

FISHERY INTERIM SUMMARY REPORT SERIES NO. 09-  
RANGELEY LAKE FISHERY MANAGEMENT

by

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### RANGELEY LAKE FISHERY MANAGEMENT INTERIM SUMMARY REPORT NO. 15 (2008)

#### SUMMARY

Rangeley Lake, located in Franklin County, provides a fishery for landlocked salmon and brook trout. This 6,000-acre lake has had a one-salmon daily bag limit since 1988 and is closed to ice fishing. Salmon growth rates declined from 2005 to 2007 due to reduced smelt abundance, but improved somewhat in 2008 after stocking was terminated in 2006. The number of wild salmon has increased in recent years as a result of the one-salmon limit, favorable water conditions for spawning, and the increased tendency of anglers to voluntarily release legal-size salmon. The salmon population was monitored by clerk and voluntary angler surveys and by fall trapnetting in 2008. Angler records indicated a continued decline in the size of salmon caught but a continued high catch and release rate of legal-size fish. However, the trapnetting sample indicated an improvement in salmon growth rates in 2008. The difference in values may result in an improved forage situation throughout the summer months, which was also suggested by hydroacoustic sampling. Spring yearling brook trout stocked until 2007 contributed substantially to the fishery, augmented by increasing numbers of wild brook trout. Smelt abundance, determined from smelt egg monitoring, increased modestly in 2008. We recommend that the general law two salmon limit be re-imposed because additional harvest would benefit growth.

**KEY WORDS:** AGE & GROWTH, AGE FREQUENCY, BKT, CPUE, FORAGE, HARVEST, HATCHERY, HYDROACOUSTICS, LAKE, LLS, SIZE AT AGE, SLT, STOCKING RATE, TRAPNET, VOLUNTARY BOOK SURVEY

## RANGELEY LAKE FISHERY MANAGEMENT INTERIM SUMMARY REPORT NO. 15 (2008)

This report summarizes 2008 clerk and voluntary angler records for Rangeley Lake, evaluation of forage abundance, and fall trapnetting at Rangeley Outlet. Results are compared to those of previous years.

### **Smelt abundance**

Forage abundance strongly influences salmonid growth rates and is therefore evaluated annually through qualitative assessment of post-spawning smelt egg abundance in the tributaries. The 2008 egg-drop – assessed at Long Pond Stream, Dodge Pond Stream, Swains Brook, Nile Brook, and several unnamed tributaries - was again light to moderate in terms of egg distribution and density. Hydroacoustic sampling was conducted to determine forage abundance at Rangeley Lake in 2000 – 2001; 2004- 2006, and in 2008. Sampling indicated declining smelt abundance from 2001 to 2006 but an increase in 2008. The lake's value of 0.8 lb. of adult smelt per acre in 2006 increased substantially in 2008 to 6.7 (compared to a statewide average of 3.5 lb./acre). However, Rangeley's value of 0.01 lb./acre of young-of-year smelt (a measure of future forage abundance) in 2006 increased only marginally to 0.04 in 2008; the statewide average is 0.36 lb./acre. Smelt abundance had been used in combination with salmonid growth rates to determine stocking rates (Table 1) of both salmon and brook trout.

### **The salmon fishery**

The clerk survey indicated increasing angler success over previous years (Table 2) and a continued high rate of voluntary release of legal-size salmon. The average fish size declined slightly. Voluntary angler information (Table 3) also indicated continued high salmon catch rates. The average length of the salmon they caught also remained relatively low at 16.7 inches. A high proportion of legal-size salmon was voluntarily released. These statistics indicate the presence of a large population of slower-growing salmon.

We captured 190 salmon at the Outlet in 2008, 184 of which were aged (Table 4). Fifty seven percent of the salmon were wild fish. The proportion of wild salmon in the catch has been increasing for several years. Prior to implementation of the one-salmon limit, wild fish

accounted for only about 10% of the catch at the Outlet. From 1997 to 2001, they averaged 33 percent. The percentage increased to 48 in 2002 and has been as high as 64 in 2006. The number of salmon sampled by origin (stocked or wild) since 1992 is shown in Figure 1, which confirms the downward trend in the number of hatchery salmon sampled (due to reduced stocking) and the increasing trend in the number of wild salmon sampled.

Table 5 summarizes the number of salmon caught at the Outlet since 1984 and the largest salmon caught each year. During that period, we've captured an average of 149 salmon per year, the largest of which was caught in 1989 and weighed 7.6 pounds. The largest salmon caught in 2008 weighed 4.9 lb.

The condition factor (a weight-to-length ratio that measures robustness; the higher the number, the heavier the fish for its length) for all trapnetted salmon sampled was 1.04 in 2004, declined gradually to 0.87 in 2007, and increased to 0.99 in 2008 (Figures 2, 3, 4; Tables 5, 6, 7, and 8). A more precise comparison of year-to-year changes in growth rates involves only those fish of the same origin (hatchery vs. wild) and of the same age. Statistical comparison of average salmon weights by origin and age (Table 9) indicated that those sampled in 2007 weighed the least of all years since 1999; the growth rate improved significantly ( $P < 0.05$ ) in 2008 for all categories. A comparison of growth rates indicates that the sizes of Rangeley Lake salmon sampled in 2008 exceeded the statewide average for both hatchery-reared and wild fish in most cases (Table 10).

There was a high proportion of age III+ stocked salmon and age II+ and III+ wild salmon in the 2008 catch (Figures 5 and 6), suggesting a high demand on smelts within the next few years. For hatchery and wild fish combined, age III+ salmon comprised the largest component of the 2008 catch.

When the salmon growth rate declined in 2002, we reduced the number of salmon stocked annually from 2,500 (0.4/acre) to 2,000 (0.33/acre) per year from 2003 through 2005 and to only 1,500 (0.25/acre) in 2006. This action resulted in increased growth rates through 2004, but – given the modest smelt egg drops from 2004 through 2006 and the subsequent decline in salmon growth rates – additional cuts were necessary to reverse the smelt shortage. Accordingly, salmon stocking was suspended altogether effective 2007, marking the first time since 1962 that the lake has not been stocked with this species. Until there is a decrease in natural reproduction

we will rely on wild salmon to provide a fishery. We will also recommend the imposition of a 2 salmon (general law) bag limit in an effort to reduce their numbers somewhat and restore size quality to the fishery. The lake may benefit from a resumption of brook trout stocking when smelt abundance increases.

Salmon spawning at the Outlet is largely unsuccessful, as evidenced by the lack of returning wild progeny. It is likely that the eggs are insufficiently aerated and do not hatch. The majority of the female salmon captured at the Outlet were hatchery-reared fish (Table 11); the wild female salmon spawn successfully at Long Pond Stream or Dodge Pond Stream. Salmon originating from eggs taken at Sebago Lake were stocked from 1987 to 1994 and from West Grand Lake from 1995 to 2000. For those cohorts (years hatched) that we sampled until the fish were at least age VII+ (nine years' data for the Sebago strain and seven for the West Grand strain), we have captured 2.8% of the Sebago salmon and 4.7% of the West Grand salmon stocked from 1987 to 1999 (Tables 4 and 12; Figure 8). These returns indicate better survival of the West Grand fish. We then stocked equal numbers of both strains of salmon from 2001 to 2005 for an unbiased comparison of the relative performance of the two strains. From this paired-stocking subset, we have sampled 116 Sebago fish and 246 West Grand fish, again suggesting superior survival of the West Grand strain salmon. However, returns may be influenced by the capture site at the Outlet, because West Grand fish are outlet spawners and Sebago fish are inlet spawners.

Hooking injuries were documented beginning in 2000 as an indication of trends associated with increased rates of catch and release. To date, the percentage salmon with hooking injuries has averaged 28% (Table 13; Figure 9). For the period, the incidence of hooking injuries exceeded the statewide average of 25%. In 2008, wild fish and hatchery fish had similar rates of hooking injuries.

### **The brook trout fishery**

Brook trout stocking is limited to the Kennebago strain, which is indigenous to the drainage. Stocked brook trout are identified by fin excision to assist in age determination and to differentiate between stocked and wild fish.

Although relatively few spring yearling brook trout have been stocked (500 per year, or 0.1/acre, from 1999 to 2006), survival has been excellent and angler success has increased from 0.02 brook trout caught per angler in 1999 to 0.41 in 2007. Because spring yearling brook trout forage on smelts, however, this stocking was also suspended after 2006. Most wild brook trout migrate to South Bog Stream to spawn, but increasing numbers are being captured in the Outlet trapnet. Seventeen were captured in 2008 (Table 14). These fish ranged up to four years old and nearly 14 inches in length. The increase in wild brook trout abundance may result from a number of factors, including several years of favorable water conditions, reproduction of the stocked Kennebago strain fish, increased survival due to restrictive regulations and voluntary release, and/or habitat restoration efforts at South Bog Stream.

### **Recommendations**

1. Continue to rely on natural reproduction to provide the salmon fisheries.
2. Restore the general law 2 salmon daily bag limit effective 2010 to reduce the number of salmon at large, increase the abundance of forage, and restore salmon size quality.
3. Conduct a season-long clerk survey and aerial counts in 2010 to document total angler use as well as salmon and brook trout harvest.
4. Continue to monitor salmon growth rates by annually trapnetting the spawning run at the Outlet and inlets as resources allow.
5. Evaluate the spring smelt egg deposition annually and continue hydroacoustic evaluation of forage abundance.

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Table 1. Stocking and regulatory history, Rangeley Lake, 2001-2008.

| Year | Species | Strain | Age | No./lb. | No.   | Mark  | Regulation History                                       |
|------|---------|--------|-----|---------|-------|---|--|
| 2001 | LLS     | Sebago | SY  | 4.8     | 1,500 | Ad  | No live fish as bait; 1                                  |
|      | LLS     | WG     | SY  | 5.2     | 1,500 | LP  | salmon, 14" min. ln.; 2                                  |
|      | BKT     | MHS    | SY  | 2.2     | 500   | None  | trout, 10" min., only 1 > 12"                            |
| 2002 | LLS     | Sebago | SY  | 8.0     | 1,250 | LV  | No live fish as bait; 1                                  |
|      | LLS     | WG     | SY  | 5.8     | 1,250 | LV, Ad  | salmon, 14" min. ln.; 2                                  |
|      | BKT     | Cross  | SY  | 2.2     | 500   | None  | trout, 10" min., only 1 > 12"                            |
| 2003 | LLS     | Sebago | SY  | 5.0     | 1,000 | RP, Ad  | No live fish as bait; 1                                  |
|      | LLS     | WG     | SY  | 6.6     | 1,000 | LP, Ad  | salmon, 14" min. ln.; 2                                  |
|      | BKT     | Kenn   | SY  | 5.0     | 500   | None  | trout, 10" min., only 1 > 12"                            |
|      | BKT     | MHS    | AD  | 0.3     | 70    | None  |  |
| 2004 | LLS     | Sebago | SY  | 5.2     | 1,000 | RV, Ad  | No live fish as bait; 1                                  |
|      | LLS     | WG     | SY  | 6.6     | 1,000 | RV  | salmon, 14" min. ln.; 2                                  |
|      | BKT     | Kenn   | SY  | 3.9     | 500   | RV  | trout, 10" min., only 1 > 12"                            |
| 2005 | LLS     | Sebago | SY  | 7.1     | 1,000 | BV, Ad  | No live fish as bait; 1                                  |
|      | LLS     | WG     | SY  | 7.1     | 1,000 | BV  | salmon, 14" min. ln.; 2                                  |
|      | BKT     | Kenn   | SY  | 3.1     | 500   | Ad  | trout, 10" min., only 1 > 12"                            |
| 2006 | LLS     | WG     | SY  | 5.9     | 1,500 | LV  | No live fish as bait; 1                                  |
|      | BKT     | Kenn   | SY  | 5.0     | 500   | LV  | salmon, 14" min. ln.; 2<br>trout, 10" min., only 1 > 12" |
| 2007 | None    |        |     |         |       | No live fish as bait; 1<br>salmon, 14" min. ln.; 2<br>trout, 10" min., only 1 > 12" |  |
| 2008 | None    |        |     |         |       | No live fish as bait; 1<br>salmon, 14" min. ln.; 2<br>trout, 10" min., only 1 > 12" |  |

**Species:**

LLS = landlocked salmon  
BKT = brook trout

**Age at stocking:**

FR = fry  
FF = fall fingerlings  
SY = spring yearlings  
AD = adults

**Marks:**

Ad = adipose  
LV = left ventral RV = right ventral  
BV = both ventral  
LP = left pectoral RP = right pectoral

**Strains:**

WG = West Grand  
MHS = Maine Hatchery Strain  
Kenn = Kennebago  
Cross = Maine Hatchery Strain x Kennebago

Table 2. Clerk creel survey, Rangeley Lake, 2000-2008.

| Statistics   | Species   | CENSUS YEAR      |                  |                  |                  |                               |
|--|-----------|------------------|------------------|------------------|------------------|-------------------------------|
|  |           | 2000             | 2002             | 2004             | 2006             | 2008                          |
| No. anglers surveyed   |           | 408              | 484              | 428              | 558              | 141                           |
| No. angler hours   |           | 2,271            | 1,843            | 921              | 2,523            | 666                           |
| No. anglers (and %) successful in catching a legal fish          | LLS       | 123<br>(30)      | 171<br>(35)      | 117<br>(27)      | 111<br>(20)      | 51<br>(36)                    |
|  | BKT       | 15<br>(4)        | 36<br>(7)        | 26<br>(6)        | 33<br>(6)        | 41<br>(29)                    |
| No. legal fish kept  | LLS       | 63               | 72               | 39               | 44               | 21                            |
|  | BKT       | 9                | 23               | 9                | 15               | 13                            |
| No. and (%) legal fish released                                  | LLS       | 162<br>(72)      | 205<br>(74)      | 176<br>(82)      | 118<br>(73)      | 64<br>(75)                    |
|  | BKT 10-12 | 6<br>(40)        | 14<br>(74)       | 11<br>(61)       | 4<br>(50)        | 31<br>(97)                    |
|  | BKT GE 12 | 0<br>(0)         | 5<br>(26)        | 7<br>(39)        | 14<br>(56)       | 15<br>(56)                    |
| No. (and %) sublegal fish released                               | LLS       | 48<br>(18)       | 44<br>(14)       | 32<br>(13)       | 88<br>(35)       | 10<br>(11)                    |
|  | BKT       | 7<br>(32)        | 0<br>(0)         | 0<br>(0)         | 6<br>(15)        | 3<br>(5)                      |
| No. legal fish per angler (only those kept)                      | LLS       | 0.55<br>(0.15)   | 0.57<br>(0.15)   | 0.50<br>(0.09)   | 0.29<br>(0.08)   | 0.60<br>(0.15)                |
|  | BKT       | 0.04<br>(0.02)   | 0.09<br>(0.05)   | 0.06<br>(0.02)   | 0.06<br>(0.03)   | 0.42<br>(0.09)                |
| Hours to catch a legal fish (all legal fish caught)              | LLS       | 8.3              | 8.2              | 8.6              | 15.6             | 7.8                           |
|  | BKT       | 125.0            | 54.1             | 68.2             | 76.5             | 11.3                          |
| Mean length in in.± SE (and no.) fish sampled or reported        | LLS       | 19.2±0.3<br>(63) | 19.7±0.3<br>(71) | 19.3±0.3<br>(38) | 19.3±0.4<br>(43) | 18.5±0.5<br>(19)              |
|  | BKT       | 14.0±0.7<br>(8)  | 13.5±0.3<br>(23) | 14.9±0.7<br>(8)  | 14.1±0.6<br>(15) | 13.1±0.3<br>(13)              |
| Mean weight in lb.± SE (and no.) fish sampled or reported        | LLS       | 2.48±0.1<br>(49) | 2.61±0.1<br>(60) | 2.79±0.1<br>(35) | 2.50±0.1<br>(41) | 2.03±0.2<br>(18)              |
|  | BKT       | 1.15±0.3<br>(7)  | 1.06±0.1<br>(17) | 1.29±0.2<br>(8)  | 1.06±0.2<br>(12) | 0.78±0.1<br>(11)              |
| No. (and %) hatchery fish sampled or reported                    | LLS       | 40<br>(64)       | 50<br>(70)       | 28<br>(74)       | 35<br>(83)       | 11<br>(58)                    |
|  | BKT       | 2<br>(25)        | 6<br>(26)        | 3<br>(38)        | 2<br>(13)        | 2<br>(15)                     |
| Estimated total fish harvested ± (CI @ 95%) during survey period | LLS       | 2,075<br>±340    | 2,323<br>±325    | 1,155<br>±239    | .                | .                             |
|  | BKT       | 296<br>±49       | 748<br>±105      | 266<br>±55       | .                | .                             |
| Estimated total angler days ± CI (@ 95%) during survey period    |           | 13,475<br>±2,209 | 15,558<br>±2,280 | 12,688<br>±2,631 | .                | 12,073<br>±3,564 <sup>1</sup> |

<sup>1</sup> The 2008 angler use estimate is approximate because it was based on boat counts made in 2007 multiplied by the number of anglers per boat in 2008.

Table 3. Voluntary creel survey, Rangeley Lake, 2004-2008.

| Statistics  | Species   | CENSUS YEAR       |                   |                   |                   |                   |
|---|-----------|-------------------|-------------------|-------------------|-------------------|-------------------|
|   |           | 2004              | 2005              | 2006              | 2007              | 2008              |
| No. anglers surveyed                                      |           | 402               | 270               | 221               | 214               | 145               |
| No. angler hours  |           | 1,551             | 921               | 916               | 783               | 537               |
| No. anglers (and %) successful in catching a legal fish   | LLS       | 182<br>(45)       | 125<br>(46)       | 112<br>(51)       | 117<br>(55)       | 69<br>(48)        |
|   | BKT       | 48<br>(12)        | 21<br>(8)         | 40<br>(18)        | 69<br>(32)        | 62<br>(43)        |
| No. legal fish kept                                       | LLS       | 90                | 57                | 62                | 46                | 39                |
|   | BKT       | 29                | 7                 | 17                | 41                | 37                |
| No. and (%) legal fish released                           | LLS       | 169<br>(65)       | 126<br>(69)       | 106<br>(63)       | 125<br>(73)       | 69<br>(64)        |
|   | BKT 10-12 | 11<br>(65)        | 4<br>(67)         | 18<br>(69)        | 20<br>(50)        | 20<br>(67)        |
|   | BKT GE 12 | 9<br>(28)         | 11<br>(69)        | 9<br>(50)         | 26<br>(50)        | 18<br>(40)        |
| No. (and %) sublegal fish released                        | LLS       | 63<br>(20)        | 15<br>(8)         | 44<br>(21)        | 50<br>(23)        | 25<br>(19)        |
|   | BKT       | 2<br>(4)          | 3<br>(12)         | 9<br>(17)         | 12<br>(12)        | 5<br>(6)          |
| No. legal fish per angler (only those kept)               | LLS       | 0.64<br>(0.22)    | 0.68<br>(0.21)    | 0.76<br>(0.28)    | 0.80<br>(0.21)    | 0.74<br>(0.27)    |
|   | BKT       | 0.12<br>(0.07)    | 0.08<br>(0.03)    | 0.20<br>(0.08)    | 0.41<br>(0.19)    | 0.52<br>(0.26)    |
| Hours to catch a legal fish (all legal fish caught)       | LLS       | 6.0               | 5.0               | 5.4               | 4.6               | 5.0               |
|   | BKT       | 31.7              | 41.9              | 20.8              | 9.0               | 7.2               |
| Mean length in in.± SE (and no.) fish sampled or reported | LLS       | 18.0±0.2<br>(250) | 17.4±0.2<br>(177) | 17.2±0.2<br>(146) | 16.6±0.2<br>(166) | 16.7±0.2<br>(106) |
|   | BKT       | 14.2±0.4<br>(49)  | 14.3±0.5<br>(20)  | 13.6±0.5<br>(39)  | 12.8±0.2<br>(84)  | 13.0±0.2<br>(75)  |
| No. (and %) hatchery fish sampled or reported             | LLS       | 111<br>(54)       | 97<br>(51)        | 93<br>(54)        | 83<br>(38)        | 31<br>(26)        |
|   | BKT       | 8<br>(16)         | 2<br>(9)          | 5<br>(10)         | 6<br>(6)          | 0                 |

Table 4. Number of trapnetted salmon sampled, by origin and ages, 2003-2008.

| Year | Origin   | Strain  | Ages |     |      |     |    |     |      |       |     |     |
|------|----------|---------|------|-----|------|-----|----|-----|------|-------|-----|-----|
|      |          |         | I+   | II+ | III+ | IV+ | V+ | VI+ | VII+ | VIII+ | All |     |
| 2003 | Wild     |         | 2    | 9   | 55   | 21  | 4  | 2   |      |       |     | 100 |
|      | Hatchery | Sebago  |      | 15  | 11   |     |    |     |      |       |     | 26  |
|      |          | W Grand | 1    | 18  | 43   | 19  | 5  |     |      |       |     | 86  |
|      | All      | All     | 3    | 42  | 109  | 40  | 9  | 2   |      |       |     | 212 |
| 2004 | Wild     |         | 9    | 12  | 11   | 44  | 21 | 6   |      |       |     | 103 |
|      | Hatchery | Sebago  | 1    | 4   | 9    | 1   |    |     |      |       |     | 15  |
|      |          | W Grand |      | 4   | 49   | 16  | 7  |     |      |       |     | 76  |
|      | All      | All     | 10   | 20  | 69   | 61  | 28 | 6   |      |       |     | 194 |
| 2005 | Wild     |         | 1    | 10  | 6    | 13  | 6  | 1   |      |       |     | 37  |
|      | Hatchery | Sebago  |      | 3   | 3    | 4   |    |     |      |       |     | 10  |
|      |          | W Grand | 1    | 3   | 2    | 9   | 10 | 1   | 2    |       |     | 28  |
|      | All      | All     | 2    | 16  | 11   | 26  | 16 | 2   | 2    |       |     | 75  |
| 2006 | Wild     |         | 2    | 25  | 40   | 10  | 6  |     |      |       |     | 83  |
|      | Hatchery | Sebago  |      | 14  | 4    | 1   |    |     |      |       |     | 19  |
|      |          | W Grand | 1    | 15  | 1    | 2   | 6  | 1   |      |       | 1   | 27  |
|      | All      | All     | 3    | 54  | 45   | 13  | 6  | 1   |      | 1     |     | 129 |
| 2007 | Wild     |         | 1    | 18  | 62   | 14  | 8  | 1   |      |       |     | 104 |
|      | Hatchery | Sebago  |      |     | 13   | 1   |    |     |      |       |     | 14  |
|      |          | W Grand |      | 51  | 8    | 3   |    |     |      |       |     | 62  |
|      | All      | All     | 1    | 69  | 83   | 18  | 8  | 1   |      |       |     | 180 |
| 2008 | Wild     |         | 1    | 58  | 23   | 18  | 4  |     |      |       |     | 105 |
|      | Hatchery | Sebago  |      |     |      | 2   |    |     |      |       |     | 2   |
|      |          | W Grand |      |     | 69   | 8   |    |     |      |       |     | 77  |
|      | All      | All     | 1    | 58  | 92   | 28  | 4  |     |      |       |     | 184 |

Figure 1. Number of salmon sampled by origin, 1992-2008.

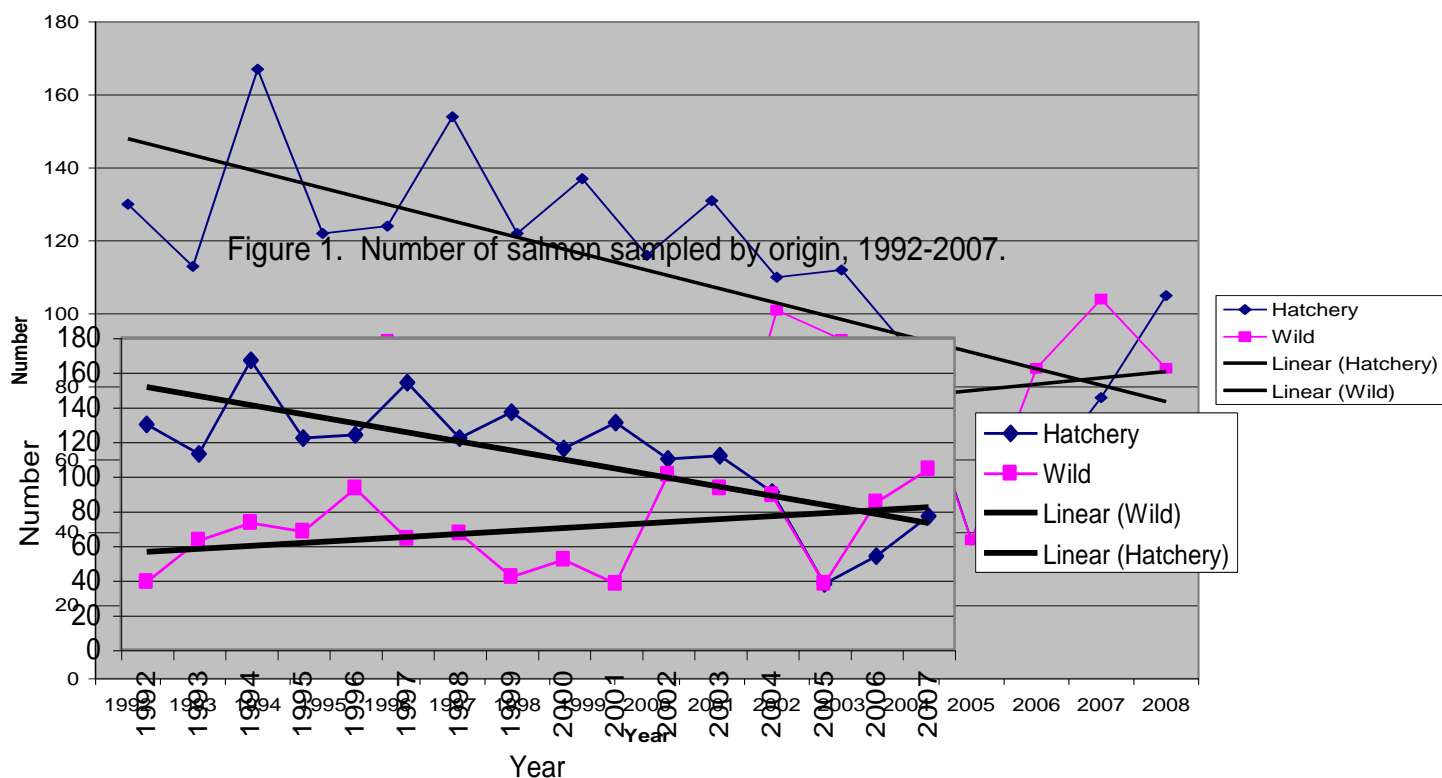


Table 5. Number of salmon and largest salmon sampled by trapnetting, 1984-2008.

| Year | No. | Length | Weight | Year | No. | Length | Weight |
|------|-----|--------|--------|------|-----|--------|--------|
| 1984 | 124 | 26.4   | 7.4    | 1997 | 221 | 22.8   | 3.8    |
| 1985 | 74  | 25.7   | 7.2    | 1998 | 189 | 22.6   | 4.0    |
| 1986 | 80  | 23.4   | 4.6    | 1999 | 186 | 24.2   | 5.4    |
| 1987 | 19  | 23.3   | 5.1    | 2000 | 170 | 27.0   | 7.1    |
| 1988 | 72  | 25.4   | 6.0    | 2001 | 172 | 25.4   | 6.2    |
| 1989 | 134 | 28.0   | 7.6    | 2002 | 218 | 25.0   | 5.7    |
| 1990 | 21  | 25.2   | 6.2    | 2003 | 207 | 25.6   | 6.1    |
| 1991 | 89  | 24.6   | 5.5    | 2004 | 239 | 25.9   | 6.8    |
| 1992 | 170 | 26.4   | 6.0    | 2005 | 76  | 26.0   | 5.9    |
| 1993 | 175 | 24.1   | 5.5    | 2006 | 138 | 23.3   | 4.7    |
| 1994 | 240 | 24.8   | 4.9    | 2007 | 181 | 23.1   | 3.9    |
| 1995 | 190 | 25.1   | 5.5    | 2008 | 190 | 22.5   | 4.9    |
| 1996 | 227 | 24.6   | 4.5    |      |     |        |        |

Figure 2. Average lengths by age of all salmon trapnetted, 2004-2008.

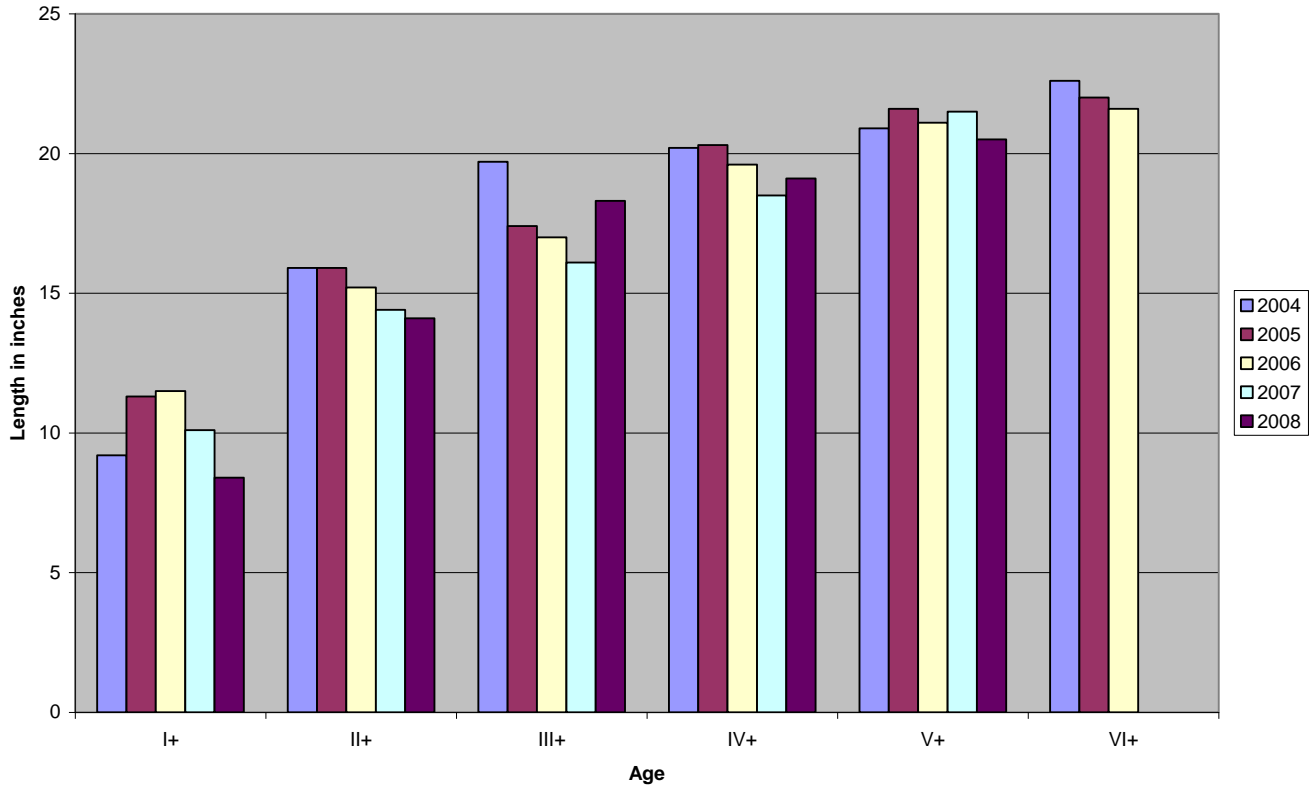


Figure 3. Average weights by age of all salmon trapnetted, 2004-2008.

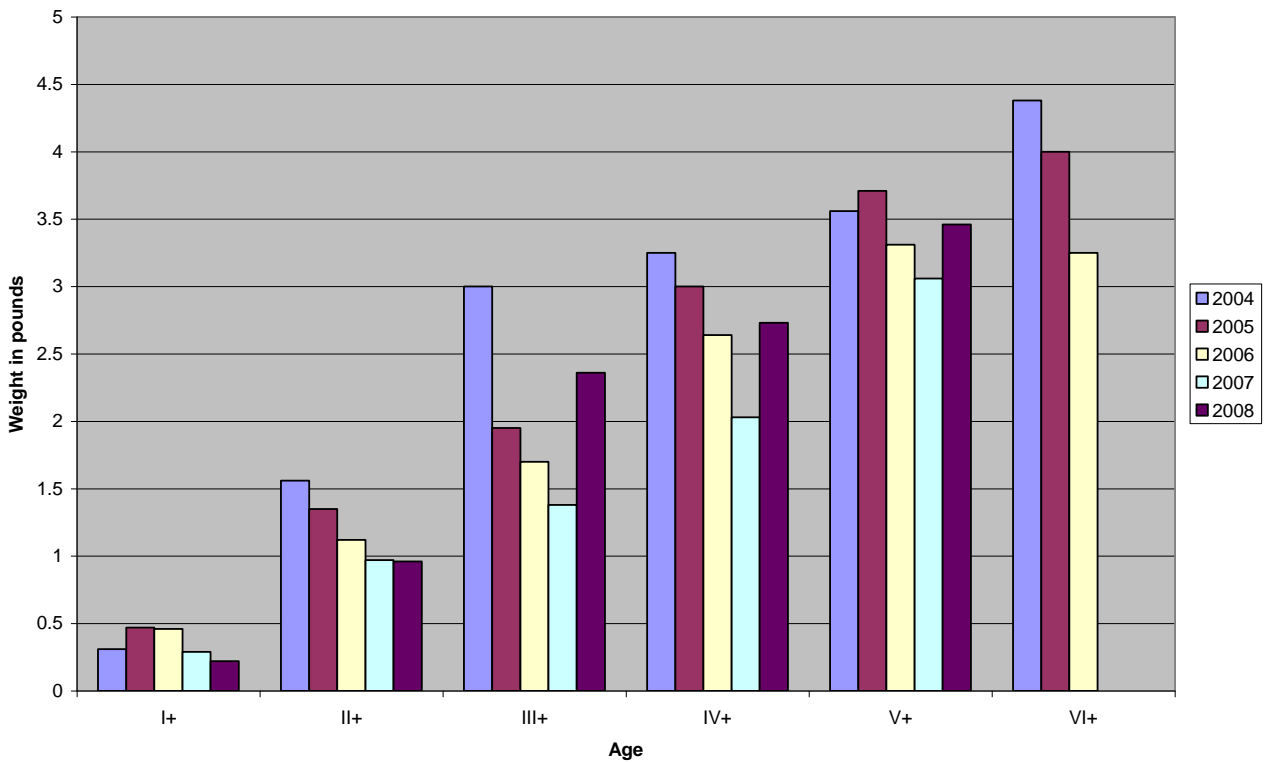


Figure 4. Condition of hatchery and wild salmon trapnetted 2004-2008.

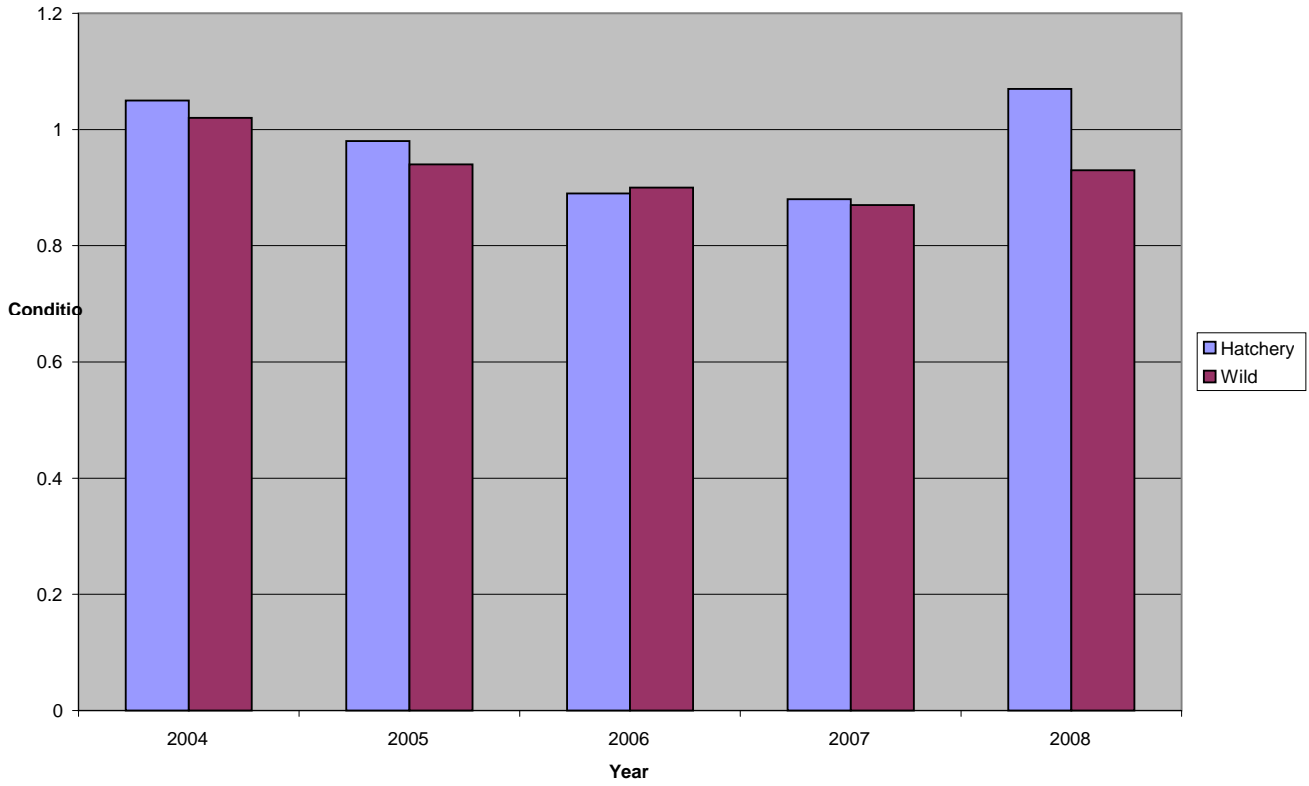


Table 6. Mean sizes of Rangeley Lake **hatchery-reared** salmon sampled during fall trapnetting at Rangeley Outlet, 2003-2008. Sample sizes are shown in parentheses. Lengths in inches; weights in pounds and ounces.

| Year | Size variable | Ages            |                  |                  |                  |                  |                 |                 | All               |
|------|---------------|-----------------|------------------|------------------|------------------|------------------|-----------------|-----------------|-------------------|
|      |               | I+              | II+              | III+             | IV+              | V+               | VI+             | VII+            |                   |
| 2003 | Length        | 11.0<br>(1)     | 16.7±0.2<br>(30) | 20.0±0.2<br>(54) | 21.5±0.3<br>(19) | 23.0±1.0<br>(5)  | 21.9±1.3<br>(3) |                 | 19.4±0.2<br>(112) |
|      | Weight        | 0-6             | 1-11±1.3         | 2-14±1.7         | 3-12±1.9         | 4-9±8.2          | 4-0±8.5         |                 | 2-13±1.6          |
|      | Cond.         | 0.78            | 0.99±0.02        | 0.98±0.01        | 1.05±0.02        | 1.03±0.03        | 1.06±0.06       |                 | 1.00±0.01         |
| 2004 | Length        | 13.3<br>(1)     | 17.2±0.4<br>(21) | 20.1±0.2<br>(75) | 21.7±0.4<br>(31) | 21.9±1.1<br>(7)  |                 |                 | 20.1±0.2<br>(135) |
|      | Weight        | 0-11            | 2-0±2.4          | 3-3±1.4          | 3-14±3.7         | 4-3±7.8          |                 |                 | 3-3±1.5           |
|      | Cond.         | 0.80            | 1.05±0.04        | 1.07±0.01        | 1.02±0.02        | 1.13±0.14        |                 |                 | 1.05±0.01         |
| 2005 | Length        | 12.1<br>(1)     | 18.2±0.4<br>(6)  | 18.9±0.8<br>(5)  | 21.0±0.3<br>(13) | 22.8±0.6<br>(10) | 22.2<br>(1)     | 22.9±0.5<br>(2) | 20.7±0.4<br>(38)  |
|      | Weight        | 0-8             | 2-1±1.9          | 2-8±5.6          | 3-6±4.0          | 4-5±5.5          | 4-7             | 4-3±7.1         | 3-5±3.2           |
|      | Cond.         | 0.821           | 0.93±0.01        | 1.00±0.05        | 1.00±0.05        | 0.99±0.05        | 1.01            | 0.97±0.04       | 0.98±0.02         |
| 2006 | Length        | 12.1±0.2<br>(9) | 16.2±0.2<br>(29) | 19.7±0.5<br>(6)  | 21.3±0.4<br>(3)  | 21.4±0.6<br>(6)  | 21.6<br>(1)     | 21.7<br>(1)     | 16.9±0.4<br>(54)  |
|      | Weight        | 0-8±0.3         | 1-6±1.0          | 2-9±3.7          | 3-0±3.4          | 3-8±4.2          | 3-4             | 3-4             | 1-12±2.2          |
|      | Cond.         | 0.80±0.03       | 0.88±0.01        | 0.93±0.03        | 0.88±0.02        | 0.99±0.04        | 0.90            | 0.88            | 0.89±0.01         |
| 2007 | Length        |                 | 14.9±0.1<br>(51) | 18.3±0.3<br>(21) | 21.2±0.4<br>(4)  | 21.4<br>(1)      |                 |                 | 16.2±0.3<br>(77)  |
|      | Weight        |                 | 1-1±0.5          | 2-1±0.2          | 2-14±5.4         | 2-6              |                 |                 | 1-7±1.2           |
|      | Cond.         |                 | 0.87±0.01        | 0.91±0.02        | 0.84±0.06        | 0.67             |                 |                 | 0.88±0.01         |
| 2008 | Length        |                 |                  | 18.6±0.2<br>(74) | 20.6±0.4<br>(11) |                  |                 |                 | 18.9±0.2<br>(85)  |
|      | Weight        |                 |                  | 2-8±1.1          | 3-9±3.5          |                  |                 |                 | 2-10±1.2          |
|      | Cond.         |                 |                  | 1.06±0.01        | 1.13±0.03        |                  |                 |                 | 1.07±0.01         |



Table 7. Mean sizes of Rangeley Lake **wild** salmon sampled during fall trapnetting at Rangeley Outlet, 2003-2008. Sample sizes are shown in parentheses. Lengths in inches; weights in pounds and ounces.

| Year | Size variable | Ages           |                  |                   |                  |                  |                 |             | All               |
|------|---------------|----------------|------------------|-------------------|------------------|------------------|-----------------|-------------|-------------------|
|      |               | I+             | II+              | III+              | IV+              | V+               | VI+             | VII+        |                   |
| 2003 | Length        | 8.0±0.9<br>(2) | 13.5±0.3<br>(9)  | 16.8±0.2<br>(55)  | 18.7±0.3<br>(21) | 18.9±0.9<br>(4)  | 25.3±0.1<br>(2) |             | 17.0±0.3<br>(93)  |
|      | Weight        | 0-3±1.0        | 0-13±1.1         | 1-11±1.2          | 2-6±2.3          | 2-8±6.8          | 5-2±0           |             | 1-13±1.5          |
|      | Cond.         | 0.97±0.03      | 0.92±0.02        | 0.96±0.01         | 1.01±0.02        | 0.97±0.06        | 0.88±0.01       |             | 0.96±0.01         |
| 2004 | Length        | 8.8±0.3<br>(9) | 13.5±0.2<br>(12) | 16.6±0.4<br>(11)  | 19.2±0.2<br>(44) | 20.6±0.3<br>(21) | 22.6±1.3<br>(6) |             | 17.8±0.4<br>(104) |
|      | Weight        | 0.4±0.3        | 0-12±0.7         | 1-12±2.0          | 2-12±1.7         | 3-6±3.0          | 4-6±10.8        |             | 2-7±2.1           |
|      | Cond.         | 1.00±0.03      | 0.84±0.02        | 1.05±0.02         | 1.06±0.02        | 1.05±0.02        | 0.99±0.04       |             | 1.02±0.01         |
| 2005 | Length        | 10.5<br>(1)    | 14.4±0.4<br>(10) | 16.2±0.2<br>(6)   | 19.6±0.5<br>(13) | 19.5±0.7<br>(6)  | 21.8<br>(1)     |             | 17.6±0.5<br>(38)  |
|      | Weight        | 0-7            | 0-15±1.4         | 1-8±1.4           | 2-10±3.5         | 2-12±3.9         | 3-9             |             | 2-0±2.6           |
|      | Cond.         | 0.97           | 0.84±0.02        | 0.97±0.04         | 0.95±0.03        | 1.01±0.04        | 0.95            |             | 0.94±0.02         |
| 2006 | Length        | 8.7±0.4<br>(2) | 14.0±0.2<br>(25) | 16.7±0.19<br>(40) | 19.2±0.6<br>(10) | 20.8±0.8<br>(6)  |                 |             | 16.3±0.3<br>(83)  |
|      | Weight        | 0-4±0          | 0-13±0.5         | 1-9±1.0           | 2-8±4.8          | 3-2±6.3          |                 |             | 1-9±1.5           |
|      | Cond.         | 0.94±0.14      | 0.82±0.01        | 0.93±0.01         | 0.96±0.02        | 0.92±0.05        |                 |             | 0.90±0.01         |
| 2007 | Length        | 10.1<br>(1)    | 13.1±0.2<br>(18) | 15.4±0.1<br>(62)  | 17.8±0.2<br>(14) | 21.5±0.4<br>(8)  |                 | 16.4<br>(1) | 15.7±0.2<br>(104) |
|      | Weight        | 0-5            | 0-11±0.4         | 1-2±0.6           | 1-12±1.5         | 3-2±3.1          |                 | 1-0         | 1-5±1.1           |
|      | Cond.         | 0.78           | 0.88±0.01        | 0.87±0.01         | 0.87±0.03        | 0.87±0.03        |                 | 0.63        | 0.87±0.01         |
| 2008 | Length        | 8.4<br>(1)     | 14.2±0.2<br>(58) | 17.2±0.4<br>(23)  | 18.1±0.5<br>(18) | 20.5±0.5<br>(4)  |                 |             | 15.7±0.3<br>(105) |
|      | Weight        | 0-4            | 0-15±0.7         | 1-14±2.4          | 2-3±3.0          | 3-2±4.7          |                 |             | 1-7±1.3           |
|      | Cond.         | 1.02           | 0.89±0.01        | 0.95±0.03         | 0.98±0.03        | 1.10±0.02        |                 |             | 0.92±0.01         |

Table 8. Mean sizes of **all** Rangeley Lake salmon sampled during fall trapnetting at Rangeley Outlet, 2003-2007. Sample sizes are shown in parentheses. Lengths in inches; weights in pounds and ounces.

| Year | Size variable | Ages             |                  |                   |                  |                  |                 |                 | All               |
|------|---------------|------------------|------------------|-------------------|------------------|------------------|-----------------|-----------------|-------------------|
|      |               | I+               | II+              | III+              | IV+              | V+               | VI+             | VII+            |                   |
| 2003 | Length        | 9.0±1.1<br>(3)   | 15.9±0.3<br>(39) | 18.3±0.2<br>(109) | 20.0±0.3<br>(40) | 21.1±1.0<br>(9)  | 23.2±1.1<br>(5) |                 | 18.3±0.2<br>(207) |
|      | Weight        | 0-4±1.2          | 1-8±1.4          | 1-5±1.4           | 3-1±2.3          | 3-10±7.8         | 4-7±6.3         |                 | 2-6±1.2           |
|      | Cond.         | 0.91±0.06        | 0.97±0.01        | 0.97±0.01         | 1.03±0.01        | 1.00±0.03        | 0.99±0.05       |                 | 0.98±0.01         |
| 2004 | Length        | 9.2±0.5<br>(10)  | 15.9±0.4<br>(33) | 19.7±0.2<br>(86)  | 20.2±0.3<br>(75) | 20.9±0.4<br>(28) | 22.6±1.3<br>(6) |                 | 19.1±0.2<br>(239) |
|      | Weight        | 0-5±0.8          | 1-9±2.3          | 3-00±1.5          | 3-4±2.1          | 3-9±3.1          | 4-6±10.8        |                 | 2-14±1.3          |
|      | Cond.         | 0.98±0.03        | 0.98±0.03        | 1.06±0.01         | 1.04±0.01        | 1.07±0.04        | 0.99±0.04       |                 | 1.04±0.01         |
| 2005 | Length        | 11.3±0.8<br>(2)  | 15.9±0.6<br>(16) | 17.4±0.6<br>(11)  | 20.3±0.4<br>(26) | 21.6±0.6<br>(16) | 22.0±0.2<br>(2) | 22.9±0.5<br>(2) | 19.1±0.4<br>(75)  |
|      | Weight        | 0-8±1.0          | 1-6±2.4          | 1-15±3.7          | 3-0±2.9          | 3-11±4.8         | 4-0±7.0         | 4-4±7.0         | 2-10±2.4          |
|      | Cond.         | 0.90±0.08        | 0.87±0.02        | 0.98±0.03         | 0.97±0.03        | 1.00±0.03        | 1.03±0.08       | 0.97±0.04       | 0.96±0.01         |
| 2006 | Length        | 11.5±0.4<br>(11) | 15.2±0.2<br>(54) | 17.0±0.2<br>(45)  | 19.6±0.5<br>(13) | 21.1±0.5<br>(12) | 21.6<br>(1)     | 21.7<br>(1)     | 16.5±0.2<br>(137) |
|      | Weight        | 0-7±0.6          | 1-2±0.8          | 1-110±1.2         | 2-10±3.8         | 3-5±3.8          | 3-4             | 3-4             | 1-10±1.2          |
|      | Cond.         | 0.82±0.03        | 0.86±0.01        | 0.93±0.01         | 0.94±0.02        | 0.96±0.03        | 0.90            | 0.88            | 0.90±0.01         |
| 2007 | Length        | 10.1<br>(1)      | 14.4±0.2<br>(69) | 16.1±0.2<br>(83)  | 18.3±0.4<br>(18) | 21.5±0.4<br>(9)  |                 | 16.4<br>(1)     | 15.9±0.2<br>(181) |
|      | Weight        | 0-5              | 0-15±0.5         | 1-6±0.9           | 2-0±2.4          | 3-1±3.0          |                 | 1-0             | 1-6±0.8           |
|      | Cond.         | 0.78             | 0.87±0.01        | 0.88±0.01         | 0.86±0.03        | 0.85±0.03        |                 | 0.63            | 0.87±0.01         |
| 2008 | Length        | 8.4<br>(1)       | 14.2<br>(58)     | 18.3<br>(97)      | 19.1<br>(29)     | 20.5<br>(4)      |                 |                 | 17.1<br>(191)     |
|      | Weight        | 0-4              | 0-15±0.7         | 2-6±1.1           | 2-12±3.0         | 3-7±4.7          |                 |                 | 2-0±1.1           |
|      | Cond.         | 1.02             | 0.89±0.01        | 1.04±0.01         | 1.04±0.02        | 1.04±0.02        |                 |                 | 0.99±0.01         |

Table 9. Duncans multiple range tests for differences in weights of ages III+ and IV+ salmon trapnetted at Rangeley Outlet, 2000-2008. Current year **bolded** for emphasis.

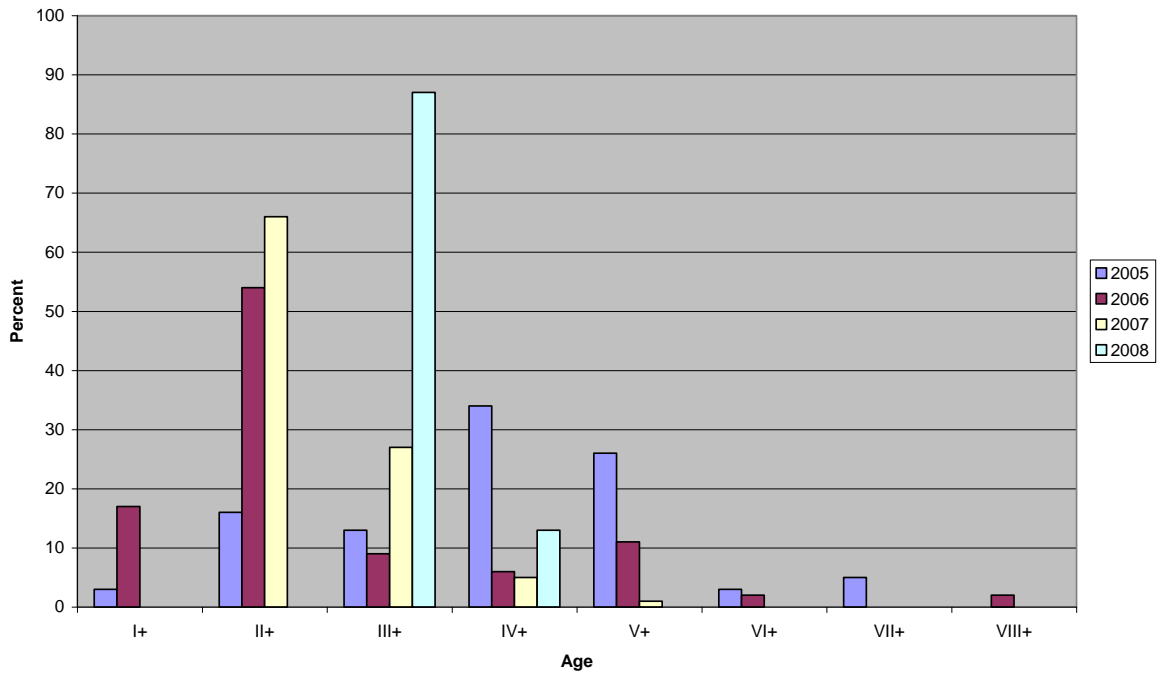
| Origin       | Age  | Duncan grouping | Mean weight (lb) | Sample size | Year        |
|--------------|------|-----------------|------------------|-------------|-------------|
| Hatchery     | III+ | A               | 3.19             | 34          | 2000        |
|              |      | A               | 3.18             | 74          | 2004        |
|              |      | A B             | 2.88             | 54          | 2003        |
|              |      | A B             | 2.75             | 61          | 2001        |
|              |      | B C             | 2.58             | 53          | 2002        |
|              |      | B C             | 2.57             | 5           | 2006        |
|              |      | <b>B C</b>      | <b>2.51</b>      | <b>74</b>   | <b>2008</b> |
|              |      | B C             | 2.51             | 5           | 2005        |
|              |      | C               | 2.04             | 21          | 2007        |
|              | IV+  | A               | 3.88             | 30          | 2004        |
|              |      | A B             | 3.75             | 19          | 2003        |
|              |      | <b>A B</b>      | <b>3.60</b>      | <b>11</b>   | <b>2008</b> |
|              |      | A B             | 3.46             | 18          | 2000        |
|              |      | A B             | 3.36             | 13          | 2005        |
|              |      | A B             | 3.35             | 13          | 2002        |
| A B          |      | 3.28            | 15               | 2001        |             |
| A B          |      | 3.02            | 3                | 2006        |             |
| B            | 2.54 | 4               | 2007             |             |             |
| Wild         | III+ | <b>A</b>        | <b>1.84</b>      | <b>23</b>   | <b>2008</b> |
|              |      | A               | 1.77             | 11          | 2004        |
|              |      | A               | 1.76             | 8           | 2001        |
|              |      | A               | 1.69             | 55          | 2003        |
|              |      | A B             | 1.59             | 40          | 2006        |
|              |      | A B             | 1.48             | 6           | 2005        |
|              |      | A B             | 1.46             | 35          | 2002        |
|              |      | B               | 1.19             | 2           | 2000        |
|              |      | B               | 1.16             | 62          | 2007        |
|              | IV+  | A               | 2.78             | 29          | 2000        |
|              |      | A               | 2.77             | 44          | 2004        |
|              |      | A               | 2.64             | 13          | 2005        |
|              |      | A B             | 2.53             | 10          | 2006        |
|              |      | A B             | 2.40             | 20          | 2003        |
|              |      | A B C           | 2.31             | 9           | 2002        |
| <b>A B C</b> |      | <b>2.19</b>     | <b>18</b>        | <b>2008</b> |             |
| B C          |      | 1.93            | 8                | 2001        |             |
| C            | 1.78 | 14              | 2007             |             |             |

Table 10. Comparison of sizes of Rangeley Lake salmon sampled in 2008 to statewide averages.

| Water(s)               | Origin   | Age    |        |        |        |
|------------------------|----------|--------|--------|--------|--------|
|                        |          | III+   |        | IV+    |        |
|                        |          | Length | Weight | Length | Weight |
| Rangeley Lake 2008     | Hatchery | 18.6   | 2.5    | 20.6   | 3.6    |
|                        | Wild     | 17.2   | 1.9    | 18.1   | 2.2    |
| Statewide <sup>2</sup> | Hatchery | 19.0   | 2.4    | 20.5   | 3.0    |
|                        | Wild     | 14.3   | 1.0    | 16.4   | 1.5    |

<sup>2</sup> From Boucher and Warner 2006.

**Figure 5. Age structure of hatchery salmon sampled by trapnetting by year and age, 2005-2008, expressed as a percentage of the total number.**



**Figure 6. Age structure of wild salmon sampled by trapnetting by year and age, 2005-2008, expressed as a percentage of the total number.**

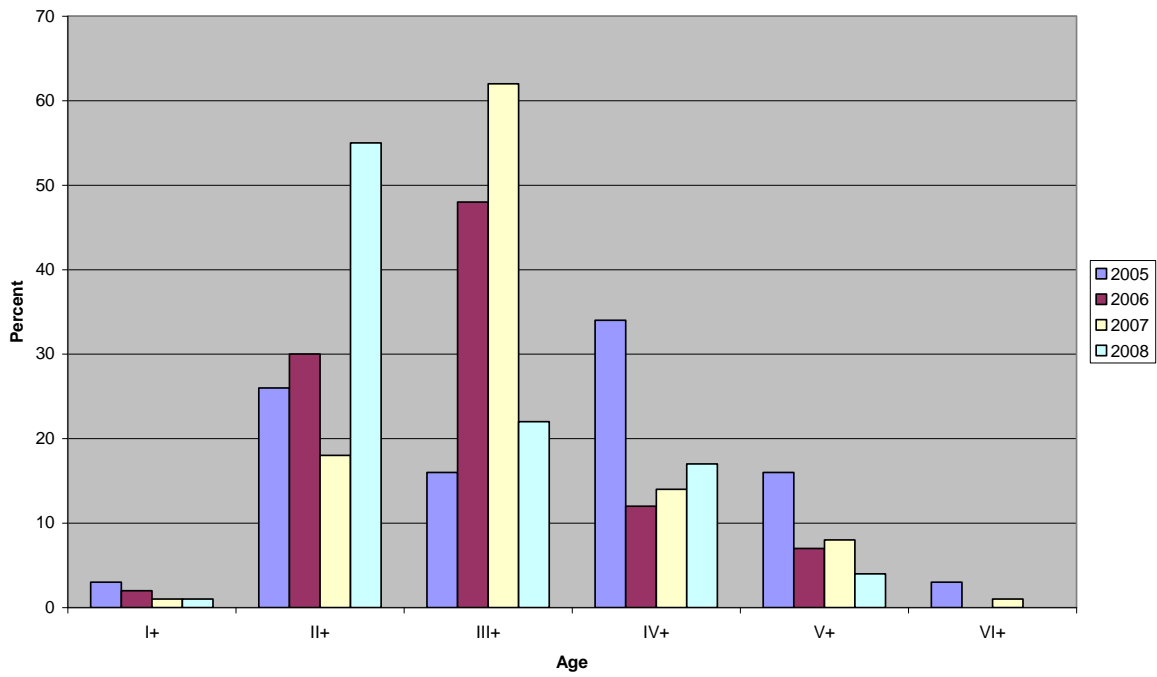


Table 11. Sex and maturity of landlocked salmon trapnetted in 2008 by origin and ages.

| Origin   | Sex     | Maturity | Ages |     |      |     |    |     |      |          |
|----------|---------|----------|------|-----|------|-----|----|-----|------|----------|
|          |         |          | I+   | II+ | III+ | IV+ | V+ | VI+ | VII+ | All (%)  |
| Wild     | Male    | Mature   | 1    | 56  | 20   | 11  |    |     |      | 88 (85)  |
|          | Female  | Mature   |      |     | 2    | 7   | 4  |     |      | 13 (12)  |
|          | Unknown | Immature |      | 2   | 1    |     |    |     |      | 3 (3)    |
|          | All     | All      | 1    | 58  | 23   | 18  | 4  |     |      | 104      |
| Hatchery | Male    | Mature   |      |     | 32   | 5   |    |     |      | 37 (44)  |
|          | Female  | Mature   |      |     | 42   | 6   |    |     |      | 48 (56)  |
|          | Unknown | Immature |      |     |      |     |    |     |      |          |
|          | All     | All      |      |     | 74   | 11  |    |     |      | 85       |
| Both     | Male    | Mature   | 1    | 56  | 52   | 16  |    |     |      | 125 (66) |
|          | Female  | Mature   |      |     | 44   | 13  | 4  |     |      | 61 (32)  |
|          | Unknown | Immature |      | 2   | 1    |     |    |     |      | 3 (2)    |
|          | All     | All      | 1    | 58  | 97   | 29  | 4  |     |      | 189      |

Table 12. Relative numbers of hatchery-reared salmon trapnetted at the Rangeley Outlet by strain.

| Strain            | Year stocked                     | Wgt. (oz) at stocking | No. of returns at age: |            |            |            |           |          |              | All          |
|-------------------|----------------------------------|-----------------------|------------------------|------------|------------|------------|-----------|----------|--------------|--------------|
|                   |                                  |                       | I+                     | II+        | III+       | IV+        | V+        | VI+      | VII+         |              |
| Sebago            | 1987                             | 4.0                   | 0                      | 8          | 39         | 0          | 2         | 0        | 0            | 49           |
| Sebago            | 1988                             | 3.1                   | 9                      | 39         | 9          | 6          | 1         | 2        | 0            | 66           |
| Sebago            | 1989                             | 4.1                   | 13                     | 2          | 38         | 12         | 2         | 1        | 0            | 68           |
| Sebago            | 1990                             | 3.2                   | 3                      | 14         | 66         | 29         | 5         | 0        | 0            | 117          |
| Sebago            | 1991                             | 4.3                   | 10                     | 30         | 49         | 29         | 7         | 1        | 0            | 126          |
| Sebago            | 1992                             | 5.5                   | 17                     | 12         | 81         | 21         | 3         | 0        | 0            | 134          |
| Sebago            | 1993                             | 5.9                   | 18                     | 41         | 71         | 13         | 1         | 0        | 0            | 144          |
| Sebago            | 1994                             | 3.3                   | 7                      | 15         | 82         | 11         | 9         | 1        | 0            | 125          |
| <b>W. Grand</b>   | <b>1995</b>                      | <b>2.3</b>            | <b>0</b>               | <b>28</b>  | <b>106</b> | <b>19</b>  | <b>10</b> | <b>1</b> | <b>0</b>     | <b>164</b>   |
| <b>W. Grand</b>   | <b>1996</b>                      | <b>2.9</b>            | <b>2</b>               | <b>36</b>  | <b>55</b>  | <b>16</b>  | <b>10</b> | <b>2</b> | <b>0</b>     | <b>121</b>   |
| <b>W. Grand</b>   | <b>1997</b>                      | <b>2.5</b>            | <b>2</b>               | <b>35</b>  | <b>78</b>  | <b>18</b>  | <b>12</b> | <b>0</b> | <b>0</b>     | <b>121</b>   |
| <b>W. Grand</b>   | <b>1998</b>                      | <b>2.4</b>            | <b>3</b>               | <b>35</b>  | <b>36</b>  | <b>15</b>  | <b>8</b>  | <b>3</b> | <b>0</b>     | <b>100</b>   |
| <b>W. Grand</b>   | <b>1999</b>                      | <b>3.0</b>            | <b>0</b>               | <b>53</b>  | <b>61</b>  | <b>13</b>  | <b>5</b>  | <b>0</b> | <b>2</b>     | <b>134</b>   |
| <b>W. Grand</b>   | <b>2000</b>                      | <b>2.7</b>            | <b>1</b>               | <b>41</b>  | <b>52</b>  | <b>1</b>   | <b>7</b>  | <b>1</b> | <b>1</b>     | <b>104</b>   |
| Sebago            | 2001                             | 3.4                   | 0                      | 9          | 11         | 6          | 0         | 0        | 0            | 26           |
| <b>W. Grand</b>   | <b>2001</b>                      | <b>3.1</b>            | <b>2</b>               | <b>22</b>  | <b>43</b>  | <b>24</b>  | <b>10</b> | <b>1</b> | <b>0</b>     | <b>102</b>   |
| Sebago            | 2002                             | 2.0                   | 2                      | 12         | 17         | 4          | 0         | 0        |              | 35           |
| <b>W. Grand</b>   | <b>2002</b>                      | <b>2.8</b>            | <b>1</b>               | <b>18</b>  | <b>58</b>  | <b>9</b>   | <b>6</b>  | <b>0</b> |              | <b>92</b>    |
| Sebago            | 2003                             | 3.2                   | 0                      | 13         | 3          | 1          | 0         |          |              | 17           |
| <b>W. Grand</b>   | <b>2003</b>                      | <b>2.4</b>            | <b>1</b>               | <b>8</b>   | <b>2</b>   | <b>2</b>   | <b>0</b>  |          |              | <b>13</b>    |
| Sebago            | 2004                             | 3.1                   | 1                      | 3          | 4          | 1          |           |          |              | 9            |
| <b>W. Grand</b>   | <b>2004</b>                      | <b>2.4</b>            | <b>0</b>               | <b>3</b>   | <b>1</b>   | <b>3</b>   |           |          |              | <b>7</b>     |
| Sebago            | 2005                             | 2.3                   | 0                      | 14         | 13         | 2          |           |          |              | 29           |
| <b>W. Grand</b>   | <b>2005</b>                      | <b>2.3</b>            | <b>1</b>               | <b>15</b>  | <b>8</b>   | <b>8</b>   |           |          |              | <b>32</b>    |
| <b>W. Grand</b>   | <b>2006</b>                      | <b>2.7</b>            | <b>9</b>               | <b>51</b>  | <b>69</b>  |            |           |          |              | <b>129</b>   |
| Sebago            | No. years sampled                |                       | 13                     | 13         | 12         | 12         | 10        | 9        | 8            | 13           |
|                   | No. sampled                      |                       | 80                     | 212        | 483        | 135        | 30        | 5        | 1            | 946          |
|                   | Mean no. sampled per year        |                       | 6                      | 16         | 37         | 11         | 3         | <1       | <1           | 73           |
| <b>West Grand</b> | <b>No. years sampled</b>         |                       | <b>12</b>              | <b>12</b>  | <b>12</b>  | <b>11</b>  | <b>8</b>  | <b>7</b> | <b>6</b>     | <b>12</b>    |
|                   | <b>No. sampled</b>               |                       | <b>22</b>              | <b>345</b> | <b>569</b> | <b>128</b> | <b>68</b> | <b>8</b> | <b>3</b>     | <b>1,163</b> |
|                   | <b>Mean no. sampled per year</b> |                       | <b>2</b>               | <b>29</b>  | <b>47</b>  | <b>12</b>  | <b>9</b>  | <b>1</b> | <b>&lt;1</b> | <b>97</b>    |

Figure 8. Average number of salmon trapnetted per year by strain and by age. From 1987-2006 stockings.

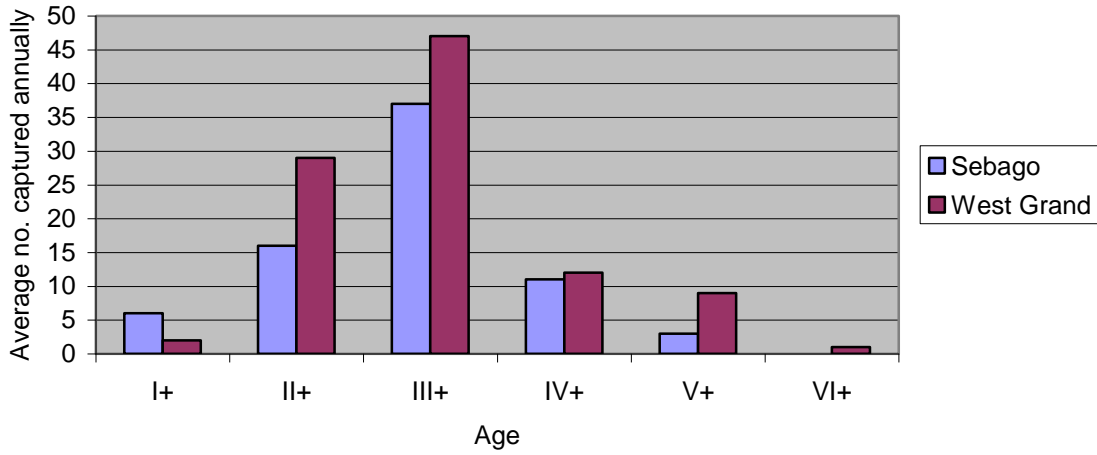


Table 13. Number and (%) of trapnetted salmon with hooking injuries, 2008.

| Origin   | Hooking injury observed | Age      |            |            |            |           |     |      | All        |
|----------|-------------------------|----------|------------|------------|------------|-----------|-----|------|------------|
|          |                         | I+       | II+        | III+       | IV+        | V+        | VI+ | VII+ |            |
| Hatchery | Yes                     |          |            | 27<br>(36) | 3<br>(27)  |           |     |      | 30<br>(35) |
|          | No                      |          |            | 47         | 8          |           |     |      | 55         |
| Wild     | Yes                     | 0<br>(0) | 13<br>(22) | 10<br>(43) | 9<br>(50)  | 1<br>(25) |     |      | 33<br>(32) |
|          | No                      | 1        | 45         | 13         | 9          | 3         |     |      | 70         |
| All      | Yes                     | 0<br>(0) | 13<br>(22) | 37<br>(38) | 12<br>(41) | 1<br>(25) |     |      | 63<br>(33) |
|          | No                      | 1        | 45         | 60         | 17         | 3         |     |      | 126        |

Figure 9. Percentage of trapnetted salmon with hooking injuries by origin and age, 2000-2008. A total of 1,111 salmon were evaluated.

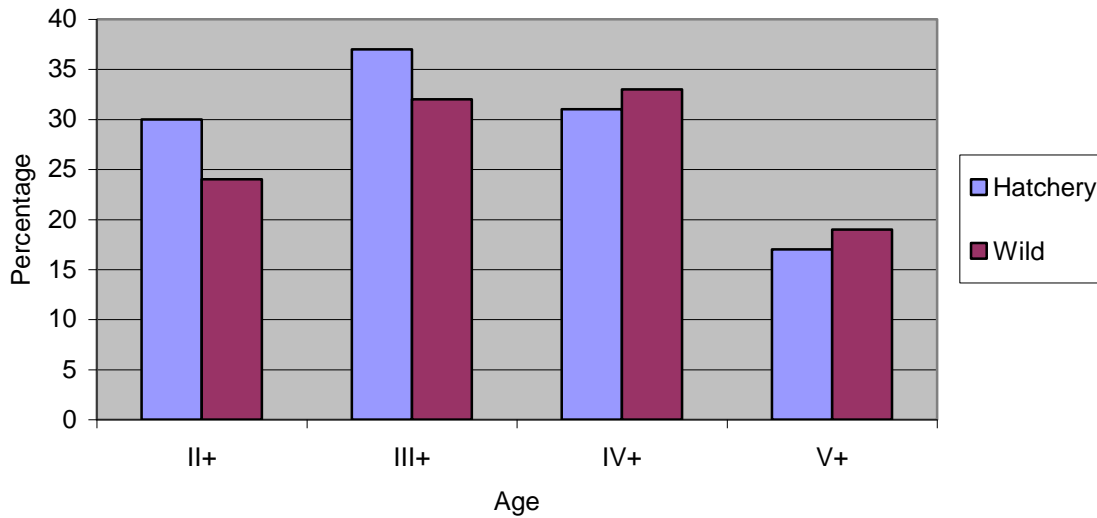


Table 14. Mean sizes of wild brook trout sampled by trapnetting. Sample sizes in parentheses.

| Year stocked | Size variable | Age             |                 |                 |             |                  |
|--------------|---------------|-----------------|-----------------|-----------------|-------------|------------------|
|              |               | I+              | II+             | III+            | IV+         | All              |
| 2004         | Length        | 12.0±0.8<br>(3) | 15.9±0.6<br>(2) |                 |             | 13.6±1.0<br>(5)  |
|              | Weight        | 0-10±2.0        | 1-11.0          |                 |             | 0-14±4.7         |
|              | Cond.         | 0.91±0.07       | 1.06            |                 |             | 0.95±0.06        |
| 2005         | Length        |                 | 16.2±0.8<br>(1) |                 |             |                  |
|              | Weight        |                 | 1-9             |                 |             |                  |
|              | Cond.         |                 | 1.023           |                 |             |                  |
| 2006         | Length        | 12.1±1.5<br>(2) |                 |                 |             |                  |
|              | Weight        | 0-10±3.7        |                 |                 |             |                  |
|              | Cond.         | 0.95±0.02       |                 |                 |             |                  |
| 2007         | Length        |                 | 14.8±0.5<br>(4) |                 |             |                  |
|              | Weight        |                 | 1-3±1.8         |                 |             |                  |
|              | Cond.         |                 | 1.02±0.01       |                 |             |                  |
| 2008         | Length        |                 | 9.6±0.2<br>(10) | 12.2±0.2<br>(6) | 13.9<br>(1) | 10.8±0.4<br>(17) |
|              | Weight        |                 | 0-5±0.3         | 0-8±0.6         | 0-13        | 0-7±0.6          |
|              | Cond.         |                 | 0.91±0.03       | 0.79±0.04       | 0.85        | 0.86±0.03        |