	9	0	1	9	
27-Oct	41	3		1	0	4	122	4	0	1	15	
27-Oct	42	3	1	5	0	9	68	2	0	0	12	
27-Oct	43	6	2	11	2	21	107	15	0	0	10	
28-Oct	44	13	5	7	3	28	115	7	0	0	12	
29-Oct	45	10	14	4	4	32	107	16	0	0	12	1
29-Oct	46	6	11	4	4	25	134	17	0	0	10	
29-Oct	47	4	21	1	7	33	166	5	0	0	19	
30-Oct	48	5	16	1	4	26	112	8	0	0	7	
30-Oct	49	4	13	0	5	22	99	11	0	0	24	
30-Oct	50	4	14	2	4	24	69	3	0	0	4	
31-Oct	51	7		6	0	13	92	6	0	0	10	
02-Nov	52	1	19	3	1	24	59	3	0	1	20	
02-Nov	53	12	35	12	3	62	84	5	0	0	9	
02-Nov	54	14	24	5	5	48	84	4	0	0	12	
02-Nov	55	13	36	5	3	57	83	4	0	0	11	1
02-Nov	56	14	27	7	3	51	66	0	0	1	15	
04-Nov	57	12	32	4	4	52	74	9	0	1	13	
04-Nov	58	0	30	5	3	38	59	3	0	1	4	
04-Nov	59	16	32	5	2	55	53	8	0	0	7	
04-Nov	60	4	30	2	0	36	55	5	0	0	6	
05-Nov	61	8	21	1	1	31	34	4	0	0	9	
05-Nov	62	19	25	0	0	44	16	2	0	0	3	
06-Nov	63	10	25	2	1	38	22	4	0	1	8	
06-Nov	64	10	22	1	2	35	38	6	0	0	11	
06-Nov	65	10	26	2	2	40	43	9	0	0	3	
07-Nov	66	1	6	1	0	8	21	9	0	1	0	
07-Nov	67	1	6	0	0	7	19	8	0	0	4	
07-Nov	68	1	1	0	0	2	14	4	0	1	4	
07-Nov	69	2	2	1	0	5	33	4	0	0	5	

Table 2. Summary of 1992 Wannock River male chinook length frequencies. RT = retagged, 1 = good condition, 3 = bleeding, 4 = killed for sampling, 5 = spawned out, 7 = released after being held for brood stock, REL = mark releases, TOT = total, PRE = prespawn, BS = brood stock, DP = dead pitch, M = marked, U = unmarked, UK = unknown.

LENGTH (mm)	SEINE CATCH	RT	1	3	4	5	7	BS	TOT REL	PRE REL	DP M	DP U	TOT DP
200	0	0	0	0	0	0	0	0	0	0	0	0	0
220	1	0	1	0	0	0	0	0	1	1	0	0	0
240	2	0	2	0	0	0	0	0	2	2	0	0	0
260	11	2	9	2	0	0	0	0	11	11	0	0	0
280	40	1	37	0	0	0	0	3	37	37	0	0	0
300	34	0	32	1	0	0	0	1	33	33	0	0	0
320	26	5	23	1	2	0	0	0	24	24	0	0	0
340	24	2	23	0	0	0	1	0	24	24	0	1	1
360	13	0	11	0	0	0	2	0	13	13	0	0	0
380	9	1	9	0	0	0	0	0	9	9	0	0	0
400	9	1	8	1	0	0	0	0	9	9	0	0	0
420	10	0	10	0	0	0	0	0	10	10	0	0	0
440	14	0	14	0	0	0	0	0	14	14	0	0	0
460	6	0	5	1	0	0	0	0	6	6	0	0	0
480	3	0	3	0	0	0	0	0	3	3	0	0	0
500	10	0	9	1	0	0	0	0	10	10	0	0	0
520	6	0	5	0	0	0	0	1	5	5	0	0	0
540	7	0	5	0	1	0	0	1	5	5	0	0	0
560	9	1	7	0	0	0	0	2	7	7	0	0	0
580	8	0	5	1	0	1	0	1	7	6	0	1	1
600	9	0	8	0	0	0	0	1	8	8	0	0	0
620	12	0	8	1	0	0	1	2	10	10	0	2	2
640	18	0	16	1	0	0	0	1	17	17	1	1	2
660	21	0	17	0	0	0	0	4	17	17	0	7	7
680	18	0	16	1	0	0	0	1	17	17	0	8	8
700	30	0	24	1	0	0	1	4	26	26	2	13	15
720	49	0	41	0	0	2	2	4	45	43	5	12	17
740	36	0	26	2	0	2	1	5	31	29	0	25	25
760	39	1	32	1	0	0	3	3	36	36	0	22	22
780	38	0	31	2	0	1	1	3	35	34	2	21	23
800	26	0	25	1	0	0	0	0	26	26	0	29	29
820	37	0	31	0	0	0	3	3	34	34	1	21	22
840	19	1	13	0	0	0	0	6	13	13	0	13	13
860	12	0	9	1	0	0	0	2	10	10	0	19	19
880	13	0	10	0	0	0	1	2	11	11	0	12	12
900	8	0	6	0	0	0	0	2	6	6	0	7	7
920	11	0	10	0	0	0	0	1	10	10	1	10	11
940	3	0	2	0	0	0	0	1	2	2	1	1	2
960	1	0	1	0	0	0	0	0	1	1	0	3	3
980	1	0	1	0	0	0	0	0	1	1	0	0	0
1000	1	0	1	0	0	0	0	0	1	1	0	0	0
1020	0	0	0	0	0	0	0	0	0	0	0	0	0
1040	0	0	0	0	0	0	0	0	0	0	0	0	0
1060	1	0	1	0	0	0	0	0	1	1	0	0	0
1080	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0
<650 mm	281	13	250	10	3	1	4	13	265	264	1	5	6
>650 mm	364	2	297	9	0	5	12	41	323	318	12	223	235
TOTAL	645	15	547	19	3	6	16	54	588	582	13	228	241
LENGTH UK	1						1	22	1	1		6	6
GRAND TOT	646	15	547	19	3	6	17	76	589	583	13	234	247

Table 3. Summary of 1992 Wannock River female chinook length frequencies. Codes: RT = retagged, 1 = good condition, 3 = bleeding, 5 = spawned out, 7 = released after being held for brood stock, REL = mark releases, TOT = total, PRE = prespawn, BS = brood stock, DP = dead pitch, M = marked, U = unmarked, UK = unknown.

Length (mm)	SEINE CATCH	RT	1	3	5	7	TOT REL	PRE REL	BS	DP M	DP U	TOT DP
500	0	0	0	0	0	0	0	0	0	0	1	1
520	0	0	0	0	0	0	0	0	0	0	0	0
540	0	0	0	0	0	0	0	0	0	0	0	0
560	0	0	0	0	0	0	0	0	0	0	0	0
580	1	0	0	1	0	0	1	1	0	0	1	1
600	0	0	0	0	0	0	0	0	0	0	1	1
620	0	0	0	0	0	0	0	0	0	0	2	2
640	4	0	4	0	0	0	4	4	0	0	2	2
660	5	0	3	2	0	0	5	5	0	1	0	1
680	2	0	2	0	0	0	2	2	1	0	5	5
700	19	0	19	0	0	0	19	19	2	1	5	6
720	35	0	29	3	1	2	35	34	3	0	20	20
740	45	0	41	2	2	0	45	43	4	5	24	29
760	69	1	60	3	6	1	69	63	7	7	39	46
780	77	0	65	4	6	2	77	71	6	5	38	43
800	60	0	53	0	7	0	60	53	11	7	34	41
820	46	1	43	0	1	3	46	45	7	2	36	38
840	48	0	38	2	7	1	48	41	2	3	27	30
860	27	1	19	2	6	1	27	21	5	1	25	26
880	24	0	19	0	5	0	24	19	7	4	21	25
900	10	0	10	0	0	0	10	10	3	1	11	12
920	2	0	2	0	0	0	2	2	1	0	8	8
940	3	0	3	0	0	0	3	3	1	0	4	4
960	2	0	2	0	0	0	2	2	0	0	0	0
980	0	0	0	0	0	0	0	0	0	0	1	1
1000	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	539	3	412	9	41	10	479	438	60	37	305	342
LENGTH UK	1		1				1	1	12	1	20	21
GRAND TOT	540	3	413	9	41	10	480	439	72	38	325	363

Table 4. Sexual composition of the components of the seine and dead pitch samples.

SEX	MALES	FEMALES	M:F RATIO
Seine Catch	646	540	1.20
Mark Releases	589	480	1.23
Prespawn mark releases	583	439	1.33
Dead Pitch	247	363	0.68
Mark Recoveries	13	38	0.34

Table 5. Female recoveries by final condition of release.

CONDITION	RECOVERED	NOT RECOVERED	TOTAL
Good	25	388	413
Bleeding	0	19	19
Spawned out	8	33	41
Held for brood stock	0	10	10

Figure 3. Female seine catch

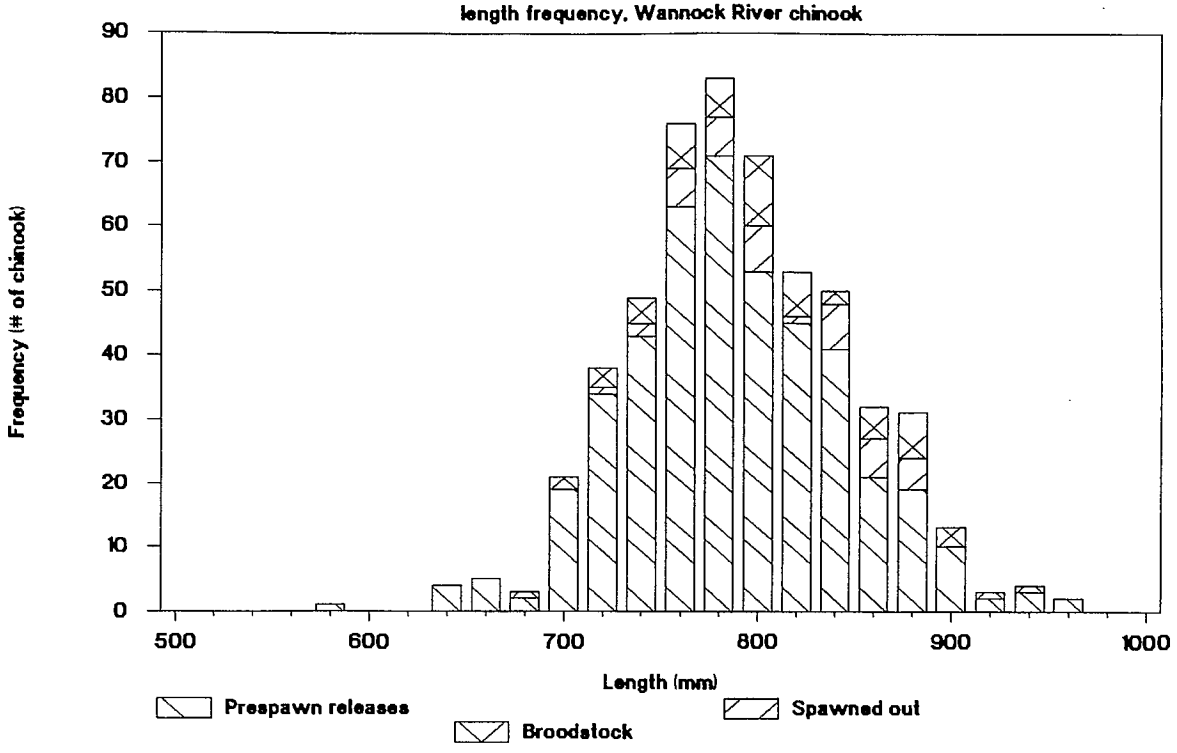


Figure 4. Female dead pitch

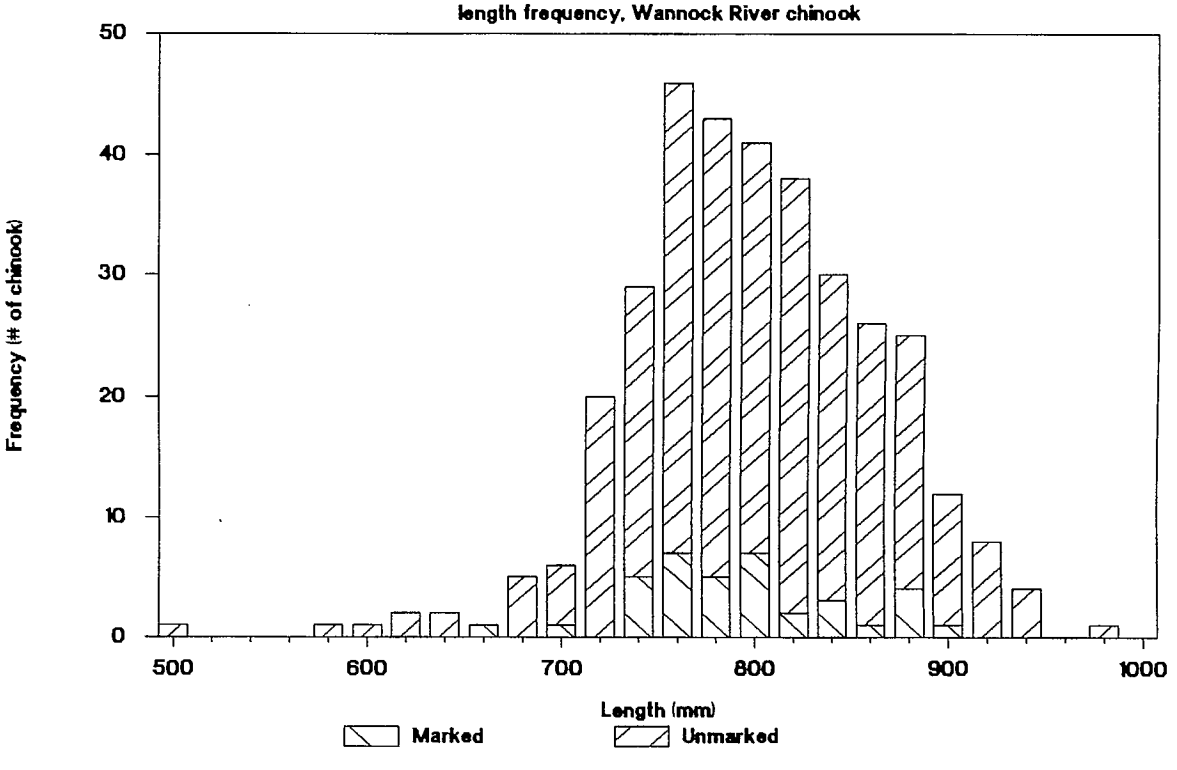


Table 6. Female chinook recoveries by number of recaptures during the seining process separated by condition of release:

Table 6A. Females released in good condition.

# RECAPTURES	RECOVERED	NOT RECOVERED	TOTAL
0	21	310	331
1	1	55	56
2	3	16	19
3	0	1	1
4	0	3	3
5	0	1	1
6	0	2	2

Table 6B. Females bleeding on release.

# RECAPTURES	RECOVERED	NOT RECOVERED	TOTAL
0	0	15	15
1	0	2	2
4	0	1	1
7	0	1	1

Table 6C. Females spawned out when marked. Females marked before spawning that were recaptured in spawned out condition are not included.

# RECAPTURES	RECOVERED	NOT RECOVERED	TOTAL
0	5	13	18
1	1	4	5
2	1	5	6
3	1	3	4
4	0	6	6
6	0	2	2

Table 6D. Females held for brood stock before release.

# RECAPTURES	RECOVERED	NOT RECOVERED	TOTAL
0	0	15	15
1	0	2	2
4	0	1	1

Table 7. Dead pitch recoveries by area. Areas are depicted on Figure 1. Prefixes N and S refer to the north and south banks of the river respectively.

AREA	UNMARKED & UNSEXED	MARKED MALES	UNMARKED MALES	MARKED FEMALES	UNMARKED FEMALES
N1			1		2
S1			1		
N2	1	1	45	10	67
S2		5	67	12	127
N3	1	1	31	9	60
S3		1	37	5	32
N4	6	4	40	2	29
S4		1	9		6
INLET			3		2
TOTAL	8	13	234	38	325

Table 8. Female chinook recoveries by week of mark application. Data excludes marks applied spawned out chinook and 5 female recoveries with unknown tag numbers.

WEEK OF MARKING	RECOVERED	NOT RECOVERED
October 4-10	3	129
October 11-17	13	216
October 18-24	6	48
October 25-31	3	21
Total	24	414

Table 9. Female chinook recoveries by week of dead pitch.

WEEK OF DEAD PITCH	PRESPAWN MARKED	TOTAL MARKED	UNMARKED
October 25-31	1	1	13
November 1-7	7	7	41
November 8-14	15	22	225
November 15-21	6	7	40
November 22-27	1	1	6
Total	30	38	325

Table 10. Female recovery matrix, week of mark application by week of dead pitch.

Week of recovery	Week of mark application				
	Oct 4-10	Oct 11-17	Oct 18-24	Oct 25-31	Total
Oct 25-31	0	1	0	0	1
Nov 1-7	1	1	3	0	5
Nov 8-14	2	7	3	2	14
Nov 15-21	0	4	0	1	5
Nov 22-27	0	0	0	0	0
Total	3	13	6	3	25

Table 11. Female egg retention for marked and unmarked dead pitch samples.

EGGS RETAINED	NONE (0%)	FEW (1-5%)	QUARTER (5-30%)	HALF (30-70%)	FULL (70-100%)	UNKNOWN
MARKED	20	9	1	0	0	8
UNMARKED	208	61	15	0	3	38

Table 12. Male chinook recoveries by final condition of release.

CONDITION	RECOVERED	NOT RECOVERED	TOTAL
Good	8	289	297
Bleeding	2	7	9
Spawned out	1	4	5
Held for brood stock	1	11	12

Figure 5. Male seine catch length

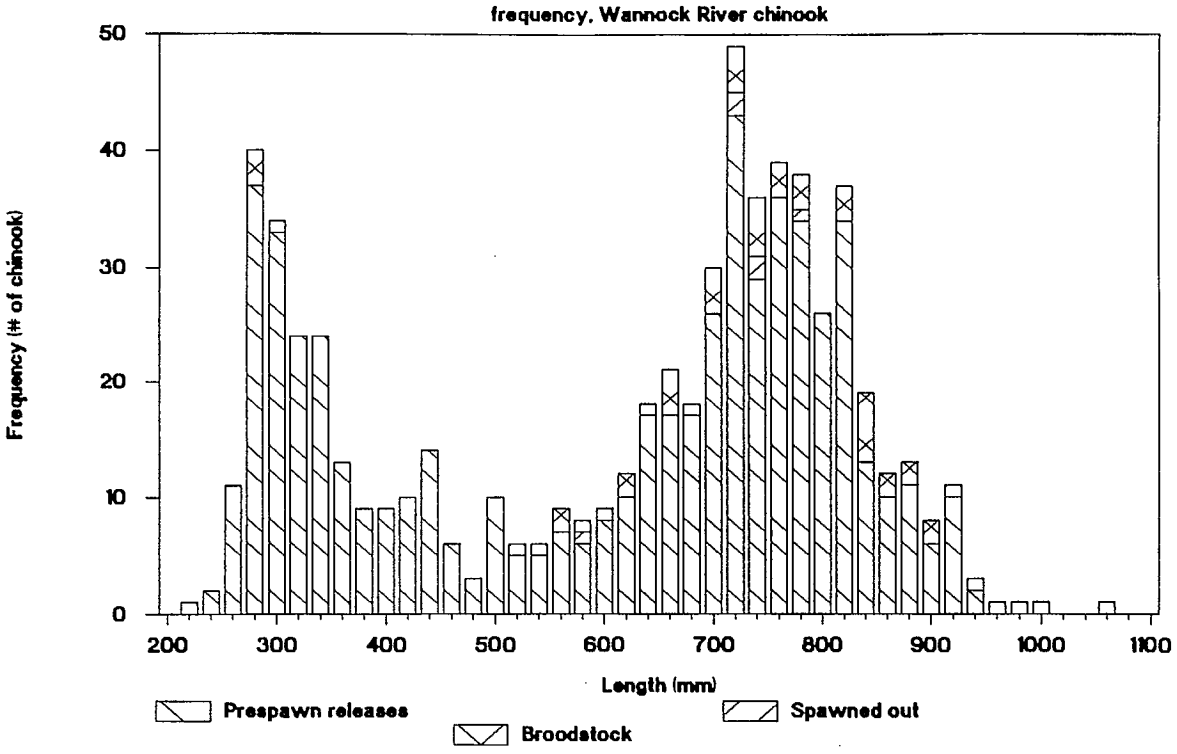


Figure 6. Male dead pitch length

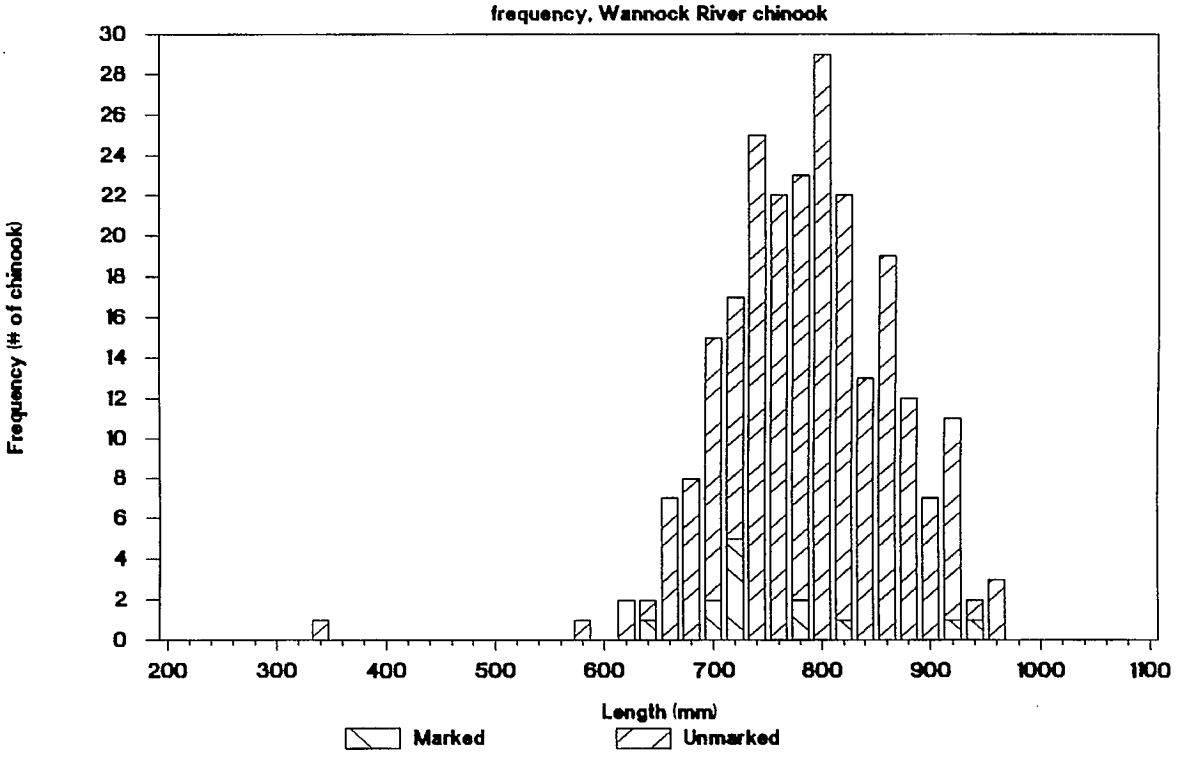


Table 13. Male chinook recoveries by number of times recaptured in the seine.

# RECAPTURES	RECOVERED	NOT RECOVERED	TOTAL
0	10	470	480
1	1	116	117
2	1	29	30
3	0	10	10
4	0	2	2
5	0	1	1
6	0	1	1

Table 14. Male chinook recoveries by week of mark application. Data for males marked after spawning are excluded.

WEEK OF MARKING	RECOVERED	NOT RECOVERED
October 4-10	2	223
October 11-17	7	281
October 18-24	2	52
October 25-31	0	16
Total	11	572

Table 15. Male chinook recoveries by week of dead pitch.

WEEK OF DEAD PITCH	MARKED	UNMARKED
October 25-31	0	7
November 1-7	4	48
November 8-14	6	144
November 15-21	2	28
November 22-27	1	7
Total	13	234

Table 16. Fin clip incidence by clip type, sex and sample type. Note that one right (R) ventral clipped female was the only fin clipped mark recapture. 38 female and 15 male mark recaptures were removed from the total numbers of chinook checked. 3 of the 6 females recovered in the dead pitch were recorded as possibly having adipose clips, they had no coded wire tags upon dissection.

	Seine Catch	Dead Pitch	Total
Females			
Adipose	10	6	16
R Ventral	3	1	3
L Ventral	1	0	1
# checked	540	363	865
Males			
Adipose	19	2	21
R Ventral	1	1	2
L Ventral	0	1	1
# checked	646	247	880

Table 17. Chinook coded wire tag recoveries, Wannock River, 1993.

DATE	SAMPLE	POH (mm)	SEX	SCALE age	CWT age	BROOD YEAR	CWT SOURCE	RELEASE DATE	WEIGHT (g)	CWT
10-Nov	DP	795	M	51	5	1987	SNOOTLI	03-Jun-88	2.10	02-54-49
29-Oct	TAG	800	F		4	1988	ROBERTSON			02-58-39
24-Oct	TAG	740	M	3M	4	1988	OWIKENO	07-Jul-89	4.15	02-59-62
30-Oct	TAG	705	M		4	1988	OWIKENO	07-Jul-89	4.15	02-59-62
17-Nov	DP	750	F		4	1988	OWIKENO	07-Jul-89	4.15	02-59-62
11-Nov	DP	755	M	41	4	1988	OWIKENO	07-Jul-89	4.15	02-59-63
13-Nov	DP	727	F	41	4	1988	OWIKENO	07-Jul-89	4.15	02-59-63
14-Oct	TAG	530	M		3	1989	OWIKENO	25-Jun-90	4.12	02-01-23
28-Oct	TAG	690	M	41	3	1989	OWIKENO	16-Jun-90	2.95	02-01-25
08-Oct	TAG	315	M		2	1990	OWIKENO	25-Jun-91	5.80	02-03-44
06-Oct	TAG	315	M		2	1990	OWIKENO	01-Jul-91	5.10	02-14-58
16-Nov	DP	495	F				head not dissected (lost)			
07-Nov	DP	758	F				no CWT when dissected			
15-Nov	DP	725	F	41		1988	POSSIBLE AD CLIP - no CWT when dissected			
11-Nov	DP	830	F	51		1987	POSSIBLE AD CLIP - no CWT when dissected			

Table 18. Length at age information for male and female chinook samples collected from the Wannock River in 1992. All of the chinook aged had only 1 freshwater year. Note that there were no samples of chinook between 340 and 520 mm POH length.

FREQUENCY AT AGE & SEX

POH LENGTH (mm)	DEAD PITCH						BROOD STOCK (SEINE CATCH)						
	MALE			FEMALE			MALE					FEMALE	
AGE>	4	5	6	4	5	6	2	3	4	5	6	4	5
280							1						
300													
320							2						
520													
540								1					
560								1					
580									1				
600									1				
620								1					
640	1			1									
660									2				
680	2											1	
700	3	1		3				1	4			2	
720	4			4					3			2	
740	4			11					5			3	
760	2			13	1				5			5	
780	3			8	3				3			9	
800	5	1		8	4				1			7	2
820	3	2	1	3	4				4	1		5	2
840	1			4	2				3	2		3	2
860	4	3		1	7				1		1	1	4
880					5	1			2	1	1	1	7
900					2	1				2			5
920		1			1						1		1
940		1	1							1	1	1	
960													2
980						1							
1000													
TOTAL	32	9	2	56	29	3	3	4	35	7	4	40	25

Table 19. Weather and water conditions on the Wannock River, 1992.

DATE	WEATHER	WATER LEVEL (ft)	SECCHI DEPTH (cm)
06-Oct	OVERCAST, COOL	8.5	
07-Oct	OVERCAST, RAIN, WIND	8.0	
08-Oct	OVERCAST, RAIN	8.7	
09-Oct	N/A		
10-Oct	N/A		
11-Oct	CLEARING, CALM	9.7	
12-Oct	N/A		
13-Oct	COLD, HIGH OVERCAST	9.0	53.0
14-Oct	CLEAR, COLD, FRESH SNOW	8.6	57.0
15-Oct	N/A		
16-Oct	COLD, OVERCAST, RAIN	7.1	53.0
17-Oct	N/A		
18-Oct	HEAVY RAIN, WIND	7.6	65.0
19-Oct	N/A		
20-Oct	HEAVY RAIN, WIND	11.2	50.0
21-Oct	N/A		
22-Oct	RAIN, WINDY	11.5	45.0
23-Oct	RAIN	11.1	34.0
24-Oct	RAIN	16.5	67.0
25-Oct	N/A		
26-Oct	OVERCAST, LT WIND	12.8	
27-Oct	OUTFLOW 15-20, OVERCAST	11.5	38.0
28-Oct	CLOUDY, RAIN	10.3	52.0
29-Oct	OVERCAST, LT OUTFLOW	9.5	57.5
30-Oct	OVERCAST, LT OUTFLOW	8.8	48.0
31-Oct	RAIN, OUTFLOW	8.4	50.0
01-Nov	HIGH OVERCAST	8.3	
02-Nov	MOSTLY SUNNY	8.4	50.0
03-Nov	HEAVY RAIN, SE GALES	8.0	
04-Nov	CLEAR, SUNNY	8.5	58.0
05-Nov	PART CLOUDY	8.5	55.0
06-Nov	HEAVY RAIN, SE GALES	8.3	56.5
07-Nov	CLOUDY, RAIN PERIODS	9.5	60.0
08-Nov	CLEAR, PART CLOUD	9.2	
09-Nov	CLEAR, SUNNY, COOL	9.1	
10-Nov	SE OUTFLOW, RAIN	8.5	
11-Nov	OVERCAST, NO RAIN	UK	
12-Nov	COLD, RAINY	7.7	
13-Nov	OVERCAST, LIGHT DRIZZLE	7.9	
14-Nov	SUNNY, CLEAR, COLD	7.8	
15-Nov	CLEAR, SUNNY, MILD	8.7	
16-Nov	OVERCAST, SHOWERS	8.6	
17-Nov	PARTLY CLOUDY	8.4	57.0
18-Nov	CLOUD, RAIN, SE WIND	8.0	58.5
19-Nov	HEAVY RAIN	7.8	58.5
20-Nov	CLOUDY, SHOWERS	7.6	59.0
21-Nov	OUTFLOW GALES, CLEAR PM	7.2	57.0
22-Nov	COOL, CLEAR	7.0	57.0
23-Nov	COOL, CLEAR, SUN, OUTFLOW	6.8	59.0
24-Nov	COOL, CLEAR, OUTFLOW 20 KM	6.7	59.0
25-Nov	PARTLY CLOUDY	6.5	59.0
26-Nov	WINDY, OVERCAST, RAIN	6.3	59.0
27-Nov	RAIN, NO WIND	7.1	59.0

Appendix 1. Wannock River chinook marking data.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
06-Oct	1	27001	870	M	1	0			
06-Oct	1	27002	820	M	1	0			
06-Oct	1	27003	865	F	1	0			
06-Oct	1	27004	765	F	1	0			
06-Oct	1	27005	765	F	1	0			
06-Oct	1	27006	840	M	1	0			
06-Oct	1	27007	790	F	1	0			
06-Oct	1	27008	820	M	1	0			
06-Oct	1	27009	700	F	1	0			TAG # INSIDE
06-Oct	1	27010	720	F	1	0			
06-Oct	1	27011	790	M	1	0			
06-Oct	1	27012	700	F	1	0			
06-Oct	1	27013	930	F	1	0			
06-Oct	1	27014	740	F	1	0			
06-Oct	1	27015	870	F	1	0			
06-Oct	1	27016	790	F	1	0			
06-Oct	1	27017	850	F	1	0			
06-Oct	1	27018	870	F	1	0			SEAL SCAR
06-Oct	1	27019	740	M	1	0			HOOK SCAR
06-Oct	1	27021	840	F	1	0			
06-Oct	1	27022	775	M	1	0			BLIND ONE EYE
06-Oct	1	27023	700	F	1	0			
06-Oct	1	27025	820	M	1	0			
06-Oct	1	27026	700	F	1	0			
06-Oct	1	27027	840	F	1	0			SEAL SCAR
06-Oct	1	27028	790	M	1	0			
06-Oct	1	27029	670	M	3	0			OPERC BLEED
06-Oct	1	27030	790	M	1	0			
06-Oct	1	27031	705	F	1	AD			REGEN AD
06-Oct	1	27032	790	F	1	0			
06-Oct	1	27033	700	M	1	0			
06-Oct	1	27034	915	F	1	0			
06-Oct	1	27035	780	F	1	0			SEAL SCAR
06-Oct	1	27036	740	F	1	0			
06-Oct	1	27037	780	F	1	0			
06-Oct	1	27038	715	F	1	0			SEAL SCAR
06-Oct	1	27039	805	F	1	0			
06-Oct	1	27040	760	F	3	0			OPERC BLEED
06-Oct	1	27041	780	F	1	0			
06-Oct	1	27042	645	M	1	0			
06-Oct	1	27043	550	M	1	0			
06-Oct	1	27047	600	M	1	0			
06-Oct	1	37001	610	M	1	0			
06-Oct	1	37002	600	M	1	0			
06-Oct	1	37003	500	M	1	0			
06-Oct	1	37005	350	M	1	0			
06-Oct	1	37006	375	M	1	0			
06-Oct	1	37008	360	M	1	0			
06-Oct	1	37009	410	M	1	0			
06-Oct	1	37010	300	M	1	0			
06-Oct	1	37011	290	M	1	0			
06-Oct	1	37012	280	M	1	0			
06-Oct	1	37014	300	M	1	0			
06-Oct	1	37015	295	M	1	0			
06-Oct	1	37017	330	M	1	0			
06-Oct	1	37018	270	M	1	0			
06-Oct	1	37019	350	M	1	0			
06-Oct	1	37020	325	M	1	0			
06-Oct	1	37021	280	M	1	0			
06-Oct	1	37022	330	M	1	0			
06-Oct	1	37023	260	M	1	0			
06-Oct	1	37024	280	M	1	0			
06-Oct	1	37025	320	M	1	0			
06-Oct	1	37026	290	M	1	0			
06-Oct	1	37027	330	M	1	0			
06-Oct	1	37028	330	M	1	0			

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
06-Oct	1	37029	270	M	1	0			
06-Oct	1	37030	390	M	1	0			
06-Oct	2	none	315	M	4	AD		2	no scales
06-Oct	2	27001		M	1	0			RECAP
06-Oct	2	27003		F	1	0			RECAP
06-Oct	2	27004		F	1	0			RECAP
06-Oct	2	27005		F	1	0			RECAP
06-Oct	2	27009		F	1	0			RECAP
06-Oct	2	27010		F	1	0			RECAP
06-Oct	2	27014		F	1	0			RECAP
06-Oct	2	27027		F	1	0			RECAP
06-Oct	2	27036		F	1	0			RECAP
06-Oct	2	27043		M	1	0			RECAP
06-Oct	2	27048	1050	M	1	0			
06-Oct	2	27049	830	F	1	0			
06-Oct	2	27050	910	M	1	0			
06-Oct	2	27051	820	M	1	0			
06-Oct	2	27052	920	M	1	0			
06-Oct	2	27053	750	F	1	0			SEAL SCAR
06-Oct	2	27054	805	M	1	0			
06-Oct	2	27055	855	F	1	0			
06-Oct	2	27056	780	F	1	0			
06-Oct	2	27057	795	F	1	RV			
06-Oct	2	27058	880	M	1	0			
06-Oct	2	27059	800	F	1	0			
06-Oct	2	27060	715	M	1	0			
06-Oct	2	27061	835	M	1	0			
06-Oct	2	27062	760	F	1	0			
06-Oct	2	27063	675	M	1	0			
06-Oct	2	27064	1000	M	1	0			
06-Oct	2	27065	745	F	1	0			SEAL SCAR
06-Oct	2	27066	785	M	1	0			
06-Oct	2	27067	765	F	3	0			SEAL SCAR
06-Oct	2	27068	740	M	1	0			
06-Oct	2	27069	715	M	1	0			
06-Oct	2	27070	750	F	1	0			
06-Oct	2	27071	900	F	1	0			
06-Oct	2	27072	820	M	1	0			
06-Oct	2	27073	790	M	1	0			
06-Oct	2	27074	820	M	1	0			
06-Oct	2	27075	830	F	1	0			SEAL SCAR
06-Oct	2	27076	880	F	1	0			
06-Oct	2	27077	770	F	1	0			HOOK SCAR
06-Oct	2	27078	820	M	1	0			
06-Oct	2	27079	900	M	1	0			SEAL SCAR
06-Oct	2	27080	920	M	1	0			SEAL SCAR
06-Oct	2	27081	800	M	3	0			OPERC BLEED
06-Oct	2	27082	810	M	1	0			
06-Oct	2	27083	820	M	1	0			SEAL SCAR /HOOK
06-Oct	2	27084	860	M	1	0			
06-Oct	2	27085	790	F	1	0			
06-Oct	2	27086	950	M	1	0			
06-Oct	2	27087	780	F	1	0			
06-Oct	2	27088	840	F	1	0			
06-Oct	2	27089	780	F	1	0			
06-Oct	2	27090	730	F	1	0			
06-Oct	2	27091	660	F	3	0			SEAL SCAR/OPERC BLEED
06-Oct	2	27092	880	F	1	0			
06-Oct	2	27093	690	M	1	0			
06-Oct	2	27094	700	F	1	0			SEAL SCAR
06-Oct	2	27095	720	F	1	0			
06-Oct	2	27096	775	F	1	0			SEAL SCAR
06-Oct	2	27097	600	M	1	0			
06-Oct	2	27098	760	F	1	0			
06-Oct	2	27099	850	M	1	0			

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
06-Oct	2	27100	800	F	1	0			
06-Oct	2	27101	765	F	1	0			
06-Oct	2	27102	790	M	1	0			
06-Oct	2	27103	820	M	1	0			SEAL SCAR
06-Oct	2	27104	710	M	1	0			
06-Oct	2	27105	780	F	1	0			
06-Oct	2	27107	780	M	1	0			
06-Oct	2	27108	850	M	1	0			
06-Oct	2	27109	760	M	1	0			
06-Oct	2	27110	790	F	1	0			SEAL SCAR
06-Oct	2	27111	710	F	1	0			SEAL SCAR/ HOOK SCAR
06-Oct	2	27112	730	M	1	0			
06-Oct	2	27113	700	M	1	AD			
06-Oct	2	27114	740	F	1	0			
06-Oct	2	27115	710	M	1	0			
06-Oct	2	27117	500	M	1	0			
06-Oct	2	27118	740	F	1	0			
06-Oct	2	27119	745	F	1	0			
06-Oct	2	27120	740	M	1	0			
06-Oct	2	27121	720	M	1	0			
06-Oct	2	27123	780	M	1	0			
06-Oct	2	27124	560	M	1	0			RETAG
06-Oct	2	27125	750	F	1	0			
06-Oct	2	27126	710	M	1	AD			
06-Oct	2	27127	650	M	1	AD			
06-Oct	2	27128	580	M	1	0			SEAL SCAR
06-Oct	2	27129	790	F	1	0			SEAL SCAR
06-Oct	2	37001		M	1	0			RECAP
06-Oct	2	37005		M	1	0			RECAP
06-Oct	2	37006		M	1	0			RECAP
06-Oct	2	37012		M	1	0			RECAP
06-Oct	2	37014		M	1	0			RECAP
06-Oct	2	37015		M	1	0			RECAP
06-Oct	2	37018		M	1	0			RECAP
06-Oct	2	37020		M	1	0			RECAP
06-Oct	2	37024		M	1	0			RECAP
06-Oct	2	37028		M	1	0			RECAP
06-Oct	2	37029		M	1	0			RECAP
06-Oct	2	37030		M	1	0			RECAP
06-Oct	2	37032	570	M	3	0			GILL BLEED
06-Oct	2	37033	320	M	1	0			
06-Oct	2	37034	330	M	1	0			
06-Oct	2	37036	270	M	1	0			
06-Oct	2	37037	430	M	1	0			
06-Oct	2	37038	480	M	1	0			
06-Oct	2	37039	430	M	1	0			
06-Oct	2	37040	400	M	1	0			RETAG
06-Oct	2	37041	430	M	1	0			
06-Oct	2	37042	380	M	1	0			SEAL SCAR
06-Oct	2	37043	440	M	1	0			
06-Oct	2	37044	300	M	1	0			
06-Oct	2	37045	320	M	1	0			
06-Oct	2	37046	280	M	1	0			
06-Oct	2	37047	310	M	1	0			
06-Oct	2	37048	270	M	1	0			
06-Oct	2	37049	280	M	1	0			SEAL SCAR
06-Oct	2	37050	270	M	1	0			RETAG
06-Oct	2	37052	260	M	1	0			
06-Oct	2	37053	320	M	1	0			
06-Oct	2	37054	310	M	1	0			
06-Oct	2	37055	320	M	1	0			
06-Oct	2	37056	290	M	1	0			
06-Oct	2	37057	230	M	1	0			
07-Oct	3	27001		M	1	0			RECAP
07-Oct	3	27007		F	1	0			RECAP

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
07-Oct	3	27009		F	1	0			RECAP
07-Oct	3	27010		F	1	0			RECAP
07-Oct	3	27011		M	1	0			RECAP
07-Oct	3	27019		M	1	0			RECAP
07-Oct	3	27022		M	1	0			RECAP
07-Oct	3	27023		F	1	0			RECAP
07-Oct	3	27027		F	1	0			RECAP
07-Oct	3	27030		M	1	0			RECAP
07-Oct	3	27031		F	1	0			RECAP
07-Oct	3	27055		F	1	0			RECAP
07-Oct	3	27057		F	1	0			RECAP
07-Oct	3	27074		M	1	0			RECAP
07-Oct	3	27075		F	1	0			RECAP
07-Oct	3	27130	720	F	1	0			
07-Oct	3	27131	775	M	1	0			
07-Oct	3	27132	820	M	1	0			
07-Oct	3	27133	710	F	1	0			
07-Oct	3	27134	770	M	1	0			
07-Oct	3	27135	765	M	1	0			
07-Oct	3	27136	740	F	1	0			
07-Oct	3	27137	715	F	1	AD			REGEN AD
07-Oct	3	27138	730	F	1	0			
07-Oct	3	27139	805	F	1	0			
07-Oct	3	27140	830	F	1	0			
07-Oct	3	27141	795	F	1	0			
07-Oct	3	27142	770	F	1	0			HOOK SCAR
07-Oct	3	27144	835	M	1	0			
07-Oct	3	27145	705	M	1	0			
07-Oct	3	27146	795	F	1	0			
07-Oct	3	27147	780	M	1	0			
07-Oct	3	27148	645	M	1	0			
07-Oct	3	27149	700	F	1	0			
07-Oct	3	27150	705	M	1	AD			
07-Oct	3	27151	695	M	1	0			
07-Oct	3	27152	785	F	1	0			
07-Oct	3	27153	745	M	1	0			
07-Oct	3	27154	810	M	1	0			
07-Oct	3	27155	800	M	1	0			
07-Oct	3	27156	635	M	1	0			HOOK SCAR
07-Oct	3	27157	785	F	1	0			
07-Oct	3	27158	745	F	1	AD			
07-Oct	3	27159	770	M	1	0			
07-Oct	3	27160	805	F	1	0			
07-Oct	3	27161	790	F	1	0			
07-Oct	3	27162	770	M	1	0			
07-Oct	3	27163	750	F	1	0			
07-Oct	3	27164	760	F	1	0			
07-Oct	3	27165	760	M	1	0			RETAG
07-Oct	3	27166	715	F	1	0			SEAL SCAR
07-Oct	3	27167	765	F	1	0			
07-Oct	3	27168	620	M	1	0			
07-Oct	3	27169	590	M	1	0			
07-Oct	3	27170	605	M	1	0			SEAL SCAR
07-Oct	3	27171	420	M	1	0			
07-Oct	3	27172	460	M	1	0			
07-Oct	3	27173	470	M	1	0			
07-Oct	3	27174	490	M	1	0			
07-Oct	3	27175	380	M	1	0			
07-Oct	3	37002		M	1	0			RECAP
07-Oct	3	37003	500	M	1	0			RECAP & RETAG to 37059
07-Oct	3	37030		M	1	0			RECAP
07-Oct	3	37034		M	1	0			RECAP
07-Oct	3	37038		M	1	0			RECAP
07-Oct	3	37041		M	1	0			RECAP
07-Oct	3	37043		M	1	0			RECAP

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
07-Oct	3	37048		M	1	0			RECAP
07-Oct	3	37058	280	M	1	0			
07-Oct	3	37060	340	M	1	0			RETAG
07-Oct	3	37061	320	M	1	0			RETAG
07-Oct	3	37062	310	M	1	0			
07-Oct	3	37063	340	M	1	0			
07-Oct	3	37064	290	M	1	0			
07-Oct	4	27014		F	1	0			RECAP
07-Oct	4	27022		M	1	0			RECAP
07-Oct	4	27023		F	1	0			RECAP
07-Oct	4	27058		M	1	0			RECAP
07-Oct	4	27074		M	1	0			RECAP
07-Oct	4	27075		F	1	0			RECAP
07-Oct	4	27077		F	1	0			RECAP
07-Oct	4	27085		F	1	0			RECAP
07-Oct	4	27088		F	1	0			RECAP
07-Oct	4	27164		F	1	0			RECAP
07-Oct	4	27165		M	1	0			RECAP
07-Oct	4	27174		M	1	0			RECAP
07-Oct	4	27175		M	1	0			RECAP
07-Oct	4	27176	755	F	1	0			
07-Oct	4	27177	735	M	1	0			
07-Oct	4	27178	830	F	1	0			SEAL SCAR
07-Oct	4	27179	760	F	1	0			HOOK
07-Oct	4	27180	830	M	1	0			
07-Oct	4	27181	910	M	1	AD			
07-Oct	4	27182	905	M	1	0			SEAL SCAR
07-Oct	4	27183	880	F	1	0			
07-Oct	4	27184	840	F	1	0			
07-Oct	4	27185	870	F	1	0			
07-Oct	4	27186	780	F	1	0			
07-Oct	4	27187	880	M	1	0			
07-Oct	4	27188	745	M	1	0			
07-Oct	4	27189	840	M	1	0			
07-Oct	4	27190	770	F	1	0			
07-Oct	4	27191	765	M	1	0			
07-Oct	4	27192	795	F	1	0			SEAL SCAR
07-Oct	4	27193	755	M	1	0			
07-Oct	4	27194	885	M	1	0			
07-Oct	4	27195	810	F	1	0			
07-Oct	4	27196	705	M	1	0			
07-Oct	4	27197	760	M	1	0			
07-Oct	4	27198	840	F	1	0			
07-Oct	4	27199	815	M	1	0			
07-Oct	4	27200	715	F	1	0			SEAL SCAR
07-Oct	4	27201	895	F	1	0			
07-Oct	4	27202	745	M	1	0			
07-Oct	4	27203	720	F	1	0			
07-Oct	4	27204	770	F	1	AD			
07-Oct	4	27205	760	F	1	0			HOOK SCAR
07-Oct	4	27206	850	F	1	0			
07-Oct	4	27207	770	F	1	0			
07-Oct	4	27208	710	M	1	0			
07-Oct	4	27209	810	F	1	0			
07-Oct	4	27210	730	F	1	0			
07-Oct	4	27211	730	M	1	0			
07-Oct	4	27212	710	M	1	0			
07-Oct	4	27213	720	M	1	0			
07-Oct	4	27214	700	M	1	0			
07-Oct	4	27215	810	M	1	0			
07-Oct	4	27216	710	M	1	0			
07-Oct	4	27217	880	F	1	0			
07-Oct	4	27218	630	M	1	0			SEAL SCAR
07-Oct	4	27219	965	M	1	0			SEAL SCAR
07-Oct	4	27220	780	F	1	0			
07-Oct	4	27221	720	M	1	0			SEAL SCAR

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
07-Oct	4	27222	530	M	1	0			
07-Oct	4	27223	710	M	1	0			
07-Oct	4	27224	670	M	1	0			
07-Oct	4	27225	810	F	1	0			HOOK SCAR
07-Oct	4	27226	660	M	1	0			SEAL SCAR
07-Oct	4	27227	680	M	1	0			
07-Oct	4	27228	790	F	1	0			
07-Oct	4	27229	610	M	1	0			
07-Oct	4	27230	550	M	1	0			
07-Oct	4	27231	670	M	1	0			
07-Oct	4	37017		M	1	0			RECAP
07-Oct	4	37018		M	1	0			RECAP
07-Oct	4	37030		M	1	0			RECAP
07-Oct	4	37034		M	1	0			RECAP
07-Oct	4	37036		M	1	0			RECAP
07-Oct	4	37041		M	1	0			RECAP
07-Oct	4	37062		M	1	0			RECAP
07-Oct	4	37065	320	M	1	0			
07-Oct	4	37066	360	M	1	0			
07-Oct	4	37067	310	M	1	0			
07-Oct	4	37068	340	M	1	0			
08-Oct	5	NONE	315	M	4	AD	R	2	KILLED
08-Oct	5	PUNCH	255	M	1	0			PUNCH ONLY
08-Oct	5	PUNCH	275	M	1	0			PUNCH ONLY
08-Oct	5	PUNCH	325	M	1	0			PUNCH ONLY
08-Oct	5	27010		F	1	0			RECAP
08-Oct	5	27018		F	1	0			RECAP
08-Oct	5	27053		F	1	0			RECAP
08-Oct	5	27075		F	1	0			RECAP
08-Oct	5	27085		F	1	0			RECAP
08-Oct	5	27142		F	1	0			RECAP
08-Oct	5	27150		M	1	AD			RECAP
08-Oct	5	27169		M	1	0			RECAP
08-Oct	5	27170		M	1	0			RECAP
08-Oct	5	27232	765	M	1	0			
08-Oct	5	27233	800	F	1	0			
08-Oct	5	27234	775	M	1	0			
08-Oct	5	27235	820	M	1	0			
08-Oct	5	27236	810	M	1	0			
08-Oct	5	27237	725	F	1	0			
08-Oct	5	27238	850	M	1	0			
08-Oct	5	27239	820	M	1	0			
08-Oct	5	27240	830	F	3	0			OPERC BLEED
08-Oct	5	27241	810	F	1	0			
08-Oct	5	27242	870	M	1	0			
08-Oct	5	27243	760	F	1	RV			REGEN RV
08-Oct	5	27244	720	M	1	0			HOOK SCAR
08-Oct	5	27245	775	M	1	0			
08-Oct	5	27246	850	F	1	0			
08-Oct	5	27247	770	F	1	0			
08-Oct	5	27248	810	F	1	0			
08-Oct	5	27249	710	F	1	0			
08-Oct	5	27250	810	M	1	0			
08-Oct	5	27251	725	M	3	0			GILL BLEED/ SEAL SCAR
08-Oct	5	27252	740	M	1	0			
08-Oct	5	27253	460	M	3	0			OPERC BLEED
08-Oct	5	27276	690	F	1	0			
08-Oct	5	27277	725	F	1	0			
08-Oct	5	27278	790	M	1	0			
08-Oct	5	27279	860	M	1	0			
08-Oct	5	27280	675	M	1	0			
08-Oct	5	27281	545	M	1	0			
08-Oct	5	27282	815	M	1	0			
08-Oct	5	27283	785	F	1	RV			
08-Oct	5	27284	880	M	1	0			

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
08-Oct	5	27285	735	M	1	0			
08-Oct	5	27286	645	M	1	0			
08-Oct	5	27287	685	M	1	0			
08-Oct	5	27289	730	M	1	0			HOOK SCAR
08-Oct	5	27290	785	F	1	0			
08-Oct	5	27291	740	F	1	0			
08-Oct	5	27292	760	M	1	0			
08-Oct	5	27293	815	M	1	0			
08-Oct	5	27294	715	M	1	0			
08-Oct	5	27295	675	M	1	0			
08-Oct	5	27296	785	F	1	0			
08-Oct	5	27297	720	F	1	0			
08-Oct	5	27298	575	M	1	0			
08-Oct	5	27299	625	M	1	0			
08-Oct	5	27300	695	F	1	0			
08-Oct	5	37034		M	1	0			RECAP
08-Oct	5	37043		M	1	0			RECAP
08-Oct	5	37066		M	1	0			RECAP
08-Oct	5	37069	415	M	1	0			
08-Oct	5	37071	UNK	M	1	0			
08-Oct	6	27048		M	1	0			RECAP
08-Oct	6	27063		M	1	0			RECAP
08-Oct	6	27088		F	1	0			RECAP
08-Oct	6	27133		F	1	0			RECAP
08-Oct	6	27147		M	1	0			RECAP
08-Oct	6	27150		M	1	AD			RECAP
08-Oct	6	27163		F	1	0			RECAP
08-Oct	6	27237		F	1	0			RECAP
08-Oct	6	27239		M	1	0			RECAP
08-Oct	6	27255	865	M	1	AD			HOOK SCAR
08-Oct	6	27256	815	M	1	0			
08-Oct	6	27257	660	F	1	0			SEAL SCAR
08-Oct	6	27258	805	M	1	0			SEAL SCAR
08-Oct	6	27260	790	M	1	0			
08-Oct	6	27261	695	F	1	0			
08-Oct	6	27262	780	F	1	0			
08-Oct	6	27263	815	F	1	0			SEAL SCAR
08-Oct	6	27264	775	F	1	0			
08-Oct	6	27265	780	M	1	0			
08-Oct	6	27266	630	F	1	0			HOOK SCAR
08-Oct	6	27267	785	M	1	0			
08-Oct	6	27268	630	M	1	0			
08-Oct	6	27269	790	F	1	0			
08-Oct	6	27270	780	F	1	0			
08-Oct	6	27271	835	M	1	0			RETAG
08-Oct	6	27272	715	F	1	0			SEAL SCAR
08-Oct	6	27273	780	M	1	0			
08-Oct	6	27274	725	M	1	0			
08-Oct	6	27275	745	M	1	0			
08-Oct	6	27301	755	F	1	0			RETAG/SEAL SCAR
08-Oct	6	27302	775	F	1	0			
08-Oct	6	27303	745	F	1	0			
08-Oct	6	27304	560	M	1	0			HOOK SCAR
08-Oct	6	27305	610	M	1	0			
08-Oct	6	27306	655	M	1	0			
08-Oct	6	37002		M	1	0			RECAP
08-Oct	6	37034		M	1	0			RECAP
08-Oct	6	37061		M	1	0			RECAP
08-Oct	6	37076	260	M	1	0			DORSAL TAG
08-Oct	6	37077	460	M	1	0			HOOK SCAR
08-Oct	6	37078	330	M	1	0			RETAG DORSAL
08-Oct	6	37079	325	M	1	0			DORSAL TAG
08-Oct	6	37080	275	M	1	0			DORSAL TAG
08-Oct	6	37081	320	M	1	0			DORSAL TAG
11-Oct	8	27010		F	1	0			RECAP/ FUNGUS

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
11-Oct	8	27069		M	1	0			RECAP
11-Oct	8	27091		F	1	0			RECAP/SEAL SCAR
11-Oct	8	27157		F	1	0			RECAP/NOSE FUNGUS
11-Oct	8	27307	840	F	1	0			
11-Oct	8	27308	890	F	1	0			
11-Oct	8	27309	715	F	1	0			
11-Oct	8	27310	745	F	1	0			SEAL SCAR
11-Oct	8	27311	755	F	1	0			
11-Oct	8	27312	700	M	1	0			
11-Oct	8	27313	715	M	1	0			
11-Oct	8	27314	720	F	1	0			
11-Oct	8	27315	795	F	1	0			
11-Oct	8	27316	770	F	1	0			
11-Oct	8	27317	745	M	1	0			
11-Oct	8	27318	730	F	1	0			
11-Oct	8	27319	695	M	1	0			
11-Oct	8	27320	615	M	1	0			
11-Oct	8	27321	775	F	1	0			
11-Oct	8	27323	740	M	1	0			
11-Oct	8	27324	760	F	1	0			
11-Oct	8	27325	695	M	1	0			
11-Oct	8	27326	695	F	1	0			SEAL SCAR
11-Oct	8	27327	600	M	1	0			
11-Oct	8	27328	745	F	1	0			
11-Oct	8	27329	580	M	1	0			
11-Oct	8	27330	805	F	1	0			RETAG
11-Oct	8	27331	820	F	1	0			HOOK SCAR
11-Oct	8	27332	640	M	1	0			
11-Oct	8	27333	520	M	1	0			SEAL SCAR
11-Oct	8	27334	780	M	1	0			
11-Oct	8	27335	580	F	3	0			OPERC BLEED
11-Oct	8	27336	740	F	1	0			
11-Oct	8	27337	760	M	1	0			
11-Oct	8	27338	500	M	3	0			OPERC BLEED
11-Oct	8	27340	450	M	1	0			
11-Oct	8	37011		M	1	0			RECAP
11-Oct	8	37084	375	M	1	0			FACE HOLE
11-Oct	8	37085	310	M	1	0			
11-Oct	8	37088	270	M	1	0			
11-Oct	8	37091	320	M	1	0			FUNGUS ON HEAD
11-Oct	8	37094	390	M	1	0			
11-Oct	8	37095	310	M	1	0			RETAG
11-Oct	8	37097	300	M	1	0			
11-Oct	8	37203	360	M	1	0			
11-Oct	8	37205	290	M	1	0			
11-Oct	8	37206	330	M	1	0			
11-Oct	8	37208	300	M	1	0			
11-Oct	8	37210	290	M	1	0			
11-Oct	8	37211	300	M	1	0			
11-Oct	8	37212	270	M	1	0			
11-Oct	8	37213	280	M	1	0			
11-Oct	8	37215	310	M	1	0			
11-Oct	8	37216	260	M	3	0			OPERC BLEED
11-Oct	9	27037		F	1	0			RECAP
11-Oct	9	27075		F	1	0			RECAP/NOSE FUNGUS
11-Oct	9	27188		M	1	0			RECAP
11-Oct	9	27205		F	1	0			RECAP
11-Oct	9	27236		M	1	0			RECAP
11-Oct	9	27271		M	1	0			RECAP
11-Oct	9	27341	640	M	1	0			
11-Oct	9	27342	755	M	1	0			
11-Oct	9	27343	860	M	1	0			
11-Oct	9	27344	825	F	1	0			
11-Oct	9	27345	865	M	1	0			
11-Oct	9	27346	805	M	1	0			
11-Oct	9	27347	765	M	1	0			

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
11-Oct	9	27348	885	F	1	0			
11-Oct	9	27349	770	F	3	0			OPERC BLEED
11-Oct	9	27350	830	F	1	0			
11-Oct	9	27351	780	F	1	0			
11-Oct	9	27352	820	F	1	0			
11-Oct	9	27353	820	F	1	0			
11-Oct	9	27354	695	F	1	AD			REGEN AD/ SEAL SCAR
11-Oct	9	27355	675	M	3	0			HEAVY BLEED/ HOOK SCAR
11-Oct	9	27356	740	F	1	0			
11-Oct	9	27357	805	F	1	0			
11-Oct	9	27358	850	F	3	0			OPERC BLEED
11-Oct	9	27359	795	F	1	0			
11-Oct	9	27360	650	M	1	0			HOOK SCAR
11-Oct	9	27361	770	M	1	0			
11-Oct	9	27362	780	F	1	0			TAIL SCAR
11-Oct	9	27363	735	F	3	0			OPERC BLEED/ HOOK SCAR
11-Oct	9	27364	845	F	1	0			
11-Oct	9	27365	870	F	1	0			
11-Oct	9	27366	840	F	1	0			
11-Oct	9	27367	695	M	1	0			
11-Oct	9	27368	770	M	1	0			
11-Oct	9	27369	660	M	1	0			SEAL SCAR
11-Oct	9	27370	845	F	1	0			
11-Oct	9	27371	755	M	1	AD			
11-Oct	9	27372	720	M	1	0			
11-Oct	9	27373	845	F	1	0			SEAL SCAR
11-Oct	9	27374	725	F	1	0			
11-Oct	9	27375	800	F	1	0			SEAL SCAR
11-Oct	9	27376	720	M	1	0			
11-Oct	9	27377	775	F	1	0			SEAL SCAR
11-Oct	9	27378	800	M	1	0			
11-Oct	9	27379	550	M	1	0			
11-Oct	9	27380	680	M	1	0			
11-Oct	9	27381	820	F	1	0			
11-Oct	9	27382	815	F	1	0			
11-Oct	9	27383	750	F	1	0			
11-Oct	9	27384	705	M	1	0			
11-Oct	9	27385	910	M	1	0			HOOK SCAR
11-Oct	9	27386	890	M	1	0			
11-Oct	9	27387	830	F	1	0			
11-Oct	9	27388	780	M	1	0			
11-Oct	9	27389	800	M	1	0			
11-Oct	9	27390	860	F	1	0			
11-Oct	9	27391	840	F	1	0			
11-Oct	9	27392	790	F	1	0			
11-Oct	9	27393	760	F	1	0			
11-Oct	9	27394	800	F	1	0			SEAL SCAR
11-Oct	9	27395	760	M	1	0			
11-Oct	9	27396	680	M	1	AD			
11-Oct	9	27400	890	M	1	0			
11-Oct	9	27401	570	M	1	0			
11-Oct	9	27402	810	F	1	0			
11-Oct	9	27403	830	F	1	0			
11-Oct	9	27404	800	F	1	AD			HOOK SCAR
11-Oct	9	27405	840	M	1	0			
11-Oct	9	27406	790	M	1	0			
11-Oct	9	27407	700	F	1	0			
11-Oct	9	27408	570	M	1	0			
11-Oct	9	27409	630	M	1	0			
11-Oct	9	27410	770	F	1	0			
11-Oct	9	27411	780	F	1	0			
11-Oct	9	27412	640	M	1	0			SEAL SCAR
11-Oct	9	27413	760	M	1	0			

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
11-Oct	9	27415	700	M	1	0			
11-Oct	9	27416	850	F	1	0			
11-Oct	9	27417	670	M	1	0			
11-Oct	9	27418	510	M	1	0			
11-Oct	9	37097		M	1	0			RECAP
11-Oct	9	37203		M	1	0			RECAP
11-Oct	9	37206		M	1	0			RECAP
11-Oct	9	37210		M	1	0			RECAP
11-Oct	9	37211		M	1	0			RECAP
11-Oct	9	37217	420	M	1	0			
11-Oct	9	37219	390	M	1	0			
11-Oct	9	37222	430	M	1	0			
11-Oct	9	37224	440	M	1	0			
11-Oct	9	37227	430	M	1	0			
11-Oct	9	37228	310	M	1	0			
11-Oct	9	37229	260	M	1	0			RETAG
11-Oct	9	37231	320	M	1	0			RETAG
11-Oct	9	37232	260	M	1	0			
11-Oct	9	37233	490	M	1	0			
11-Oct	9	37234	330	M	1	0			
11-Oct	9	37235	380	M	1	0			
11-Oct	9	37236	330	M	1	0			
11-Oct	9	37237	280	M	1	0			
11-Oct	9	37239	340	M	1	0			
11-Oct	9	37240	250	M	1	0			
11-Oct	9	37242	270	M	1	0			
13-Oct	10	27037		F	1	0			RECAP
13-Oct	10	27039		F	1	0			RECAP/FUNGUS
13-Oct	10	27205		F	1	0			RECAP
13-Oct	10	27271		M	1	0			RECAP
13-Oct	10	27315		F	1	0			RECAP
13-Oct	10	27342		M	1	0			RECAP
13-Oct	10	27358		F	1	0			RECAP
13-Oct	10	27374		F	1	0			RECAP
13-Oct	10	27386		M	1	0			RECAP
13-Oct	10	27420	865	M	1	0			
13-Oct	10	27421	800	M	1	0			SEAL SCAR
13-Oct	10	27422	750	M	1	0			
13-Oct	10	27423	765	M	1	0			
13-Oct	10	27424	850	F	1	0			
13-Oct	10	27425	810	M	1	0			SEAL SCAR
13-Oct	10	27426	790	M	1	0			
13-Oct	10	27427	830	F	1	0			
13-Oct	10	27428	735	F	3	0			LT OPERC BLEED
13-Oct	10	27429	710	F	1	0			
13-Oct	10	27430	730	F	1	0			
13-Oct	10	27431	910	F	1	0			
13-Oct	10	27432	815	F	1	0			
13-Oct	10	27433	945	F	1	0			
13-Oct	10	27434	770	F	1	0			
13-Oct	10	27435	790	F	1	0			
13-Oct	10	27436	795	F	1	0			
13-Oct	10	27437	725	F	1	0			SEAL SCAR
13-Oct	10	27438	850	M	1	0			SEAL SCAR
13-Oct	10	27439	855	F	1	0			SEAL SCAR
13-Oct	10	27440	820	F	1	0			SEAL SCAR
13-Oct	10	27441	560	M	1	0			
13-Oct	10	27442	710	M	1	0			
13-Oct	10	27444	780	F	1	0			
13-Oct	10	27445	865	F	1	0			
13-Oct	10	27446	780	F	1	0			SEAL SCAR
13-Oct	10	27447	790	F	1	0			SEAL SCAR
13-Oct	10	27448	755	M	1	AD			
13-Oct	10	27449	760	F	1	0			SEAL SCAR
13-Oct	10	27450	785	F	1	0			SEAL SCAR
13-Oct	10	27451	880	F	1	0			

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
13-Oct	10	27452	820	F	1	0			
13-Oct	10	27453	790	F	1	0			SEAL SCAR
13-Oct	10	27454	890	F	1	0			
13-Oct	10	27455	750	F	1	0			
13-Oct	10	27456	790	F	1	0			
13-Oct	10	27457	780	F	1	0			
13-Oct	10	27458	730	M	1	0			SEAL SCAR
13-Oct	10	27459	800	F	1	0			
13-Oct	10	27460	790	F	1	0			
13-Oct	10	27461	750	M	1	0			
13-Oct	10	27462	810	F	1	0			
13-Oct	10	27463	810	M	1	0			
13-Oct	10	27464	730	M	1	0			
13-Oct	10	27465	780	M	1	0			
13-Oct	10	27466	800	F	1	0			
13-Oct	10	27467	800	F	1	0			
13-Oct	10	27468	790	F	1	0			
13-Oct	10	27469	790	F	1	0			FUNGUS
13-Oct	10	27470	680	M	1	0			
13-Oct	10	27471	770	F	1	0			
13-Oct	10	27472	770	F	1	0			
13-Oct	10	27473	780	F	1	0			
13-Oct	10	27474	780	F	1	0			
13-Oct	10	27475	690	F	1	0			
13-Oct	10	27476	740	F	1	0			
13-Oct	10	27479	890	F	1	0			
13-Oct	10	27480	760	F	1	0			
13-Oct	10	27481	790	F	1	0			
13-Oct	10	27482	770	F	1	0			
13-Oct	10	27483	630	M	1	0			
13-Oct	10	27484	800	F	1	0			
13-Oct	10	27485	750	F	1	0			
13-Oct	10	27486	740	M	1	0			
13-Oct	10	27487	760	M	1	0			
13-Oct	10	27488	780	F	1	0			
13-Oct	10	27489	770	M	1	0			
13-Oct	10	27490	840	F	1	0			
13-Oct	10	27491	625	M	1	0			
13-Oct	10	27492	730	F	1	0			
13-Oct	10	27493	540	M	1	0			
13-Oct	10	27494	780	F	1	0			
13-Oct	10	27495	520	M	1	0			
13-Oct	10	27496	590	M	1	0			
13-Oct	10	27497	660	M	1	0			
13-Oct	10	27498	530	M	1	0			
13-Oct	10	27499	530	M	1	0			
13-Oct	10	27500	620	M	3	0			GILL BLEED
13-Oct	10	37027		M	1	0			RECAP
13-Oct	10	37213		M	1	0			RECAP
13-Oct	10	37227		M	1	0			RECAP
13-Oct	10	37231		M	1	0			RECAP
13-Oct	10	37235		M	1	0			RECAP
13-Oct	10	37237		M	1	0			RECAP
13-Oct	10	37244	410	M	1	0			
13-Oct	10	37247	410	M	1	0			
13-Oct	10	37248	300	M	1	0			
13-Oct	10	37249	340	M	1	0			
13-Oct	10	37250	440	M	1	0			
13-Oct	10	37352	330	M	1	0			
13-Oct	10	37354	400	M	1	0			
13-Oct	10	37356	380	M	1	0			
13-Oct	10	37357	290	M	1	0			
13-Oct	10	37358	300	M	1	0			
13-Oct	10	37359	400	M	1	0			
13-Oct	10	37361	320	M	1	0			
13-Oct	10	37362	330	M	1	0			

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
13-Oct	10	37363	290	M	1	0			
13-Oct	10	37365	430	M	1	0			
13-Oct	10	37367	400	M	1	0			
13-Oct	10	37368	370	M	1	0			
13-Oct	10	37370	330	M	1	0			
13-Oct	10	37371	320	M	1	0			
13-Oct	10	37372	290	M	1	0			
13-Oct	10	37375	290	M	1	0			
13-Oct	10	37376	290	M	1	0			
13-Oct	10	37378	270	M	1	0			
13-Oct	10	37379	260	M	1	0			
13-Oct	10	37380	310	M	1	0			
13-Oct	11	27039		F	1	0			RECAP/ FUNGUS
13-Oct	11	27152		F	1	0			RECAP/ FUNGUS
13-Oct	11	27342		M	1	0			RECAP
13-Oct	11	27418		M	1	0			RECAP
13-Oct	11	27429		F	1	0			RECAP
13-Oct	11	27501	760	F	1	0			
13-Oct	11	27502	680	M	1	0			
13-Oct	11	27503	635	F	1	0			
13-Oct	11	27504	760	F	1	0			SEAL SCAR
13-Oct	11	27505	710	M	1	0			
13-Oct	11	27506	705	F	1	0			
13-Oct	11	27507	755	M	1	0			
13-Oct	11	27508	690	M	1	0			
13-Oct	11	27509	720	F	1	0			
13-Oct	11	27510	690	M	1	0			
13-Oct	11	27511	790	F	1	0			
13-Oct	11	27512	705	F	1	0			
13-Oct	11	27513	730	F	1	0			
13-Oct	11	27514	735	M	1	0			SEAL SCAR
13-Oct	11	27515	755	F	1	0			
13-Oct	11	27516	905	M	1	0			HOOK SCAR
13-Oct	11	27517	830	F	1	0			
13-Oct	11	27518	800	M	1	0			
13-Oct	11	27519	660	M	1	0			
13-Oct	11	27520	715	F	1	0			
13-Oct	11	27521	770	F	1	0			SEAL SCAR
13-Oct	11	27522	710	M	1	0			
13-Oct	11	27523	835	M	1	0			
13-Oct	11	27524	655	F	3	0			
13-Oct	11	27525	870	F	1	0			SEAL SCAR
13-Oct	11	27526	735	F	1	0			
13-Oct	11	27527	775	F	1	0			HOOK SCAR
13-Oct	11	27528	645	M	1	0			HOOK SCAR
13-Oct	11	27529	585	M	1	0			
13-Oct	11	27530	590	M	1	0			TAG IN OPERC PUNCH
13-Oct	11	37042		M	1	0			RECAP
13-Oct	11	37049		M	1	0			RECAP
13-Oct	11	37213		M	1	0			RECAP
13-Oct	11	37227		M	1	0			RECAP
13-Oct	11	37231		M	1	0			RECAP
13-Oct	11	37235		M	1	0			RECAP
13-Oct	11	37235		M	1	0			RECAP
13-Oct	11	37237		M	1	0			RECAP
13-Oct	11	37247		M	1	0			RECAP
13-Oct	11	37250		M	1	0			RECAP
13-Oct	11	37352		M	1	0			RECAP
13-Oct	11	37354		M	1	0			RECAP
13-Oct	11	37356		M	1	0			RECAP
13-Oct	11	37357		M	1	0			RECAP
13-Oct	11	37358		M	1	0			RECAP
13-Oct	11	37363		M	1	0			RECAP
13-Oct	11	37370		M	1	0			RECAP
13-Oct	11	37375		M	1	0			RECAP

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
13-Oct	11	37378		M	1	0			RECAP
13-Oct	11	37381	270	M	1	0			FUNGUS
13-Oct	11	37384	410	M	1	0			
13-Oct	11	37385	300	M	1	0			
13-Oct	11	37387	270	M	1	0			
13-Oct	11	37388	270	M	1	0			
13-Oct	11	37389	240	M	1	0			
13-Oct	12	27049		F	1	0			RECAP
13-Oct	12	27146		F	1	0			RECAP
13-Oct	12	27160		F	1	0			RECAP
13-Oct	12	27203		F	1	0			RECAP
13-Oct	12	27261		F	1	0			RECAP
13-Oct	12	27300		F	1	0			RECAP
13-Oct	12	27315		F	1	0			RECAP
13-Oct	12	27373		F	1	0			RECAP
13-Oct	12	27374		F	1	0			RECAP
13-Oct	12	27393		F	1	0			RECAP
13-Oct	12	27418		M	1	0			RECAP
13-Oct	12	27453		F	1	0			RECAP
13-Oct	12	27455		F	1	0			RECAP
13-Oct	12	27468		F	1	0			RECAP
13-Oct	12	27470		M	1	0			RECAP
13-Oct	12	27480		F	1	0			RECAP
13-Oct	12	27486		M	1	0			RECAP
13-Oct	12	27531	840	F	1	0			
13-Oct	12	27532	880	F	1	0			
13-Oct	12	27533	900	M	1	0			
13-Oct	12	27534	785	F	1	0			
13-Oct	12	27535	675	F	1	0			
13-Oct	12	27536	750	F	1	0			
13-Oct	12	27537	890	F	1	0			
13-Oct	12	27538	790	F	1	0			
13-Oct	12	27539	870	F	1	0			
13-Oct	12	27540	775	M	1	0			
13-Oct	12	27541	755	F	1	0			
13-Oct	12	27542	830	F	1	0			
13-Oct	12	27543	700	F	1	0			
13-Oct	12	27544	UNK	F	1	0			HOOK SCAR
13-Oct	12	27545	880	M	1	0			HOOK SCAR
13-Oct	12	27546	710	M	1	AD			SEAL SCAR
13-Oct	12	27547	705	M	1	AD			
13-Oct	12	27548	755	F	1	0			SEAL SCAR
13-Oct	12	27549	630	M	1	0			SEAL SCAR
13-Oct	12	27550	770	M	1	0			
13-Oct	12	27551	820	F	1	0			
13-Oct	12	27552	735	M	1	0			
13-Oct	12	27553	720	F	1	0			
13-Oct	12	27554	840	F	1	0			
13-Oct	12	27555	755	M	1	0			HOOK SCAR
13-Oct	12	27556	615	M	1	0			BAD FINS
13-Oct	12	27557	750	F	1	0			
13-Oct	12	27558	660	M	1	0			
13-Oct	12	27559	700	F	1	0			
13-Oct	12	27560	730	M	1	0			SEAL SCAR
13-Oct	12	27561	830	M	1	0			
13-Oct	12	27562	710	M	1	0			
13-Oct	12	37095		M	1	0			RECAP
13-Oct	12	37231		M	1	0			RECAP
13-Oct	12	37247		M	1	0			RECAP
13-Oct	12	37301	260	M	1	0			
13-Oct	12	37302	285	M	1	0			
13-Oct	12	37352		M	1	0			RECAP
13-Oct	12	37356		M	1	0			RECAP
13-Oct	12	37385		M	1	0			RECAP
13-Oct	12	37391	300	M	1	0			
13-Oct	12	37392	295	M	1	0			

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
13-Oct	12	37394	270	M	1	0			
13-Oct	12	37400	285	M	3	0			OPERC BLEED
14-Oct	13	27215		M	1	0			RECAP
14-Oct	13	27324		F	1	0			RECAP
14-Oct	13	27358		F	1	0			RECAP
14-Oct	13	27447		F	1	0			RECAP
14-Oct	13	27455		F	1	0			RECAP
14-Oct	13	27462		F	1	0			RECAP
14-Oct	13	27470		M	1	0			RECAP
14-Oct	13	27486		M	1	0			RECAP
14-Oct	13	27488		F	1	0			RECAP
14-Oct	13	27489		M	1	0			RECAP
14-Oct	13	27496		M	1	0			RECAP
14-Oct	13	27531		F	1	0			RECAP
14-Oct	13	27549		M	1	0			RECAP
14-Oct	13	27563	765	F	1	0			SEAL SCAR
14-Oct	13	27564	815	M	1	0			
14-Oct	13	27565	775	M	1	0			
14-Oct	13	27566	755	F	1	0			SEAL SCAR
14-Oct	13	27567	920	M	1	0			
14-Oct	13	27568	815	F	1	0			
14-Oct	13	27569	835	M	1	0			
14-Oct	13	27570	820	F	1	0			
14-Oct	13	27571	740	F	1	0			
14-Oct	13	27572	875	F	1	0			
14-Oct	13	27573	915	M	1	0			
14-Oct	13	27574	815	F	1	0			SEAL SCAR
14-Oct	13	27575	780	M	1	0			HOOK IN MOUTH
14-Oct	13	27576	815	M	1	0			
14-Oct	13	27577	790	F	1	0			
14-Oct	13	27578	755	F	1	0			
14-Oct	13	27579	805	M	1	0			FUNGUS
14-Oct	13	27580	795	F	1	0			
14-Oct	13	27581	715	M	1	0			
14-Oct	13	27582	830	M	1	0			
14-Oct	13	27583	775	F	3	0			GILL BLEED
14-Oct	13	27584	735	F	1	0			SEAL SCAR
14-Oct	13	27585	835	F	1	0			SEAL SCAR
14-Oct	13	27586	770	F	1	0			
14-Oct	13	27587	770	F	1	0			
14-Oct	13	27589	740	M	1	0			SEALSCAR/FUNGUS
14-Oct	13	27590	950	F	1	0			
14-Oct	13	27591	775	F	1	0			
14-Oct	13	27592	730	F	1	0			
14-Oct	13	27593	780	F	1	0			SEAL SCAR
14-Oct	13	27594	740	F	1	0			SEAL SCAR
14-Oct	13	27595	755	M	3	RV			SEAL SCAR
14-Oct	13	27596	750	F	1	0			SEAL SCAR
14-Oct	13	27597	750	M	1	0			
14-Oct	13	27598	710	F	1	0			
14-Oct	13	27599	695	M	1	0			
14-Oct	13	27600	845	F	3	0			SEAL SCAR
14-Oct	13	27601	625	F	1	AD			SEAL SCAR
14-Oct	13	27602	715	M	1	0			SEAL SCAR
14-Oct	13	27603	735	F	1	0			
14-Oct	13	27604	630	M	3	0			OPERC BLEED
14-Oct	13	27605	700	M	1	0			
14-Oct	13	37076		M	1	0			RECAP
14-Oct	13	37095		M	1	0			RECAP
14-Oct	13	37231		M	1	0			RECAP
14-Oct	13	37302		M	1	0			RECAP
14-Oct	13	37352		M	1	0			RECAP
14-Oct	13	37363		M	1	0			RECAP
14-Oct	13	37370		M	1	0			RECAP
14-Oct	13	37384		M	1	0			RECAP
14-Oct	13	39002	470	M	1	0			

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
14-Oct	13	39003	325	M	1	0			
14-Oct	13	39004	285	M	1	0			
14-Oct	13	39006	500	M	1	0			
14-Oct	13	39007	360	M	1	0			
14-Oct	13	39008	315	M	1	0			
14-Oct	13	39009	380	M	1	0			RETAG
14-Oct	13	39010	335	M	1	0			FUNGUS
14-Oct	13	39012	280	M	1	0			
14-Oct	13	39013	320	M	1	0			
14-Oct	13	39014	310	M	3	0			
14-Oct	13	39015	290	M	1	0			
14-Oct	13	39016	270	M	1	0			
14-Oct	13	39017	295	M	1	0			
14-Oct	13	39018	280	M	1	0			
14-Oct	14	27418		M	1	0			RECAP
14-Oct	14	27456		F	1	0			RECAP
14-Oct	14	27496		M	1	0			RECAP
14-Oct	14	27556		M	1	0			RECAP
14-Oct	14	27606	765	M	1	0			
14-Oct	14	27607	880	F	1	0			
14-Oct	14	27608	775	F	1	0			
14-Oct	14	27609	695	M	1	0			SEAL SCAR
14-Oct	14	27610	850	F	1	0			SEAL SCAR
14-Oct	14	27611	770	F	1	0			
14-Oct	14	27612	675	M	1	0			
14-Oct	14	27613	830	F	1	0			
14-Oct	14	27614	780	F	1	0			SEAL SCAR/ HOOK SCAR
14-Oct	14	27615	655	M	1	0			
14-Oct	14	27616	800	F	1	0			HOOK SCAR
14-Oct	14	27617	820	F	1	0			SEAL SCAR
14-Oct	14	27618	750	M	1	0			
14-Oct	14	27619	720	M	1	0			HOOK SCAR
14-Oct	14	27620	835	F	1	0			SEAL SCAR
14-Oct	14	27621	570	M	1	0			
14-Oct	14	27622	650	F	1	0			
14-Oct	14	27623	785	M	1	0			
14-Oct	14	27624	770	M	1	0			
14-Oct	14	27625	710	M	1	0			
14-Oct	14	27626	735	M	1	0			
14-Oct	14	27627	660	M	1	0			
14-Oct	14	37352		M	1	0			RECAP
14-Oct	14	37391		M	1	0			RECAP
14-Oct	14	39002		M	1	0			RECAP
14-Oct	14	39004		M	1	0			RECAP
14-Oct	14	39010		M	1	0			RECAP
14-Oct	14	39012		M	1	0			RECAP
14-Oct	14	39016		M	1	0			RECAP
14-Oct	14	39018		M	1	0			RECAP
14-Oct	14	39019	410	M	1	0			
14-Oct	14	39026	295	M	1	0			
14-Oct	15	NO TAG		530	M	4	AD	R	KILLED
14-Oct	15	27055		F	1	0			RECAP/FUNGUS
14-Oct	15	27160		F	1	0			RECAP
14-Oct	15	27217		F	1	0			RECAP
14-Oct	15	27303		F	1	0			RECAP
14-Oct	15	27335		F	1	0			RECAP
14-Oct	15	27358		F	1	0			RECAP
14-Oct	15	27455		F	1	0			RECAP
14-Oct	15	27491		M	1	0			RECAP
14-Oct	15	27549		M	1	0			RECAP
14-Oct	15	27571		F	1	0			RECAP
14-Oct	15	27599		M	1	0			RECAP
14-Oct	15	27612		M	1	0			RECAP
14-Oct	15	27621		M	1	0			RECAP
14-Oct	15	27628	830	F	1	0			RIPE/FUNGUS

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
14-Oct	15	27629	785	M	1	0			
14-Oct	15	27630	830	F	1	0			RIPE-CLOSE
14-Oct	15	27631	770	M	1	0			
14-Oct	15	27632	820	M	1	0			SEAL SCAR
14-Oct	15	27633	785	M	1	0			
14-Oct	15	27634	885	F	1	0			
14-Oct	15	27635	735	F	1	0			SEAL SCAR
14-Oct	15	27636	815	F	1	0			SEAL SCAR
14-Oct	15	27637	725	F	1	0			SEAL SCAR
14-Oct	15	27638	835	M	1	0			
14-Oct	15	27639	780	F	1	0			
14-Oct	15	27640	745	F	1	0			
14-Oct	15	27641	745	F	1	0			
14-Oct	15	27642	760	F	1	0			
14-Oct	15	27643	710	M	1	0			
14-Oct	15	27644	715	F	1	0			
14-Oct	15	27645	720	M	1	0			
14-Oct	15	27646	760	F	1	0			
14-Oct	15	27647	760	M	1	0			
14-Oct	15	27649	855	M	3	0			OPERC BLEED
14-Oct	15	27650	745	F	1	0			SEAL SCAR
14-Oct	15	27651	720	M	1	0			
14-Oct	15	27652	865	M	1	0			SEAL SCAR
14-Oct	15	27653	730	F	1	0			SEAL SCAR
14-Oct	15	27654	705	F	1	0			
14-Oct	15	27655	665	M	1	0			BODY FUNGUS
14-Oct	15	27656	680	M	1	0			HOOK SCAR
14-Oct	15	27657	675	F	1	0			
14-Oct	15	27658	760	M	1	0			
14-Oct	15	27659	755	M	1	0			
14-Oct	15	27660	745	F	1	0			
14-Oct	15	27661	620	M	1	0			SEAL SCAR
14-Oct	15	37053		M	1	0			RECAP
14-Oct	15	37227		M	1	0			RECAP
14-Oct	15	37231		M	1	0			RECAP
14-Oct	15	37302		M	1	0			RECAP
14-Oct	15	37356		M	1	0			RECAP
14-Oct	15	37384		M	1	0			RECAP
14-Oct	15	39002		M	1	0			RECAP
14-Oct	15	39008		M	1	0			RECAP
14-Oct	15	39012		M	1	0			RECAP
14-Oct	15	39015		M	1	0			RECAP
14-Oct	15	39026		M	1	0			RECAP
14-Oct	15	39028	515	M	1	0			SEAL SCAR
14-Oct	15	39029	530	M	1	0			
14-Oct	15	39030	430	M	1	0			FUNGUS
14-Oct	15	39031	320	M	1	0			RETAG
16-Oct	16	27055		F	1	0			RECAP/GREEN
16-Oct	16	27205		F	1	0			RECAP
16-Oct	16	27206		F	1	0			RECAP/4 DAYS
16-Oct	16	27264		F	1	0			RECAP/GREEN
16-Oct	16	27393		F	1	0			RECAP/GREEN
16-Oct	16	27418		M	1	0			RECAP
16-Oct	16	27455		F	1	0			RECAP
16-Oct	16	27493		M	1	0			RECAP/GREEN
16-Oct	16	27567		M	1	0			RECAP
16-Oct	16	27589		M	1	0			RECAP
16-Oct	16	27610		F	1	0			RECAP
16-Oct	16	27647		M	1	0			RECAP
16-Oct	16	27657		F	1	0			RECAP/6 DAYS
16-Oct	16	27662	930	M	1	0			
16-Oct	16	27663	810	F	1	0			GREEN
16-Oct	16	27664	855	F	1	0			SEAL SCAR/5 DAYS
16-Oct	16	27665	805	F	1	0			GREEN
16-Oct	16	27666	745	F	1	0			SEAL SCAR/4 DAYS
16-Oct	16	27667	760	F	1	0			GREEN

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
16-Oct	16	27668	730	M	1	0			
16-Oct	16	27669	715	F	1	0			GREEN
16-Oct	16	27670	775	F	1	0			GREEN
16-Oct	16	27671	730	F	1	0			SEAL SCAR/ GREEN
16-Oct	16	27672	805	F	1	0			GREEN
16-Oct	16	27673	830	F	1	0			SEAL SCAR/ GREEN
16-Oct	16	27674	855	F	1	0			GREEN
16-Oct	16	27675	705	M	1	0			
16-Oct	16	27676	725	F	1	0			GREEN
16-Oct	16	27677	735	F	1	0			SEAL SCAR/ HOOK SCAR
16-Oct	16	27678	720	F	1	0			SEAL SCAR/ GREEN
16-Oct	16	27679	740	F	1	0			GREEN
16-Oct	16	27680	770	F	1	0			GREEN
16-Oct	16	27681	745	F	1	0			GREEN
16-Oct	16	27682	925	M	1	0			
16-Oct	16	27683	740	M	1	0			
16-Oct	16	27684	735	M	1	0			HOOK SCAR
16-Oct	16	27685	740	M	1	0			SEAL SCAR
16-Oct	16	27686	775	M	1	0			
16-Oct	16	27687	790	M	1	0			
16-Oct	16	27688	750	F	1	AD			GREEN
16-Oct	16	27689	815	F	1	0			SEAL SCAR/ GREEN
16-Oct	16	27690	705	M	1	0			SEAL SCAR
16-Oct	16	27691	670	M	1	0			
16-Oct	16	27692	900	M	1	0			SEAL SCAR
16-Oct	16	27693	730	M	1	0			SEAL SCAR
16-Oct	16	27694	810	M	1	0			SEAL SCAR
16-Oct	16	27695	755	M	1	0			
16-Oct	16	27696	925	F	1	0			GREEN
16-Oct	16	27697	710	M	1	0			
16-Oct	16	27698	755	F	1	0			SEAL SCAR
16-Oct	16	27699	715	F	1	0			GREEN
16-Oct	16	27700	750	M	1	0			
16-Oct	16	27701	660	M	1	0			TAIL ROTTING
16-Oct	16	27702	740	F	1	0			SEAL SCAR
16-Oct	16	27703	685	M	1	0			SEAL SCAR
16-Oct	16	27704	790	F	1	0			SEAL SCAR
16-Oct	16	37213		M	1	0			RECAP
16-Oct	16	37231		M	1	0			RECAP
16-Oct	16	37357		M	1	0			RECAP
16-Oct	16	37365		M	1	0			RECAP
16-Oct	16	37400		M	1	0			RECAP
16-Oct	16	39010		M	1	0			RECAP
16-Oct	16	39012		M	1	0			RECAP
16-Oct	16	39128	455	M	1	0			
16-Oct	16	39129	495	M	1	0			
16-Oct	16	39130	355	M	1	0			
16-Oct	16	39131	345	M	1	0			
16-Oct	16	39132	395	M	1	0			
16-Oct	16	39133	355	M	1	0			SEAL SCAR
16-Oct	16	39134	385	M	1	0			
16-Oct	16	39135	270	M	1	0			
16-Oct	16	39136	495	M	1	0			
16-Oct	16	39137	405	M	1	0			
16-Oct	16	39138	275	M	1	0			TAG IN OPERC PUNCH
16-Oct	17	27003		F	1	0			RECAP
16-Oct	17	27055		F	1	0			RECAP
16-Oct	17	27081		M	1	0			RECAP
16-Oct	17	27133		F	1	0			RECAP
16-Oct	17	27205		F	1	0			RECAP

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
16-Oct	17	27286		M	1	0			RECAP
16-Oct	17	27328		F	1	0			RECAP
16-Oct	17	27358		F	1	0			RECAP
16-Oct	17	27393		F	1	0			RECAP
16-Oct	17	27418		M	1	0			RECAP
16-Oct	17	27440		F	1	0			RECAP
16-Oct	17	27471		F	1	0			RECAP
16-Oct	17	27480		F	1	0			RECAP
16-Oct	17	27505		M	1	0			RECAP
16-Oct	17	27562		M	1	0			RECAP
16-Oct	17	27589		M	1	0			RECAP
16-Oct	17	27610		F	1	0			RECAP/GREEN
16-Oct	17	27671		F	1	0			RECAP
16-Oct	17	27672		F	1	0			RECAP
16-Oct	17	27685		M	1	0			RECAP
16-Oct	17	27697		M	1	0			RECAP
16-Oct	17	27700		M	1	0			RECAP
16-Oct	17	27702		F	1	0			RECAP
16-Oct	17	27705	820	F	1	0			SEAL SCAR/GREEN
16-Oct	17	27706	765	F	1	0			GREEN
16-Oct	17	27707	740	M	1	0			SEAL SCAR
16-Oct	17	27709	705	F	3	0			GREEN
16-Oct	17	27710	705	M	1	0			SEAL SCAR
16-Oct	17	27711	690	M	1	0			
16-Oct	17	27712	800	M	1	0			SEAL SCAR
16-Oct	17	27713	750	F	1	0			SEAL SCAR/GREEN
16-Oct	17	27714	795	M	1	0			SEAL SCAR
16-Oct	17	27715	710	M	1	0			SEAL SCAR
16-Oct	17	27716	825	F	1	0			SEAL SCAR/GREEN
16-Oct	17	27717	880	M	1	0			SEAL SCAR
16-Oct	17	27718	810	F	1	LV			REGEN LV/GREEN
16-Oct	17	27719	820	F	1	0			SEAL SCAR/70% SPAWN ED
16-Oct	17	27720	790	F	1	0			2 DAYS
16-Oct	17	27721	700	M	1	0			
16-Oct	17	27722	805	F	1	0			5 DAYS
16-Oct	17	27723	800	M	1	0			
16-Oct	17	27724	845	F	1	0			GREEN
16-Oct	17	27725	685	M	1	0			FUNGUS
16-Oct	17	27726	785	F	1	0			2 DAYS
16-Oct	17	27727	755	M	1	0			
16-Oct	17	27728	750	F	1	0			GREEN
16-Oct	17	27729	660	M	1	0			RIPE
16-Oct	17	27730	710	M	1	0			SEAL SCAR
16-Oct	17	27731	775	F	1	0			GREEN
16-Oct	17	27732	835	M	1	0			
16-Oct	17	27733	745	F	1	0			SEAL SCAR/4 DAYS
16-Oct	17	27734	750	M	1	0			
16-Oct	17	27735	745	M	1	0			
16-Oct	17	27736	720	F	1	0			GREEN
16-Oct	17	27737	750	F	1	0			SEAL SCAR/GREEN
16-Oct	17	27738	770	F	1	0			RIPE
16-Oct	17	27739	735	F	1	0			GREEN
16-Oct	17	27740	815	F	1	0			GREEN
16-Oct	17	27741	750	F	3	0			SEAL SCAR/GREEN
16-Oct	17	27742	715	F	3	0			SEAL SCAR/GREEN
16-Oct	17	27743	695	M	1	0			SEAL SCAR
16-Oct	17	27744	760	F	1	0			2 DAYS
16-Oct	17	27745	700	F	1	0			GREEN
16-Oct	17	27746	870	F	1	0			GREEN
16-Oct	17	27747	850	F	1	0			SEAL SCAR/GREEN
16-Oct	17	27748	625	M	1	0			SEAL SCAR
16-Oct	17	27749	730	F	1	0			SEAL SCAR/4 DAYS
16-Oct	17	27750	685	M	1	0			SEAL SCAR/HOOK SCAR
16-Oct	17	37077		M	1	0			RECAP

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
16-Oct	17	37362		M	1	0			RECAP
16-Oct	17	37363		M	1	0			RECAP
16-Oct	17	37385		M	1	0			RECAP
16-Oct	17	39128		M	1	0			RECAP
16-Oct	17	39133		M	1	0			RECAP
16-Oct	17	39136		M	1	0			RECAP
16-Oct	17	39139	485	M	1	0			
16-Oct	17	39140	320	M	1	0			
16-Oct	17	39141	340	M	1	0			
16-Oct	17	39142	340	M	1	0			
16-Oct	17	39143	340	M	1	0			
16-Oct	17	39144	300	M	1	0			SEAL SCAR
16-Oct	17	39145	260	M	1	0			RETAG
16-Oct	17	39146	300	M	1	0			
18-Oct	18	27081		M	1	0			RECAP/PARTIAL SPAWN
18-Oct	18	27610		F	1	0			RECAP
18-Oct	18	27642		F	1	0			RECAP/GREEN
18-Oct	18	27692		M	1	0			RECAP
18-Oct	18	27702		F	1	0			RECAP/GREEN
18-Oct	18	27751	845	M	1	0			
18-Oct	18	27752	855	F	1	0			SEAL SCAR
18-Oct	18	27753	700	M	1	0			
18-Oct	18	27754	925	F	1	0			GREEN
18-Oct	18	27755	780	F	1	0			GREEN
18-Oct	18	27756	770	F	1	0			GREEN
18-Oct	18	27757	770	F	1	0			SEAL SCAR
18-Oct	18	27758	770	M	1	0			
18-Oct	18	27759	745	F	1	0			SEAL SCAR
18-Oct	18	27760	630	M	1	0			
18-Oct	18	37077		M	1	0			RECAP
18-Oct	18	39051	370	M	1	0			HOOK SCAR
18-Oct	18	39052	335	M	1	0			
18-Oct	19	27081		M	1	0			RECAP
18-Oct	19	27205		F	1	0			RECAP
18-Oct	19	27390		F	1	0			RECAP
18-Oct	19	27455		F	1	0			RECAP
18-Oct	19	27492		F	1	0			RECAP
18-Oct	19	27610		F	1	0			RECAP/GREEN
18-Oct	19	27759		F	1	0			RECAP
18-Oct	19	27760		M	1	0			RECAP
18-Oct	19	27761	855	F	1	0			GREEN
18-Oct	19	27762	795	F	1	0			RIPE
18-Oct	19	27763	775	M	3	0			
18-Oct	19	27764	880	F	1	0			GREEN
18-Oct	19	27765	890	M	1	0			SEAL SCAR
18-Oct	19	27766	855	F	1	0			GREEN
18-Oct	19	27767	755	F	1	0			GREEN
18-Oct	19	27768	800	F	1	0			SEAL SCAR
18-Oct	19	27769	700	F	1	0			SEAL SCAR
18-Oct	19	27770	830	F	1	0			GREEN
18-Oct	19	27771	685	M	3	0			
18-Oct	19	27772	785	F	1	0			GREEN
18-Oct	19	27773	795	F	1	0			SEAL SCAR
18-Oct	19	27774	670	M	1	0			
18-Oct	19	27775	735	F	1	0			HOOK SCAR/ SEAL SCAR
18-Oct	19	27776	685	F	1	0			GREEN
18-Oct	19	39051		M	1	0			RECAP
18-Oct	19	39053	640	M	1	0			
18-Oct	19	39054	270	M	1	0			
18-Oct	19	39055	210	M	1	0			
18-Oct	19	39056	375	M	1	0			
18-Oct	19	39057	280	M	1	0			
18-Oct	20	27255		M	1	0			RECAP
18-Oct	20	27359		F	1	0			RECAP/4 DAYS

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
18-Oct	20	27440		F	1	0			RECAP
18-Oct	20	27591		F	1	0			RECAP
18-Oct	20	27698		F	1	0			RECAP
18-Oct	20	27766		F	1	0			RECAP
18-Oct	20	27777	830	F	1	0			SEAL SCAR/GREEN
18-Oct	20	27778	825	F	1	0			GREEN
18-Oct	20	27779	785	M	1	0			
18-Oct	20	27780	805	F	1	0			6 DAYS
18-Oct	20	27781	830	F	1	0			HOOK SCAR/GREEN
18-Oct	20	27783	745	F	3	0			SEAL SCAR/GREEN
18-Oct	20	27784	840	F	1	0			SEAL SCAR/GREEN
18-Oct	20	27785	715	F	1	0			SEAL SCAR/GREEN
18-Oct	20	37357		M	1	0			RECAP
18-Oct	20	39026		M	1	0			RECAP
18-Oct	20	39058	430	M	1	0			
18-Oct	20	39059	390	M	3	0			
18-Oct	20	39060	255	M	3	0			
20-Oct	21	27786	710	F	1	0			GREEN
20-Oct	21	27787	650	F	1	0			SEAL SCAR/GREEN
20-Oct	21	39032	510	M	1	0			
20-Oct	21	39033	270	M	1	0			
20-Oct	22	27205		F	1	0			RECAP/GREEN
20-Oct	22	27610		F	1	0			RECAP/4 DAYS
20-Oct	22	27657		F	1	0			RECAP/GREEN
20-Oct	22	27783		F	1	0			RECAP/GREEN
20-Oct	22	27788	840	F	1	0			SEAL SCAR/GREEN
20-Oct	22	27789	715	M	1	0			
20-Oct	22	27790	715	M	1	0			
20-Oct	22	27791	735	F	1	0			4 DAYS
20-Oct	22	27792	715	F	3	0			SEAL SCAR/5 DAYS
20-Oct	22	27793	820	F	1	0			SEAL SCAR/GREEN
20-Oct	22	27794	820	F	1	0			5 DAYS
20-Oct	22	27795	870	F	1	0			SEAL SCAR/4 DAYS
20-Oct	22	27796	640	F	1	0			4 DAYS
20-Oct	22	27797	640	M	1	0			
20-Oct	23	27053		F	1	0			RECAP/ FUNGUS
20-Oct	23	27134		M	1	0			RECAP/2 DAYS RIPE
20-Oct	23	27702		F	1	0			RECAP/4 DAYS
20-Oct	23	27793		F	1	0			RECAP/GREEN
20-Oct	23	27798	765	F	1	0			4 DAYS
20-Oct	23	27799	800	F	1	0			4 DAYS
20-Oct	23	27800	755	F	1	0			4 DAYS
20-Oct	23	27801	760	F	1	0			4 DAYS
20-Oct	23	27802	775	F	1	0			SEAL SCAR/5 DAYS
20-Oct	23	27803	770	M	1	0			FUNGUS/RIPE
20-Oct	23	27804	820	F	1	0			GREEN
20-Oct	23	27805	650	M	1	0			HOOK SCAR/ FUNGUS
20-Oct	23	27806	770	M	3	0			
20-Oct	23	27807	810	M	1	0			SEAL SCAR/FUNGUS
20-Oct	23	27808	745	F	1	0			5 DAYS
20-Oct	23	27809	775	F	1	0			3 DAYS
20-Oct	23	39034	555	M	1	0			
20-Oct	23	39035	430	M	1	0			SEAL SCAR/FUNGUS
22-Oct	24	27702		F	6	0			HOLD-04-2 DAYS/ RECAP
22-Oct	24	27756		F	1	0			RECAP/GREEN
22-Oct	24	27810	720	F	6	0			HOLD-01-4 DAYS
22-Oct	24	27811	840	F	6	0			HOLD-02-4 DAYS
22-Oct	24	27812	720	F	6	0			HOLD-03-4 DAYS/ HOOK SCAR
22-Oct	24	27813	810	M	6	0			RIPE-HOLD
22-Oct	24	27814	720	M	6	0			RIPE-HOLD/ FUNGUS
22-Oct	24	27815	770	F	6	0			HOLD-05-5 DAYS
22-Oct	24	27816	680	F	6	0			HOLD-06-5 DAYS
22-Oct	24	27817	760	M	6	AD			HOLD-4 DAYS
22-Oct	24	39036	290	M	1	0			

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
22-Oct	24	39037	270	M	1	0			
22-Oct	25	27203		F	6	0			RECAP/HOLD
22-Oct	25	27819	720	M	6	0			RIPE-HOLD
22-Oct	25	27820	740	M	1	0			GREEN
22-Oct	25	27821	780	M	5	0			SPAWNED OUT
22-Oct	25	27822	680	M	1	0			GREEN
22-Oct	25	27823	800	F	6	0			07-RIPE-HOLD
22-Oct	25	27824	770	F	6	0			HOLD-09-4DAYS
22-Oct	25	27825	820	F	6	0			10-RIPE-HOLD
22-Oct	25	39038	280	M	1	0			
22-Oct	25	39039	270	M	1	0			
22-Oct	25	39040	420	M	1	0			
22-Oct	25	39041	360	M	1	0			
22-Oct	26	27211		M	6	0			RECAP/RIPE-HOLD
22-Oct	26	27452		F	6	0			RECAP/HOLD-12-4 DAYS
22-Oct	26	27610		F	6	0			RECAP/11-RIPE-HOLD
22-Oct	26	27822		M	6	0			RECAP/RIPE-HOLD
22-Oct	26	27826	690	F	1	0			PARTIAL
22-Oct	26	27827	730	F	1	0			PARTIAL
22-Oct	26	27828	830	M	1	0			GREEN
22-Oct	26	27829	880	M	6	0			RIPE-HOLD
22-Oct	26	27830	610	M	6	0			RIPE-HOLD
22-Oct	26	27831	690	M	1	0			GREEN
22-Oct	26	27832	730	M	3	0			GREEN
22-Oct	26	27833	850	F	6	0			HOLD-13-4 DAYS
22-Oct	26	27834	890	M	6	0			RIPE-HOLD
22-Oct	26	39036		M	1	0			RECAP/GREEN
22-Oct	26	39042	450	M	1	0			GREEN
22-Oct	26	39043	560	M	6	0			RIPE-HOLD
22-Oct	26	39044	490	M	1	0			GREEN
22-Oct	26	39045	440	M	1	0			GREEN
22-Oct	27	27538		F	6	0			RECAP/HOLD-18-2 DAYS
22-Oct	27	27544		F	1	0			RECAP/GREEN
22-Oct	27	27636		F	1	0			RECAP/GREEN
22-Oct	27	27826		F	5	0			RECAP
22-Oct	27	27827		F	1	0			RECAP/PARTIAL
22-Oct	27	27835	810	F	6	0			14-RIPE-HOLD
22-Oct	27	27836	650	M	6	0			RIPE-HOLD
22-Oct	27	27837	770	F	6	0			HOLD-15-5 DAYS
22-Oct	27	27838	930	M	1	0			GREEN
22-Oct	27	27839	830	F	3	0			GREEN
22-Oct	27	27851	760	F	6	0			HOLD-16-5 DAYS
22-Oct	27	27852	870	F	6	0			HOLD-17-5 DAYS
22-Oct	27	27853	750	F	1	0			GREEN/VENT SCAR
22-Oct	27	27854	730	F	6	0			19-RIPE-HOLD
22-Oct	27	27855	700	F	1	0			GREEN
22-Oct	27	39038		M	1	0			RECAP/GREEN
22-Oct	27	39045		M	1	0			RECAP/GREEN
22-Oct	27	39046	430	M	1	0			
22-Oct	27	39047	310	M	1	0			RETAG/BAD SCARS
22-Oct	27	39048	270	M	1	0			GREEN
22-Oct	28	27856	750	M	1	0			GREEN
22-Oct	28	27857	730	F	6	0			HOLD-20-4 DAYS
22-Oct	28	27858	750	F	1	AD			SEAL SCAR

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
22-Oct	28	27859	810	F	1	0			GREEN
22-Oct	28	27860	910	F	6	0			HOLD-21-4 DAYS
22-Oct	28	27861	730	F	1	0			GREEN/HOOK SCAR
22-Oct	28	27863	650	M	1	0			GREEN
22-Oct	28	27864	610	M	6	0			RIPE-HOLD
22-Oct	28	39041		M	1	0			RECAP/GREEN
22-Oct	29	27865	760	F	1	0			GREEN
23-Oct	30	27866	770	F	1	0			GREEN
23-Oct	30	27867	710	M	6	0			RIPE-HOLD
23-Oct	30	39049	260	M	1	0			
23-Oct	31	27480		F	6	0			RECAP/HOLD-23-4 DAYS
23-Oct	31	27868	730	M	6	AD			RIPE-HOLD
23-Oct	31	27869	850	F	6	0			HOLD-22-5 DAYS
23-Oct	31	27870	830	M	1	0			GREEN
23-Oct	31	27871	790	F	6	0			HOLD-24-3 DAYS
23-Oct	31	27872	740	F	1	0			GREEN
23-Oct	31	27873	900	F	1	0			GREEN/BAD SEAL SCAR
23-Oct	31	27874	760	F	6	0			HOLD-25-4 DAYS
23-Oct	31	27875	750	F	6	0			HOLD-26-1 DAY
23-Oct	31	27876	790	F	6	0			27-RIPE-HOLD
23-Oct	31	27877	800	F	6	0			28-RIPE-HOLD
23-Oct	31	27878	700	F	6	0			HOLD-29-1 DAY
23-Oct	31	27879	830	F	6	0			HOLD-30-4 DAYS
23-Oct	31	27880	860	F	6	0			HOLD-31-1 DAY
23-Oct	31	39049		M	1	0			RECAP
23-Oct	31	39050	630	M	1	0			GREEN
23-Oct	31	39061	290	M	1	0			
23-Oct	32	27881	860	F	6	0			HOLD-32-3 DAYS
23-Oct	32	27882	780	M	6	0			RIPE-HOLD
23-Oct	32	27883	880	F	6	0			HOLD-33-2 DAYS/SEAL SCAR
23-Oct	32	27884	830	M	1	0			GREEN
23-Oct	32	39049		M	1	0			RECAP
23-Oct	32	39050		M	1	0			RECAP
23-Oct	32	39062	510	M	6	0			RIPE-HOLD
23-Oct	32	39063	320	M	1	0			GREEN
23-Oct	32	39064	280	M	1	0			GREEN
24-Oct	37	27203	780	F	6	0	W		SPAWNED
24-Oct	37	27211		M	6	0			ESCAPED
24-Oct	37	27610	880	F	6	0	5		SPAWNED
24-Oct	37	27813		M	6	0			ESCAPED
24-Oct	37	27814	700	M	6	0	4		SPAWNED
24-Oct	37	27817		M	6	AD			ESCAPED
24-Oct	37	27819		M	6	0			ESCAPED
24-Oct	37	27822	695	M	6	0	4		SPAWNED
24-Oct	37	27823		F	6	0			DISCARDED
24-Oct	37	27825	820	F	6	0	4		SPAWNED
24-Oct	37	27829		M	6	0			RELEASED-GREEN
24-Oct	37	27830	570	M	6	0	4		SPAWNED
24-Oct	37	27834	780	M	6	0	4		SPAWNED
24-Oct	37	27835	840	F	6	0	4		SPAWNED
24-Oct	37	27836	650	M	6	0	W		SPAWNED
24-Oct	37	27854	760	F	6	0	W		SPAWNED
24-Oct	37	27864		M	6	0			ESCAPED
24-Oct	37	27867		M	6	0			ESCAPED
24-Oct	37	27868	740	M	6	AD	W	4	SPAWNED
24-Oct	37	27876	835	F	6	0	4		SPAWNED
24-Oct	37	27877	770	F	6	0	4		SPAWNED
24-Oct	37	27882		M	6	0			ESCAPED
24-Oct	37	39043	550	M	6	0	W		SPAWNED
24-Oct	37	39062		M	6	0			ESCAPED
26-Oct	37	27272		F	1	0			RECAP/GREEN
26-Oct	37	27885	780	F	6	0			RELEASED-GREEN
26-Oct	37	27886	880	F	6	0			HOLD-7-3 DAYS

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
26-Oct	37	27887	810	F	6	0			HOLD-8-3 DAYS
26-Oct	37	27888	880	F	6	0			HOLD-10-3 DAYS
26-Oct	37	27889	810	F	6	0			RELEASED
26-Oct	38	27233		F	6	0			RECAP/HOLD-19-2 DAYS
26-Oct	38	27454		F	6	0			RECAP/HOLD-14-4 DAYS
26-Oct	38	27688		F	1	AD			RECAP/GREEN
26-Oct	38	27890	790	F	6	0			HOLD-27-RIPE
26-Oct	38	27891	790	F	6	0			HOLD-28-RIPE
26-Oct	38	27892	780	F	6	0			HOLD-34-RIPE,SEAL SCAR/ESCAPED 10/27/92
26-Oct	38	39065	270	M	1	0			
27-Oct	39	27893	815	F	1	0			GREEN
27-Oct	39	27894	830	F	1	0			GREEN/HOOK SCAR
27-Oct	40	27494		F	6				RECAP/HOLD-35-2 DAYS, FUNGUS
27-Oct	40	27587		F	6				RECAP/HOLD-34-RIPE
27-Oct	40	27895	750	M	6	0			HOLD-RIPE
27-Oct	40	27896	880	M	6	0			HOLD-RIPE/FIN ROT
27-Oct	40	27897	780	F	1	0			GREEN/SCAR
27-Oct	40	27898	785	F	1	0			SEAL SCAR
27-Oct	40	27899	900	F	1	0			GREEN
27-Oct	40	27926	760	F	1	0			GREEN/SEAL SCAR, HOOK MARK
27-Oct	40	27927	845	M	1	0			GREEN
27-Oct	40	39066	530	M	6	0			HOLD-RIPE
27-Oct	40	39067	330	M	1	0			
27-Oct	41	27928	825	F	1	0			GREEN
27-Oct	41	27929	690	M	1	0			SEAL SCAR
27-Oct	41	27930	820	F	6	0			HOLD-36-2 DAYS
27-Oct	41	27931	725	F	6	0			HOLD-42-2 DAYS
27-Oct	42	27786		F	1				RECAP/GREEN
27-Oct	42	27932	760	F	1	0			PARTIAL
27-Oct	42	27933	760	M	1	0			GREEN
27-Oct	42	27934	735	F	5	0			SEAL SCAR
27-Oct	42	27935	865	F	6	0			HOLD-41-1 DAY
27-Oct	42	27936	690	M	6	0			HOLD-RIPE, GILL FUNGUS
27-Oct	42	27937	690	M	1	0			SEAL SCAR
27-Oct	42	27938	790	M	1	0			GREEN
27-Oct	42	39068	350	M	6	0			ESCAPED
27-Oct	43	27456		F	6				RECAP/HOLD-39-RIPE
27-Oct	43	27634		F	1				RECAP/PARTIAL
27-Oct	43	27884		M	5				RECAP
27-Oct	43	27929		M	1				RECAP/GREEN
27-Oct	43	27939	860	M	6	0			HOLD-RIPE, HOOK SCAR & FUNGUS
27-Oct	43	27940	710	M	5	0			
27-Oct	43	27941	820	M	6	0			HOLD-FUNGUS
27-Oct	43	27942	815	F	5	0			
27-Oct	43	27943	760	M	6	0			HOLD-RIPE
27-Oct	43	27944	760	F	5	0			
27-Oct	43	27946	820	M	5	0			
27-Oct	43	27947	825	M	6	0			HOLD-RIPE
27-Oct	43	27948	780	F	5	0			FUNGUS
27-Oct	43	27949	850	F	5	0			
27-Oct	43	27950	840	F	5	0			

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
27-Oct	43	28076	785	F	6	0			HOLD-40-RIPE/INJ. EYE
27-Oct	43	28077	690	M	6	AD			HOLD-RIPE/SEAL SCAR
27-Oct	43	28078	760	M	1	AD			GREEN/SEAL SCAR
27-Oct	43	28079	740	M	1	0			GREEN/SEAL SCAR
27-Oct	43	28080	720	M	6	0			HOLD-RIPE
27-Oct	43	39069	315	M	1	0			
28-Oct	44	NONE	275	M	6	0	2		SPAWNED
28-Oct	44	NONE	560	M	6	0	3		SPAWNED
28-Oct	44	NONE	650	M	6	0	W		SPAWNED
28-Oct	44	NONE	725	M	6	0	RG		SPAWNED
28-Oct	44	NONE	745	M	6	0	4		SPAWNED
28-Oct	44	NONE	830	M	6	0	4		SPAWNED
28-Oct	44	NONE	900	F	6	0	5		SPAWNED
28-Oct	44	NONE	910	M	6	0	W		SPAWNED
28-Oct	44	27457		F	5				RECAP
28-Oct	44	27489		M	6				RECAP/HOLD-RIPE
28-Oct	44	27641		F	5				RECAP
28-Oct	44	27686		M	6				RECAP/HOLD-RIPE
28-Oct	44	27926		F	1				RECAP/PARTIAL
28-Oct	44	27932		F	6		4		RECAP/SPAWNED
28-Oct	44	27950		F	5				RECAP
28-Oct	44	28081	830	F	1	0			
28-Oct	44	28082	875	F	5	0			SCARS + FUNGUS
28-Oct	44	28083	840	F	6	0			HOLD-38-3 DAYS
28-Oct	44	28084	860	F	5	0			FUNGUS
28-Oct	44	28085	830	F	5	0			
28-Oct	44	28086	770	F	5	0			
28-Oct	44	28087	925	F	1	0			GREEN/SEAL SCAR
28-Oct	44	28088	830	F	5	0			
28-Oct	44	28089	790	F	5	0			
28-Oct	44	28090	825	F	5	0			
28-Oct	44	28091	860	F	5	0			
28-Oct	44	28092	760	F	5	0			
28-Oct	44	28093	720	F	1	0			GREEN
28-Oct	44	39062		M	6				RECAP/SPAWNED & RELEASED
28-Oct	45	27452		F	6	0	5		SPAWNED
28-Oct	45	27456		F	6	0	5		SPAWNED
28-Oct	45	27489		M	6	0	RG		SPAWNED
28-Oct	45	27538		F	6	0	4		HOLDING MORT
28-Oct	45	27587		F	6	0	4		SPAWNED
28-Oct	45	27686		M	6	0	4		SPAWNED
28-Oct	45	27702		F	6	0	RG		SPAWNED
28-Oct	45	27811		F	6	0	5		SPAWNED
28-Oct	45	27816		F	6	0	4		SPAWNED
28-Oct	45	27824		F	6	0	4		HOLDING MORT
28-Oct	45	27833		F	6	0	4		DISCARDED EGGS
28-Oct	45	27837		F	6	0	4		SPAWNED
28-Oct	45	27851		F	6	0	4		SPAWNED
28-Oct	45	27852		F	6	0	4		SPAWNED
28-Oct	45	27874		F	6				GREEN/RELEASED
28-Oct	45	27875		F	6	0	4		SPAWNED
28-Oct	45	27878		F	6	0	4		SPAWNED
28-Oct	45	27879		F	6	0	5		SPAWNED
28-Oct	45	27880		F	6	0	5		SPAWNED
28-Oct	45	27881		F	6	0	5		SPAWNED
28-Oct	45	27883		F	6	0	5		SPAWNED
28-Oct	45	27888		F	6	0	5		SPAWNED
28-Oct	45	27890		F	6	0	4		SPAWNED
28-Oct	45	27891		F	6	0	4		SPAWNED
28-Oct	45	27895		M	6	0	4		SPAWNED
28-Oct	45	27896		M	6	0	6		SPAWNED
28-Oct	45	27935		F	6	0	5		SPAWNED
28-Oct	45	27936		M	6	0	4		SPAWNED

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
28-Oct	45	27941		M	6	0	W		SPAWNED
28-Oct	45	27947		M	6	0	4		SPAWNED
28-Oct	45	28076		F	6	0	4		SPAWNED
28-Oct	45	28077		M	6	AD	4	3	SPAWNED
28-Oct	45	28080		M	6	0	4		SPAWNED
28-Oct	45	39066		M	6	0	R		SPAWNED
29-Oct	45	27282		M	6				RECAP/HOLD
29-Oct	45	27335		F	5				RECAP
29-Oct	45	27575		M	6				RECAP/HOLD
29-Oct	45	27634		F	5				RECAP
29-Oct	45	27767		F	6				RECAP/HOLD-2
29-Oct	45	27870		M	6				RECAP/HOLD
29-Oct	45	27874		F	6				RECAP/HOLD-6-2 DAYS, SORE ON BACK
29-Oct	45	27901	815	F	1	0			GREEN
29-Oct	45	27902	760	F	5	0			
29-Oct	45	27903	740	F	5	0			
29-Oct	45	27904	605	M	1	0			GREEN
29-Oct	45	27934		F	5				RECAP
29-Oct	45	27944		F	5				RECAP
29-Oct	45	27948		F	5				RECAP
29-Oct	45	27949		F	5				RECAP
29-Oct	45	27950		F	5				RECAP
29-Oct	45	28084		F	5				RECAP
29-Oct	45	28089		F	5				RECAP
29-Oct	45	28090		F	5				RECAP
29-Oct	45	28091		F	5				RECAP
29-Oct	45	28093		F	6				RECAP/HOLD-13-2DAYS
29-Oct	45	28094	880	F	5	0			
29-Oct	45	28095	870	F	5	0			
29-Oct	45	28096	900	F	6	0			HOLD-4-2DAYS/SEAL SCAR
29-Oct	45	28097	880	F	5	0			
29-Oct	45	28098	830	F	5	0			
29-Oct	45	28099	855	F	5	0			
29-Oct	45	28100	830	F	5	0			
29-Oct	45	39041		M	6				RECAP/HOLD
29-Oct	45	39070	290	M	1	0			
29-Oct	45	39071	270	M	1	0			
29-Oct	45	39087		M	6				RECAP/HOLD
29-Oct	46	27335		F	5				RECAP
29-Oct	46	27692		M	6				RECAP/HOLD
29-Oct	46	27786		F	6				RECAP/HOLD-17-2 DAYS
29-Oct	46	27838		M	6				RECAP/HOLD
29-Oct	46	27904		M	6				RECAP/HOLD
29-Oct	46	27905	825	F	5	0			
29-Oct	46	27906	780	F	5	0			
29-Oct	46	27907	820	F	1	0			HOLD-16-2 DAYS
29-Oct	46	27908	790	F	5	0			
29-Oct	46	27909	700	M	5	0			
29-Oct	46	27910	760	F	1	0			HOLD-25-2 DAYS
29-Oct	46	27911	710	M	5	0			
29-Oct	46	27912	790	F	5	0			
29-Oct	46	27918	760	M	5	0			
29-Oct	46	27926		F	5				RECAP
29-Oct	46	27929		M	6				RECAP/HOLD-RIPE
29-Oct	46	27948		F	5				RECAP
29-Oct	46	28082		F	5				RECAP
29-Oct	46	28084		F	5				RECAP
29-Oct	46	28086		F	5				RECAP
29-Oct	46	28091		F	5				RECAP

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
29-Oct	46	28092		F	5				RECAP
29-Oct	46	28097		F	5				RECAP
29-Oct	46	28099		F	5				RECAP
29-Oct	46	39072	270	M	1	0			
29-Oct	47	PUNCH		M	1				RECAP / SPAWNED
29-Oct	47	27326		F	6				RECAP/HOLD-30-RIPE
29-Oct	47	27335		F	5				RECAP
29-Oct	47	27345		M	6				RECAP/HOLD-RIPE
29-Oct	47	27634		F	5				RECAP
29-Oct	47	27736		F	5				RECAP
29-Oct	47	27789		M	6				RECAP/HOLD-RIPE
29-Oct	47	27828		M	6				RECAP/HOLD-RIPE
29-Oct	47	27869		F	1	0			ESCAPED
29-Oct	47	27903		F	5				RECAP
29-Oct	47	27905		F	5				RECAP
29-Oct	47	27906		F	5				RECAP
29-Oct	47	27908		F	5				RECAP
29-Oct	47	27909		M	6				RECAP/HOLD-RIPE
29-Oct	47	27912		F	5				RECAP
29-Oct	47	27913	710	F	5	0			
29-Oct	47	27914	790	F	5	0			
29-Oct	47	27915	770	F	6	0			HOLD-29-2 DAYS
29-Oct	47	27916	780	M	1	0			GREEN/SEAL SCAR
29-Oct	47	27917	845	F	5	0			
29-Oct	47	27934		F	5				RECAP
29-Oct	47	27948		F	5				RECAP
29-Oct	47	27949		F	5				RECAP
29-Oct	47	27950		F	5				RECAP
29-Oct	47	28084		F	5				RECAP
29-Oct	47	28086		F	5				RECAP
29-Oct	47	28090		F	5				RECAP
29-Oct	47	28091		F	5				RECAP
29-Oct	47	28094		F	5				RECAP
29-Oct	47	28095		F	5				RECAP
29-Oct	47	28098		F	5				RECAP
29-Oct	47	28100		F	5				RECAP
29-Oct	47	39061		M	1				RECAP /SPAWNED
29-Oct	47	39072		M	1				RECAP /SPAWNED
29-Oct	48	NONE	280	M	6	0	?		SPAWNED
29-Oct	48	NONE	585	M	6	0	4		SPAWNED
29-Oct	48	NONE	630	M	6	0	R		SPAWNED
29-Oct	48	NONE	655	M	6	0	4		SPAWNED
29-Oct	48	NONE	720	M	6	0	W		SPAWNED
29-Oct	48	NONE	725	M	6	0	4		SPAWNED
29-Oct	48	NONE	730	M	6	0	4		SPAWNED
29-Oct	48	NONE	740	M	6	0	4		SPAWNED
29-Oct	48	NONE	810	F	6	0	4		SPAWNED
29-Oct	48	NONE	810	F	6	0	4		DISCARDED EGGS
29-Oct	48	NONE	815	M	6	0	4		SPAWNED
29-Oct	48	NONE	820	F	6	0	5		SPAWNED
29-Oct	48	NONE	830	M	6	0	R		SPAWNED
29-Oct	48	NONE	830	M	6	0	4		SPAWNED
29-Oct	48	NONE	850	M	6	0	6		SPAWNED
29-Oct	48	NONE	850	F	6	0	5		SPAWNED
29-Oct	48	NONE	875	F	6	0	5		SPAWNED
29-Oct	48	NONE	880	F	6	0	5		SPAWNED
29-Oct	48	PUNCH	280	M	6	0	?		SPAWNED
29-Oct	48	27233		F	6	0	5		SPAWNED
29-Oct	48	27326		F	6	0	RG		KILLED/GREEN
29-Oct	48	27345		M	6	0	5		SPAWNED
29-Oct	48	27454		F	6	0	5		SPAWNED
29-Oct	48	27484		F	6	AD	3M	4	SPAWNED
29-Oct	48	27692		M	6	0	5		SPAWNED
29-Oct	48	27767		F	6	0	4		SPAWNED
29-Oct	48	27789		M	6	0	4		SPAWNED
29-Oct	48	27815		F	6	0	4		SPAWNED

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
29-Oct	48	27828		M	6	0	5		SPAWNED
29-Oct	48	27838		M	6	0	5		SPAWNED
29-Oct	48	27857		F	6	0	4		SPAWNED
29-Oct	48	27860		F	6	0	5		SPAWNED
29-Oct	48	27871		F	6	0	4		SPAWNED
29-Oct	48	27886		F	6	0	RG		SPAWNED
29-Oct	48	27887		F	6	0	W		SPAWNED
29-Oct	48	27904		M	6	0	R		SPAWNED
29-Oct	48	27909		M	6	0	R		SPAWNED
29-Oct	48	27929		M	6	0	4		SPAWNED
29-Oct	48	27930		F	6				RELEASED
29-Oct	48	27931		F	6	0	4		SPAWNED
29-Oct	48	28083		F	6				RELEASED
29-Oct	48	39061		M	6	0	?		SPAWNED
29-Oct	48	39072		M	6	0	?		SPAWNED
30-Oct	48	PUNCH		F	5	0			
30-Oct	48	27335		F	5	0			
30-Oct	48	27346		M	5	0			
30-Oct	48	27634		F	5	0			
30-Oct	48	27660		F	6	0			HOLD-2
30-Oct	48	27903		F	5	0			
30-Oct	48	27905		F	1	0			
30-Oct	48	27906		F	5	0			
30-Oct	48	27918		M	6	0			HOLD-RIPE
30-Oct	48	27919	760	F	1	0			
30-Oct	48	27920	850	F	1	0			RETAG
30-Oct	48	27921	810	F	1	0			GREEN
30-Oct	48	27922	900	F	1	0			GREEN
30-Oct	48	27923	790	F	1	0			GREEN
30-Oct	48	27924	810	M	6	0			HOLD-RIPE
30-Oct	48	27944		F	5	0			
30-Oct	48	27948		F	5	0			
30-Oct	48	27949		F	5	0			
30-Oct	48	27950		F	5	0			
30-Oct	48	28079		M	5	0			
30-Oct	48	28089		F	5	0			
30-Oct	48	28090		F	5	0			
30-Oct	48	28095		F	5	0			
30-Oct	48	28097		F	5	0			
30-Oct	48	28100		F	5	0			
30-Oct	48	39033		M	1	0			
30-Oct	49	27329		M	6	0			RECAP/HOLD
30-Oct	49	27335		F	5	0			RECAP
30-Oct	49	27634		F	5	0			RECAP
30-Oct	49	27831		M	6	0			HOLD-RIPE
30-Oct	49	27903		F	5	0			RECAP
30-Oct	49	27906		F	5	0			RECAP
30-Oct	49	27920		F	5	0			RECAP
30-Oct	49	27925	790	F	5	0			
30-Oct	49	27938		M	5	0			
30-Oct	49	27948		F	5	0			RECAP
30-Oct	49	27949		F	5	0			
30-Oct	49	27950		F	5	0			RECAP
30-Oct	49	27951	775	F	1	0			GREEN
30-Oct	49	27953	780	F	3	0			GREEN
30-Oct	49	27954	750	F	1	0			GREEN
30-Oct	49	28079		M	5	0			RECAP
30-Oct	49	28090		F	5	0			RECAP
30-Oct	49	28091		F	5	0			
30-Oct	49	28097		F	5	0			RECAP
30-Oct	49	28098		F	5	0			RECAP
30-Oct	49	28100		F	5	0			RECAP
30-Oct	49	39067		M	6	0			RECAP/HOLD
30-Oct	50	27335		F	5	0			RECAP
30-Oct	50	27547		M	4	AD	RG	4	RECAP/KILLED
30-Oct	50	27626		M	1	0			RECAP

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
30-Oct	50	27634		F	5	0			RECAP
30-Oct	50	27826		F	5	0			RECAP
30-Oct	50	27903		F	5	0			RECAP
30-Oct	50	27906		F	5	0			RECAP
30-Oct	50	27911		M	5	0			RECAP
30-Oct	50	27919		F	5	0			RECAP
30-Oct	50	27920		F	5	0			RECAP
30-Oct	50	27948		F	5	0			RECAP
30-Oct	50	27950		F	5	0			RECAP
30-Oct	50	27955	745	F	5	0			
30-Oct	50	27956	795	F	5	0			
30-Oct	50	27957	915	M	1	0			GREEN
30-Oct	50	27958	870	F	5	0			
30-Oct	50	27959	780	F	5	0			
30-Oct	50	28078		M	6	0			RECAP/HOLD-RIPE
30-Oct	50	28081		F	5	0			RECAP
30-Oct	50	28084		F	5	0			RECAP
30-Oct	50	28086		F	5	0			RECAP
30-Oct	50	28089		F	5	0			RECAP
30-Oct	50	28092		F	5	0			RECAP
30-Oct	50	39073	275	M	1	0			
31-Oct	51	27960	760	F	5	0			
31-Oct	51	27961	850	F	5	0			
31-Oct	51	27962	790	F	5	0			
31-Oct	51	27963	780	F	5	0			
31-Oct	51	27964	740	M	5	0			
31-Oct	51	27965	770	F	5	0			
31-Oct	51	27966	750	F	5	0			
31-Oct	51	27967	740	M	5	0			
31-Oct	51	27968	740	F	1	0			
31-Oct	51	27969	570	M	5	0			
31-Oct	51	39074	345	M	1	0			
31-Oct	51	39075	350	M	1	0			
31-Oct	51	39100	250	M	1	0			
31-Oct			730	M	6		4		
31-Oct		27870	830	M	6		5		
31-Oct			750	M	6		4		
31-Oct			760	M	6		RG		
31-Oct		27575	780	M	6		4		
31-Oct			940	M	6		6		
31-Oct			795	F	6		4		
31-Oct		27910	760	F	6		4		
31-Oct		27915	770	F	6		4		
31-Oct			805	F	6		4		
31-Oct			680	M	6		R		
31-Oct			890	M	6		5		
31-Oct		27946	820	M	6		4		
31-Oct		28096	900	F	6		5		
31-Oct			865	F	6		5		
31-Oct		27812	720	F	6		4		
31-Oct		27874	760	F	6		MF		
31-Oct		27660	745	F	6		R		
31-Oct		27810	720	F	6		4		
31-Oct			810	M	6		4		
31-Oct			920	M	6		6		
31-Oct			720	M	6		RG		
28-Oct		27943	760	M	6	0	4		
28-Oct		27939	860	M	6	0	4		
02-Nov			830	F	6		4		
02-Nov			775	F	6		4		
02-Nov			725	F	6		4		
02-Nov		27329	610	M	6		3		
02-Nov			880	M	6		4		
06-Nov			900	F	6		RG		
06-Nov			780	F	6		4		
06-Nov			945	F	6		5		

Appendix 1 continued.

DATE	SET	TAG #	POH	SEX	CDN	FC	AGE SCL	AGE CWT	COMMENTS
06-Nov			900	F	6		5		
06-Nov			880	M	6		4		
06-Nov			785	M	6		4		
06-Nov			805	M	6		4		
06-Nov			860	M	6		R		
07-Nov			700	F	6		4		
07-Nov		28087	950	F	6		RG		
07-Nov			860	F	6		5		
07-Nov			805	F	6		4		
07-Nov			895	F	6		5		
07-Nov			945	F	6		5		
07-Nov			870	M	6		R		
07-Nov			750	M	6		R		
07-Nov			700	M	6		R		
07-Nov		27863	650	M	6		4		
07-Nov			790	M	6		RG		
07-Nov			750	M	6		4		

Appendix 2. 1992 Wannock River chinook salmon dead pitch data.

FISH	DATE	AREA	POH	SEX	EGG RET	TAG #	FIN CLIPS	SCALE AGE	CWT AGE	COMMENTS
1	29-Oct	N4	688	M			0	4		
2	29-Oct	N3	694	F	0		0	4		
3	29-Oct	S2	877	F	100		0	6		
4	29-Oct	S2	746	F	0		0			HEAD, SPINE & TAIL
5	29-Oct	S4	787	M			0			HEAD, SPINE & TAIL
6	30-Oct	S3	820	M			0	6		
7	30-Oct	S2	705	F	0	27603	0	4		POOR POH LENGTH
8	30-Oct	S2	784	F	1000		0	5		DEFORMED JAW
9	30-Oct	S2	836	M			0	4		
10	30-Oct	S2	766	M			0			OLD CARCASS
11	31-Oct	S2	843	M			0	4		
12	31-Oct	S2	847	F	700		0	5		
13	31-Oct	S2	792	F	25		0	5		
14	31-Oct	S2	746	F	30		0	4		
15	31-Oct	S2	766	F	0		0	4		
16	31-Oct	N2	800	M			0			
17	31-Oct	N3	765	F	0		0			
18	31-Oct	N4	823	F	0		0			
19	31-Oct	N3	767	F	0		0	4		
20	31-Oct	N3	787	F	0		0	5		
21	31-Oct	N4	864	F	0		0	5		
22	1-Nov	S3	764	F	0		0			
23	1-Nov	S2	854	F	0		0	5		
24	1-Nov	S2	771	F	0	27283	RV	4		POSSIBLE RV
25	1-Nov	S2	860	M			0	4		
26	1-Nov	S2	752	F	0		0	4		
27	1-Nov	N4	728	M			0	4		
28	2-Nov	S3	776	F	0		0			CARCASS SCAVENGED
29	2-Nov	N2	808	F	50		0	4		
30	2-Nov	S3	670	M			0	4		
31	2-Nov	S3	705	F	0		0	4		
32	2-Nov	S3	757	F	0		0	4		
33	2-Nov	S2	830	F	0		0	5		
34	2-Nov	S2	771	M			0	W		
35	2-Nov	S2	888	M			0	4M		
36	2-Nov	N4	717	M		PUNCH	0	4		OPERCULUM PUNCH ONLY
37	2-Nov	N4	724	F	0		0			SCAVENGED BY BIRDS
38	3-Nov	S3	678	M			0			
39	3-Nov	S2	877	M			0			
40	3-Nov	S2	880	F	0		0			
41	3-Nov	S2	842	F	0		0	5		
42	3-Nov	S2	758	F	0		0	4		
43	3-Nov	S2	797	F	0	27793	0	5		
44	3-Nov	N2	916	M			0			
45	4-Nov	S2	818	M			0			SPRING POOL
46	4-Nov	N3	823	F	UK		0			
47	5-Nov	S3	785	M			0	4		
48	5-Nov	S3	819	F	0		0	4		
49	5-Nov	S3	758	F	UK		0			
50	5-Nov	S2	723	M			LV	4		POSSIBLE LV, REGEN.
51	5-Nov	S2	834	F	100		0	4		
52	5-Nov	S2	718	M			0	4		
53	5-Nov	S2	877	F	100		0	5		
54	5-Nov	S2	751	M			0	4		
55	5-Nov	S2	741	M			0	3M		
56	5-Nov	S2	858	M			0	5		
57	5-Nov	S2	UK	F	UK		0			HEAD & BONES

Appendix 2 continued.

FISH	DATE	AREA	POH	SEX	EGG RET	TAG #	FIN CLIPS	SCALE AGE	CWT AGE	COMMENTS
58	5-Nov	S2	806	M			0			
59	5-Nov	S2	713	M			0			
60	5-Nov	S2	911	F	0		0			
61	5-Nov	S2	730	M			0			
62	5-Nov	S2	745	F	0		0			
63	5-Nov	S2	784	M			0	4		SPRING POOL
64	5-Nov	S2	815	M			0	4		SPRING POOL
65	5-Nov	S2	840	F	0		0	RG		SPRING POOL
66	5-Nov	S2	UK	F	UK	PUNCH	0			OPECULUM PUNCH
67	5-Nov	S2	768	F	0		0			SPRING POOL
68	5-Nov	S2	835	F	0		0			SPRING POOL
69	5-Nov	S2	732	M			0			SPRING POOL
70	5-Nov	N2	838	F	UK		0			SPRING POOL
71	5-Nov	N2	816	M			0			SPRING POOL
72	5-Nov	N2	840	M			0			
73	5-Nov	N2	UK	F	UK		0			HEAD ONLY, DECOMPOSED
74	5-Nov	N2	UK	F	UK		0			HEAD ONLY, DECOMPOSED
75	5-Nov	N3	736	F	0		0			OLD CARCASS
76	5-Nov	N3	936	M			0	5		
77	5-Nov	N3	820	M			0			
78	5-Nov	N3	694	M			0			
79	5-Nov	S3	754	M			0			
80	5-Nov	S3	711	M			0			
81	5-Nov	S3	787	F	UK		0			
82	5-Nov	N4	858	M			0	4		
83	5-Nov	N4	790	M			0			
84	5-Nov	N4	814	M		27970	0	5		LOW TIDE, RIVER MOUTH
85	5-Nov	N4	781	F	0		0			
86	5-Nov	N4	697	M		27376	0	5		
87	5-Nov	N4	689	M			0	4		
88	5-Nov	N4	805	F	0	27706	0	5		
89	5-Nov	N4	768	M			0	4		
90	5-Nov	*	950	M			0			MAIN INLET
91	6-Nov	S4	737	M			0			
92	6-Nov	S4	865	M			0			
93	6-Nov	S3	904	M			0			
94	6-Nov	S3	684	F	UK		0			HEAD, SPINE & TAIL
95	6-Nov	S3	787	F	0		0			
96	6-Nov	S2	767	M			0			
97	6-Nov	N2	696	M			0			
98	6-Nov	N4	956	M			0			GRAVEL BAR
99	6-Nov	N4	UK	F	UK		0			GRAVEL BAR, HEAD ONLY
100	6-Nov	N4	UK	M			0			GRAVEL BAR, HEAD ONLY
101	6-Nov	S3	736	F	0		0	4		
102	6-Nov	S3	740	F	20	UK	0	4		TAG ABRADED, 27684 OR 27884
103	6-Nov	S4	748	F	0		0	4		
104	6-Nov	S4	800	F	0		0	4		
105	6-Nov	S4	717	M		27940	0	4		
106	7-Nov	N4	758	F	25		AD	5	NOP	
107	7-Nov	N2	769	F	0	27768	0	4		
108	7-Nov	N2	688	F	0	27826	0	4		
109	7-Nov	S2	734	F	0		0			SPRING POOL
110	7-Nov	S2	843	F	0		0	5		SPRING POOL
111	7-Nov	S2	748	F	0		0	4		SPRING POOL
112	7-Nov	*	775	F	0		0			MAIN INLET
113	7-Nov	S3	930	F	UK		0			
114	7-Nov	S3	779	M			0			
115	7-Nov	S3	788	M			0			

Appendix 2 continued.

FISH	DATE	AREA	POH	SEX	EGG RET	TAG #	FIN CLIPS	SCALE AGE	CWT AGE	COMMENTS
116	7-Nov	S3	722	M			0			
117	7-Nov	S3	794	M			0			
118	7-Nov	S3	737	M			0			
119	7-Nov	S3	751	M			0			
120	7-Nov	S3	796	M			0			
121	7-Nov	S3	603	M			0			
122	8-Nov	N3	724	M		27625	0			
123	8-Nov	N3	887	F	0		0			
124	8-Nov	S3	784	M			0			
125	8-Nov	S3	774	M		27763	0	4		
126	8-Nov	S3	751	M			0			
127	8-Nov	S3	880	F	5		0	5		
128	8-Nov	S3	750	F	20		0	4		
129	8-Nov	S3	746	F	5		0			
130	8-Nov	S2	885	F	0		0	5		
131	8-Nov	S2	783	F	0		0	4		
132	8-Nov	S2	753	F	UK		0			HEAD, SPINE & TAIL
133	8-Nov	S2	854	F	100		0	5		
134	8-Nov	S2	761	F	0		0	4		
135	8-Nov	N3	820	F	50		0			
136	8-Nov	N3	823	F	0		0			
137	8-Nov	N3	790	F	0		0			
138	8-Nov	N2	786	M			0			
139	8-Nov	N2	745	F	0		0			
140	8-Nov	N4	856	M			0			
141	8-Nov	N4	768	M			0			
142	8-Nov	N4	838	F	0		0			
143	8-Nov	N4	894	F	20		0			
144	8-Nov	N4	932	F	0		0			
145	9-Nov	N2	920	M			0	5		
146	9-Nov	N2	740	F	0		0			
147	9-Nov	N2	780	F	0		0			
148	9-Nov	N2	UK	F	0	27853	0			HEAD & BONES
149	9-Nov	N2	860	M			0	5		
150	9-Nov	N2	670	F	15		0			
151	9-Nov	S2	720	F	0		0			
152	9-Nov	N3	877	F	50		0			
153	9-Nov	S3	731	M			0			
154	9-Nov	S3	UK	F	UK	28098	0			HEAD ONLY
155	9-Nov	S2	701	M			0			
156	9-Nov	S2	UK	F	UK		0			HEAD ONLY
157	9-Nov	S2	794	M			RV	4		
158	9-Nov	S2	746	F	0		0	3M		
159	9-Nov	S2	797	F	8		0	4		
160	9-Nov	S2	736	M		27710	0			
161	9-Nov	S2	660	M			0			
162	9-Nov	S2	725	M			0			
163	9-Nov	S2	804	F	0		0			
164	9-Nov	S2	720	F	5	27791	0	3M		
165	9-Nov	S2	UK	M			0			HEAD AND SPINE
166	9-Nov	S2	735	M			0			PARTLY DECOMPOSED
167	9-Nov	S2	788	F	20		0			
168	9-Nov	S2	790	F	25		0			BROKEN JAW
169	9-Nov	S2	808	F	150		0			
170	9-Nov	S2	768	F	0		0			
171	9-Nov	N2	817	F	150		0			
172	9-Nov	N2	768	M			0			
173	9-Nov	N2	774	F	0		0			
174	9-Nov	N2	830	F	UK		0			HEAD & TAIL

Appendix 2 continued.

FISH	DATE	AREA	POH	SEX	EGG RET	TAG #	FIN CLIPS	SCALE AGE	CWT AGE	COMMENTS
175	9-Nov	N3	UK	F	UK	27449	0			HEAD & SPINE
176	9-Nov	N3	712	F	0		0			
177	9-Nov	N3	860	F	UK		0			
178	9-Nov	N3	890	F	50		0			
179	9-Nov	N3	794	F	0		0			
180	9-Nov	N3	756	F	0	27912	0	4		
181	9-Nov	N3	903	F	0		0			
182	9-Nov	N4	656	M			0	3M		
183	9-Nov	N4	774	F	UK		0			LEFT GILL TORN
184	9-Nov	N4	UK	F	UK		0			DECOMPOSED
185	9-Nov	N4	858	F	UK		0			DECOMPOSED
186	9-Nov	N4	795	M			0			
187	9-Nov	N4	734	M			0			
188	9-Nov	N4	845	F	50		0			
189	9-Nov	N4	772	M			0			
190	9-Nov	S4	692	M			0			
191	9-Nov	S3	852	F	0		0			
192	9-Nov	S3	708	F	0		0			
193	9-Nov	S3	884	F	1200		0			
194	9-Nov	S3	802	M			0			
195	9-Nov	S3	833	F	0		0			
196	10-Nov	N2	830	F	5%		0	4		
197	10-Nov	N2	880	M			0			
198	10-Nov	N2	745	M			0			
199	10-Nov	N2	830	F	0		0			
200	10-Nov	N2	860	M			0			
201	10-Nov	N2	750	F	0		0	4		
202	10-Nov	N2	740	F	0		0			
203	10-Nov	N2	730	M			0			
204	10-Nov	N2	640	F	0		0			
205	10-Nov	N2	720	M			0			
206	10-Nov	N2	810	M			0	4		
207	10-Nov	N2	745	F	10%		0			
208	10-Nov	N2	890	F	0		0			
209	10-Nov	N2	865	M			0			
210	10-Nov	N2	750	M			0			
211	10-Nov	N2	790	F	5%		0	4		
212	10-Nov	N2	730	F	0		0			
213	10-Nov	N2	UK	F	UK	27622	0			HEAD ONLY
214	10-Nov	N2	755	F	10%		0			
215	10-Nov	N2	795	M			AD	5	5	
216	10-Nov	N2	815	F	0	27570	0			
217	10-Nov	N2	750	M			0			
218	10-Nov	N2	900	M			0			
219	10-Nov	N4	670	M			0			
220	10-Nov	N3	760	M			0			
221	10-Nov	N3	730	M			0			
222	10-Nov	N3	690	F	5%		0			
223	10-Nov	N3	840	F	1%	27795	0	RG		
224	10-Nov	N3	770	F	0		0	4		
225	10-Nov	N3	750	F	0	27955	0	4		
226	10-Nov	N3	870	F	0		0	5		
227	10-Nov	N3	850	M			0	4		
228	10-Nov	N3	790	M			0	4		
229	10-Nov	N3	920	F	0		0	5		
230	10-Nov	N3	640	F	0		0	4		
231	10-Nov	N3	740	F	0		0	4		
232	10-Nov	N3	730	F	0		0	4		
233	10-Nov	N3	760	M			0			

Appendix 2 continued.

FISH	DATE	AREA	POH	SEX	EGG RET	TAG #	FIN CLIPS	SCALE AGE	CWT AGE	COMMENTS
234	10-Nov	N3	820	F	1%		0			
235	10-Nov	N3	870	F	0		0			
236	10-Nov	N3	780	F	0		0			
237	10-Nov	N4	810	M			0			
238	10-Nov	N4	610	F	0		0			
239	10-Nov	N4	820	F	0		0			
240	10-Nov	N4	610	F	0		0			
241	10-Nov	S3	830	M			0			
242	10-Nov	S3	752	F	10	28089	0	W		
243	10-Nov	S3	807	F	75	27920	0	4		
244	10-Nov	S3	838	F	0		0			
245	10-Nov	S3	723	M			0			
246	10-Nov	S3	880	F	25		0	4M		
247	10-Nov	S3	734	F	100		0	4		
248	10-Nov	S3	753	F	0		0	3M		
249	10-Nov	S3	786	F	40		0			
250	10-Nov	S3	741	M			0			
251	10-Nov	S2	810	F	0		0			
252	10-Nov	S2	785	M			0			
253	10-Nov	S2	UK	F	UK		0			HEAD & PART OF BODY
254	10-Nov	S2	715	M			0			
255	10-Nov	S2	729	F	0		0			
256	10-Nov	S2	802	F	UK		0			
257	10-Nov	S2	851	F	75		0			
258	10-Nov	S2	765	F	0		0			
259	10-Nov	S2	773	F	UK		0			
260	10-Nov	S2	883	F	5		0			
261	10-Nov	S4	750	F	5		0	4		
262	10-Nov	S4	714	M			0	4		
263	10-Nov	S4	712	M			0			
264	10-Nov	N3	752	F	0		0			
265	10-Nov	N3	782	F	0		0			
266	11-Nov	S4	735	M			0			
267	11-Nov	S3	630	M			0	4		
268	11-Nov	S3	805	M			0			
269	11-Nov	S3	800	F	0		0	4		
270	11-Nov	S3	850	M			0			
271	11-Nov	S3	795	M			0	W		
272	11-Nov	S3	725	M			0			
273	11-Nov	S3	780	M			0			
274	11-Nov	S3	855	F	0		0	4		
275	11-Nov	S3	800	F	1%		0	4		
276	11-Nov	N2	800	F	0		0			SKIN, HEAD & BONES
277	11-Nov	N2	UK	F	0		0			SKIN, HEAD & BONES
278	11-Nov	N2	760	F	0		0			
279	11-Nov	N2	820	F	0		0	5		
280	11-Nov	N2	800	M			0			
281	11-Nov	N2	760	M			0			
282	11-Nov	N2	580	M		27549	0			
283	11-Nov	N2	755	M			0			
284	11-Nov	N2	740	M			0			
285	11-Nov	N2	830	F	0		AD	5	NOP	POSSIBLE CLIP
286	11-Nov	N2	825	M			0			
287	11-Nov	N2	900	M			0			
288	11-Nov	N2	780	F	90%		0			EGGS LOOSE
289	11-Nov	S2	755	M			0			
290	11-Nov	S2	770	F	0		0			
291	11-Nov	S2	770	F	0		0			
292	11-Nov	S2	870	F	0		0			

Appendix 2 continued.

FISH	DATE	AREA	POH	SEX	EGG RET	TAG #	FIN CLIPS	SCALE AGE	CWT AGE	COMMENTS
293	11-Nov	N2	UK	UK		27183	0			HEAD & BONES
294	11-Nov	N2	UK	UK		27960	0			TAG BESIDE BONES
295	11-Nov	N2	810	F	0	27956	0			
296	11-Nov	N2	845	F	0		0			
297	11-Nov	N2	820	M			0			
298	11-Nov	N2	780	F	0		0			
299	11-Nov	N2	770	F	5%		0	5		
300	11-Nov	N2	910	M			0			
301	11-Nov	N2	905	M			0			
302	11-Nov	N2	855	F	0		0			
303	11-Nov	N2	710	F	0		0			
304	11-Nov	N2	880	F	10%		0	RG		
305	11-Nov	N2	900	F	0		0			HEAD & BONES
306	11-Nov	N2	810	F	0		0			
307	11-Nov	N2	UK	M			0			SEAL KILL
308	11-Nov	N2	785	F	15		0			
309	11-Nov	N2	735	M			0	4		
310	11-Nov	N2	895	M			0			
311	11-Nov	S2	730	M			0			SKIN, HEAD & BONES
312	11-Nov	S2	820	F	0		0			
313	11-Nov	S2	590	F	0		0			
314	11-Nov	S2	740	F	0		0	4		
315	11-Nov	S2	850	F	1%	27184	0	5		TAG ABRADED
316	11-Nov	S2	775	M			0			
317	11-Nov	S1	645	M			0			
318	11-Nov	S4	726	F	UK		0			
319	11-Nov	S4	770	M			0			MAIN INLET
320	11-Nov	S3	746	F	0		0			
321	11-Nov	S2	UK	M			0			HEAD & SKIN
322	11-Nov	S3	822	F	0		0			
323	11-Nov	S3	658	M			0			
324	11-Nov	S3	842	M			0			
325	11-Nov	S2	762	F	0		0			
326	11-Nov	S2	UK	F	0		0			HEAD ONLY
327	11-Nov	S2	805	F	0		0			
328	11-Nov	S2	832	F	10		0			
329	11-Nov	S2	700	M			0			
330	11-Nov	S2	788	M			0			
331	11-Nov	S2	873	M			0			
332	11-Nov	S2	734	M			0			
333	11-Nov	S2	757	M			0			
334	11-Nov	S2	782	M			0			
335	11-Nov	S2	943	M			0	RG		
336	11-Nov	S2	750	F	10%		0			
337	11-Nov	S2	755	M			AD	4	4	
338	11-Nov	S2	705	F	1%		0			
339	11-Nov	S2	735	F	0		0			
340	11-Nov	S2	860	F	0		0			
341	11-Nov	S2	905	M			0			
342	11-Nov	N3	795	M			0	4		
343	11-Nov	N3	770	F	0		0	W		
344	11-Nov	N3	670	M			0	4		
345	11-Nov	N3	735	F	0		0	4		
346	11-Nov	N3	715	F	0		0	4		
347	11-Nov	N3	750	F	0		0	4		
348	11-Nov	N3	700	M			0	3M		
349	11-Nov	N3	820	F	1%		0	NS		
350	11-Nov	N3	740	M			0			
351	11-Nov	N3	735	M			0			

Appendix 2 continued.

FISH	DATE	AREA	POH	SEX	EGG RET	TAG #	FIN CLIPS	SCALE AGE	CWT AGE	COMMENTS
352	11-Nov	N3	870	F	2%	27525	0			
353	11-Nov	N3	810	F	1%		0			
354	11-Nov	N4	775	M			0			
355	12-Nov	N4	700	M			0	W		
356	12-Nov	N4	690	F	0		0			
357	12-Nov	N4	700	M			0	4		
358	12-Nov	N4	750	F	0		0			
359	12-Nov	N4	725	F	30%	27959	0	4		
360	12-Nov	N3	860	M			0	5		
361	12-Nov	N3	890	F	0		0			
362	12-Nov	N3	850	F	0		0			
363	12-Nov	N2	690	M			0			
364	12-Nov	N2	780	F	0		0			
365	12-Nov	N2	704	F	100%		0			
366	12-Nov	N2	910	F	1%		0			
367	12-Nov	N2	795	F	0		0			
368	12-Nov	N2	UK	UK			0			
369	12-Nov	N2	865	F	0		0			
370	12-Nov	N2	870	M			0			
371	12-Nov	N2	755	F	0		0			
372	12-Nov	N2	660	M			0			
373	12-Nov	S2	770	M			0			
374	12-Nov	S2	860	M			0			
375	12-Nov	S2	805	M			0			
376	12-Nov	S2	845	F	0		0	RG		
377	12-Nov	S2	880	F	45		0	RG		
378	12-Nov	S2	785	F	0		0	4		
379	12-Nov	S2	805	M			0	4		
380	12-Nov	S2	815	F	0		0	5		
381	12-Nov	S2	663	M			0	R		
382	12-Nov	S2	702	M			0	R		
383	12-Nov	S2	771	F	1%		0			
384	12-Nov	S2	767	F	UK		0			
385	12-Nov	S2	742	F	0		0			
386	12-Nov	S2	774	F	0		0	5		
387	12-Nov	S2	913	F	0		0			
388	12-Nov	S2	724	F	1%		0			
389	12-Nov	S2	852	F	0		0	R		
390	12-Nov	S2	818	F	10%		0			
391	12-Nov	S2	835	F	0		0			
392	12-Nov	S2	656	M		27750	0			VERY OLD
393	12-Nov	S2	782	F	0		0			
394	12-Nov	S2	UK	F	UK		0			HEAD ONLY
395	12-Nov	S2	UK	F	UK		0			HEAD ONLY
396	12-Nov	S2	UK	F	UK		0			HEAD ONLY
397	12-Nov	S2	793	F	0		0			
398	12-Nov	S2	830	F	0		0			
399	12-Nov	S2	875	M			0			
400	12-Nov	S2	865	F	0		0			
401	12-Nov	S2	855	M			0			
402	12-Nov	S2	790	M			0			
403	12-Nov	S2	760	F	2		0			
404	12-Nov	S2	765	M			0			
405	12-Nov	S2	755	M			0			
406	12-Nov	S2	815	F	0		0			
407	12-Nov	S2	805	F	200		0			
408	12-Nov	N2	740	F	200		0			
409	12-Nov	N2	785	F	6000		0			
410	12-Nov	N2	695	M			0			

Appendix 2 continued.

FISH	DATE	AREA	POH	SEX	EGG RET	TAG #	FIN CLIPS	SCALE AGE	CWT AGE	COMMENTS
411	12-Nov	N2	850	F	10		0			
412	12-Nov	N2	835	M			0			
413	12-Nov	N2	835	M			0			
414	12-Nov	N2	755	F	0		0			
415	12-Nov	N2	735	F	100		0	4		
416	12-Nov	N2	810	F	4		0	5		
417	12-Nov	N2	855	M			0	R		
418	12-Nov	N2	885	F	3		0	5		
419	12-Nov	N2	765	F	2		0	RG		
420	12-Nov	N2	834	F	0		0	4		
421	12-Nov	N2	775	F	0	27577	0	4		
422	12-Nov	N2	834	F	1%		0	4		
423	12-Nov	N2	777	F	0		0	4		
424	12-Nov	N2	755	F	0		0			
425	12-Nov	N2	708	F	0		0	4		
426	12-Nov	N2	760	M			0			
427	12-Nov	N2	811	F	0		0			
428	13-Nov	S2	720	F	0		0			
429	13-Nov	S2	870	F	0		0			
430	13-Nov	S2	895	F	1%		0			
431	13-Nov	S2	820	M			0			
432	13-Nov	S2	790	F	1%		0			
433	13-Nov	S2	890	M			0			
434	13-Nov	S2	705	F	0		0			
435	13-Nov	S2	930	F	0		0			
436	13-Nov	S2	790	F	0		0			
437	13-Nov	S2	770	F	0		0			
438	13-Nov	S2	840	F	0		0			
439	13-Nov	S2	800	M			0			
440	13-Nov	S2	830	M			0			
441	13-Nov	S2	785	F	5%		0			
442	13-Nov	S2	910	F	0	27815	0			
443	13-Nov	S2	805	F	10%		0			
444	13-Nov	S2	815	F	0		0			
445	13-Nov	S2	660	M			0			
446	13-Nov	S2	705	M		UK	0			TAG ABRADED
447	13-Nov	S2	870	F	0		0			
448	13-Nov	S2	840	F	12		0			
449	13-Nov	S2	695	M			0			
450	13-Nov	S2	UK	F	UK		0			HEAD ONLY
451	13-Nov	S2	655	M			0			
452	13-Nov	S2	UK	F	UK		0			HEAD ONLY
453	13-Nov	S2	875	M			0			
454	13-Nov	S2	805	M			0			
455	13-Nov	S2	855	F	0		0			
456	13-Nov	S2	860	F	0		0			
457	13-Nov	S2	767	F	20		0			
458	13-Nov	S2	825	M			0			
459	13-Nov	S2	840	F	0		0			
460	13-Nov	N4	840	M			0			
461	13-Nov	N4	UK	UK			0			HEAD ONLY
462	13-Nov	N4	735	F	0		0			
463	13-Nov	N4	720	F	0		0			
464	13-Nov	N4	825	M			0			
465	13-Nov	N4	UK	UK			0			HEAD ONLY
466	13-Nov	N4	870	F	0		0			
467	13-Nov	N4	570	M			0			
468	13-Nov	N4	745	M			0			
469	13-Nov	N4	UK	UK			0			HEAD ONLY

Appendix 2 continued.

FISH	DATE	AREA	POH	SEX	EGG RET	TAG #	FIN CLIPS	SCALE AGE	CWT AGE	COMMENTS
470	13-Nov	N4	790	M			0			
471	13-Nov	N4	735	F	0		0			
472	13-Nov	N4	UK	UK			0			HEAD ONLY
473	13-Nov	N3	680	F	UK		0			PARTIAL CARCASS
474	13-Nov	N3	820	F	0		0			
475	13-Nov	N3	UK	UK			0			HEAD & SPINE
476	13-Nov	N3	570	F	0		0			
477	13-Nov	N3	780	M			0			
478	13-Nov	N3	870	F	0		0			
479	13-Nov	N3	760	M			0			
480	13-Nov	N3	760	F	0		0			
481	13-Nov	N3	835	F	0		0			
482	13-Nov	S4	810	F	0		0			
483	13-Nov	S4	808	M			0			
484	13-Nov	S3	914	M			0			
485	13-Nov	S3	904	M			0			
486	13-Nov	S2	865	M			0			
487	13-Nov	S2	762	M			0			
488	13-Nov	S2	774	F	0		0			
489	13-Nov	S2	822	F	0		0			
490	13-Nov	S2	727	F	0		AD	4	4	
491	13-Nov	S2	742	F	0	27548	0	RG		
492	13-Nov	N2	758	F	0		0			
493	13-Nov	N2	795	F	0		0			
494	13-Nov	N2	770	F	0		0			
495	13-Nov	N2	890	M			0			
496	13-Nov	N2	800	M			0			
497	13-Nov	N2	755	M			0			
498	13-Nov	N2	732	F	0		0			
499	13-Nov	N2	773	F	0		0			
500	13-Nov	N2	332	M			0			
501	13-Nov	N2	732	F	60		0			
502	13-Nov	N2	724	M			0			
503	13-Nov	N2	697	F	10	27677	0	4		
504	14-Nov	N4	UK	M			0			HEAD & SPINE
505	14-Nov	N4	690	F	0		0			
506	14-Nov	N4	680	M			0			
507	14-Nov	N4	860	M			0			
508	14-Nov	N4	730	UK			0			HEAD, SPINE & TAIL
509	14-Nov	N4	UK	UK			0			HEAD ONLY
510	14-Nov	N4	880	F	0		0			
511	14-Nov	N4	715	F	0		0			
512	14-Nov	N4	720	F	0		0			
513	14-Nov	N3	670	F	0		0			
514	14-Nov	N3	680	F	1%		0			
515	14-Nov	N3	770	M			0			
516	14-Nov	N3	665	F	0		0			
517	14-Nov	N3	710	F	0		0			
518	14-Nov	N3	810	F	0		0			
519	14-Nov	N3	820	M			0			
520	14-Nov	N3	710	F	0		0			
521	14-Nov	N3	920	M			0			
522	14-Nov	N3	725	F	0	27926	0			
523	14-Nov	N3	770	F	0		0			
524	14-Nov	N3	710	F	0		0			
525	14-Nov	N3	730	M			0			
526	14-Nov	N3	810	F	0		0			
527	15-Nov	S3	778	M			0	4		
528	15-Nov	S3	782	M			0			

Appendix 2 continued.

FISH	DATE	AREA	POH	SEX	EGG RET	TAG #	FIN CLIPS	SCALE AGE	CWT AGE	COMMENTS
529	15-Nov	S3	970	F	0		0	6		
530	15-Nov	S2	900	F	60	27899	0	6		
531	15-Nov	S2	725	F	0	27679	AD	4		POSSIBLE AD CLIP
532	15-Nov	N2	820	F	0		0			
533	15-Nov	N2	756	F	0		0			SKIN, HEAD & BONE
534	15-Nov	N3	880	M			0			
535	16-Nov	S3	802	F	0		0			
536	16-Nov	S3	804	M			0			
537	16-Nov	S3	827	M			0			
538	16-Nov	S3	858	F	0	27539	0	5		
539	16-Nov	S3	854	F	0		0			
540	16-Nov	S3	758	F	200		0			
541	16-Nov	S2	902	F	0		0			
542	16-Nov	S2	932	M		27662	0	6		
543	16-Nov	S2	758	M			0			
544	16-Nov	S2	847	F	0		0			
545	16-Nov	S2	UK	F	UK		0			HEAD ONLY
546	16-Nov	S2	751	F	UK		0			PARTLY DEVOURED
547	16-Nov	S2	739	M		27806	0	4		
548	16-Nov	S2	UK	F	UK		0			HEAD ONLY
549	16-Nov	S2	710	F	0		0			
550	16-Nov	S2	743	F	0		0			
551	16-Nov	S2	760	F	0	27925	0	4		
552	16-Nov	N4	780	M			0			
553	16-Nov	N4	915	M			0			
554	16-Nov	N3	760	F	0	27639	0			
555	16-Nov	N3	495	F	0		AD	?	?	
556	16-Nov	N3	905	F	10%		0			
557	16-Nov	N1	720	M			0			
558	16-Nov	N1	940	F	120		0			
559	16-Nov	N1	UK	F	UK		0			HEAD & SPINE
560	17-Nov	N4	810	M			0			
561	17-Nov	N4	720	F	0		0			
562	17-Nov	N3	790	F	0	27639	0			
563	17-Nov	N3	750	F	5%		AD	?	?	
564	17-Nov	N3	782	M			0			VERY OLD
565	17-Nov	N3	675	M			0			VERY OLD
566	17-Nov	N3	614	M			0			VERY OLD
567	17-Nov	*	696	M			0			MAIN INLET
568	17-Nov	*	847	F	0		0			MAIN INLET
569	17-Nov	*	855	M			0			MAIN INLET
570	17-Nov	S2	843	F	0		0			
571	17-Nov	S2	768	F	0		0			HOOK, LEFT FRONT FIN
572	17-Nov	S2	795	F	0		0			
573	17-Nov	S2	730	F	0		0			
574	17-Nov	S2	872	F	20		0			
575	17-Nov	S2	775	F	0		0			SPRING POOL
576	17-Nov	N2	710	F	UK		0			
577	17-Nov	N2	UK	F	UK		0			HEAD ONLY
578	18-Nov	N3	785	F	0		0			VERY OLD
579	18-Nov	N3	678	M			0			VERY OLD
580	18-Nov	N3	703	M			0			VERY OLD
581	18-Nov	N3	816	F	0		0			VERY OLD
582	18-Nov	N3	800	F	0		0			
583	19-Nov	S2	912	F	25		0			
584	19-Nov	S2	UK	F	UK	27350	0			HEAD ONLY
585	19-Nov	S2	826	F	UK		0			HEAD, SPINE & TAIL
586	19-Nov	N3	UK	F	UK		0			HEAD & TAIL
587	19-Nov	S3	878	M			0			

Appendix 2 continued.

FISH	DATE	AREA	POH	SEX	EGG RET	TAG #	FIN CLIPS	SCALE AGE	CWT AGE	COMMENTS
588	19-Nov	N3	804	F	0		0			VERY OLD
589	19-Nov	N3	875	M			0			VERY OLD
590	19-Nov	N3	776	M			0			VERY OLD
591	19-Nov	N3	782	F	0		0			VERY OLD
592	19-Nov	N4	886	M			0			VERY OLD
593	19-Nov	N4	838	M			0			WANNOCK TIDAL FLATS
594	19-Nov	N4	846	M			0			WANNOCK TIDAL FLATS
595	19-Nov	N4	801	M			0			WANNOCK TIDAL FLATS
596	20-Nov	S2	813	F	0		0			
597	20-Nov	N4	864	F	0		0	5		GRAVEL BAR, LOW TIDE
598	20-Nov	N4	793	F	0		0	4		GRAVEL BAR, LOW TIDE
599	20-Nov	N3	784	M			0			OLD
600	21-Nov	S2	815	M			0	5		
601	21-Nov	S4	766	F	0		0	5		
602	21-Nov	N4	787	M			0			VERY OLD
603	21-Nov	N4	843	M			0			VERY OLD
604	22-Nov	N4	912	M		27182	0			VERY OLD
605	22-Nov	N4	823	M			0			VERY OLD
606	23-Nov	N4	775	M			0			
607	23-Nov	N3	733	M			0			
608	23-Nov	N3	784	M			0			
609	24-Nov	S2	852	F	0		0			VERY OLD
610	24-Nov	S2	742	F	0		0			VERY OLD
611	24-Nov	N3	770	F	UK	PUNCH	0			VERY OLD, TAG TORN OUT
612	25-Nov	S2	UK	M			0			HEAD ONLY
613	26-Nov	S2	806	F	25		0			OLD
614	26-Nov	S2	813	F	10		0			OLD, SPRING POOL
615	26-Nov	N2	814	F	UK		0			PARTLY DEVOURED
616	26-Nov	S2	UK	F	UK		0			HEAD & SKIN
617	27-Nov	N4	844	M			0			VERY OLD
618	27-Nov	N4	713	M			0			VERY OLD.

Appendix 3. Male mark and recovery data for dead pitch recoveries REC = recaptures, other codes as in text.

DATE MARKED	SET	DATE RECOVERED	TAG #	START POH	END POH	SEINE REC	FINAL CODE	FIN CLIPS
UK	UK	02-Nov-92	PUNCH		717			
07-Oct-92	4	22-Nov-92	27182	905	912	0	1	0
08-Oct-92	5	05-Nov-92	27282	815	814	1	7	0
11-Oct-92	9	05-Nov-92	27376	720	697	0	1	0
13-Oct-92	11	13-Nov-92	27508	690	705	0	1	0
13-Oct-92	12	11-Nov-92	27549	630	580	2	1	0
14-Oct-92	14	08-Nov-92	27625	710	724	0	1	0
16-Oct-92	16	16-Nov-92	27662	930	932	0	1	0
16-Oct-92	17	09-Nov-92	27710	705	736	0	1	0
16-Oct-92	17	12-Nov-92	27750	685	656	0	1	0
18-Oct-92	19	13-Nov-92	27763	775	774	0	3	0
20-Oct-92	23	13-Nov-92	27806	770	739	0	3	0
27-Oct-92	43	13-Nov-92	27940	710	717	0	5	0

Appendix 4: Female mark and recovery data for dead pitch recoveries

DATE MARKED	SET	DATE RECOVERED	TAG #	TAG POH	DP POH	SEINE REC	FINAL CODE	TAG SEX	DP SEX	EGG RET	FIN CLIPS
		05-Nov	PUNCH		UK					UK	0
		24-Nov	PUNCH		770					UK	0
		06-Nov	UK		740					1%	0
		13-Nov	UK		910					0	0
		16-Nov	UK		760					0	0
07-Oct	4	11-Nov	27183	880	UK	0	1	F	UK	UK	0
07-Oct	4	11-Nov	27184	840	850	0	1	F	F	1%	0
08-Oct	5	01-Nov	27283	785	771	0	1	F	F	0	RV
11-Oct	9	19-Nov	27350	830	UK	0	1	F	F	UK	0
13-Oct	10	09-Nov	27449	760	UK	0	1	F	F	UK	0
13-Oct	11	11-Nov	27525	870	870	0	1	F	F	2%	0
13-Oct	12	16-Nov	27539	870	858	0	1	F	F	0	0
13-Oct	12	13-Nov	27548	755	742	0	1	F	F	0	0
14-Oct	13	10-Nov	27570	820	815	0	1	F	F	0	0
14-Oct	13	12-Nov	27577	790	775	0	1	F	F	0	0
14-Oct	13	30-Oct	27603	735	705	0	1	F	F	0	0
14-Oct	14	10-Nov	27622	650	UK	0	1	M	F	UK	0
14-Oct	15	17-Nov	27639	780	790	0	1	F	F	0	0
16-Oct	16	13-Nov	27677	735	697	0	1	F	F	1%	0
16-Oct	16	15-Nov	27679	740	725	0	1	F	F	0	AD
16-Oct	17	05-Nov	27706	765	805	0	1	F	F	0	0
18-Oct	19	07-Nov	27768	800	769	0	1	F	F	0	0
20-Oct	22	09-Nov	27791	735	720	0	1	F	F	1%	0
20-Oct	22	03-Nov	27793	820	797	1	1	F	F	0	0
20-Oct	22	10-Nov	27795	870	840	0	1	F	F	1%	0
22-Oct	26	07-Nov	27826	690	688	2	1	F	F	0	0
22-Oct	27	09-Nov	27853	750	UK	0	1	F	F	0	0
27-Oct	40	15-Nov	27899	900	900	0	1	F	F	1%	0
29-Oct	46	09-Nov	27912	790	756	1	5	F	F	0	0
30-Oct	48	10-Nov	27920	850	807	2	1	F	F	1%	0
30-Oct	49	16-Nov	27925	790	760	0	5	F	F	0	0
27-Oct	40	14-Nov	27926	760	725	2	1	F	F	0	0
30-Oct	50	10-Nov	27955	745	750	0	5	F	F	0	0
30-Oct	50	11-Nov	27956	795	810	0	5	F	F	0	0
30-Oct	50	12-Nov	27959	780	725	0	5	F	F	30%	0
31-Oct	51	11-Nov	27960	760	UK	0	5	F	UK	UK	0
28-Oct	44	10-Nov	28089	790	752	3	5	F	F	1%	0
29-Oct	45	09-Nov	28098	830	UK	2	5	F	F	UK	0