MERISTIC ANALYSIS

FOR

BONNEVILLE AND COLORADO RIVER

CUTTHROAT TROUT

IN THE STATE OF UTAH

2000 Annual Report

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Utah Division of Wildlife Resources
1594 W. North Temple
Salt Lake City, Utah
John F. Kimball, Director

Meristic Analysis Results

for Bonneville and Colorado River Cutthroat Trout

In the State of Utah

Annual Report

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INTRODUCTION

Utah has only one native trout, the cutthroat trout (*Oncorhynchus clarki*). Behnke (1992) described 14 different subspecies of cutthroat trout scattered throughout the western United States. Utah is home to three of these sub-species: Bonneville cutthroat trout (*O.c. utah*), Colorado River cutthroat trout (*O.c. pleuriticus*), and Yellowstone cutthroat trout (*O.c. bouvieri*).

These three subspecies inhabit waters in various parts of the state. The Bonneville cutthroat trout was historically found throughout the Bonneville Basin. As the name indicates, the Colorado River cutthroat trout was historically found in streams of the Colorado River drainage of Utah. Yellowstone cutthroat trout have been stocked in the past throughout the state, but were historically found only in the northwestern corner of Utah in tributaries of the Snake River drainage.

Introductions of nonnative salmonids have been a factor in the decline of native cutthroat trout populations in Utah as well as other western states. The nonnative salmonids successfully compete with the native cutthroat trout for habitat and food resources. In addition, rainbow trout and nonnative cutthroat trout can hybridize with native cutthroat trout, which decreases the genetic diversity and damages the integrity of a population. In an effort to conserve and restore native cutthroat trout, the Utah Division of Wildlife Resources (UDWR) has developed conservation teams to address the problems associated with these species as well as other sensitive aquatic species in Utah (Bonneville Basin Conservation and Recovery Team; Colorado River Basin Conservation Team).

The purpose for conducting meristic analysis on populations of cutthroat trout is to assist in determining the extent of hybridization in a given population. The extent of hybridization in cutthroat trout populations is being further evaluated through a review of historic stocking records and quantification of hybridization by molecular analysis.

METHODS

Ten individuals were randomly sampled from each population and either frozen or preserved in 95% EtOH. Tissue was removed from the right side of the sample for molecular analysis. Each sample was then assigned a number and preserved until meristic analysis was conducted. Frozen samples were first preserved in 10% buffered formalin solution for two days and then transferred to 95% EtOH prior to analysis. Specimens already preserved in ethanol were returned to 95% EtOH. All samples analyzed are currently stored in ethanol at the Utah Division of Wildlife Resources, Salt Lake City Office.

Meristic characters analyzed included: dorsal rays, anal rays, pelvic rays, scales above the lateral line, lateral line scales, gill rakers, pyloric caeca, and basibranchial teeth. These characters were analyzed using the methods described in the Guidelines and Protocols for Identification and Designation of Populations of Cutthroat Trout (Toline 1999).

The hybrid index formula was devised by Hubbs and Kuronuma (1942). The hybrid index formula is based on Hubbs' theory of Intermediacy of Hybrids, which states that "natural interspecific hybrids are intermediate between their parental species in all characters in which those species differ" (Hubbs, 1955). For this reason, we excluded dorsal rays, anal rays, pelvic rays, and gill raker counts from our quantitative analysis. These characters overlap in cutthroat and rainbow trout. Therefore, they can not be used to determine the extent of hybridization using the hybrid index formula. However, they can help determine if an individual fish is a hybrid using qualitative measures.

The hybrid index formula is written as follows:

$$\text{Position of the hybrid (P)} = (V_H - M_1)/(M_2 - M_1)$$

$$\text{Hybrid Index (I)} = 100P$$

V_H represents the character of the individual in question, M_1 represents the mean value for species one, and M_2 represents the mean for species two. Using this formula yields a hybrid index value between zero and one hundred. Values between zero and thirty are considered pure M_1 individuals. Values between seventy and one hundred are considered pure M_2 individuals. Hybrid individuals will have hybrid index values between thirty and seventy (Mayhew, 1983).

In some cases, the character count of an individual is outside the range of the mean values between the two species of comparison. This results in a hybrid index score for a character that is either negative or greater than one hundred. Numbers less than zero or greater than one hundred bias the hybrid index score for the individual. In such cases, we changed the hybrid index score for the character to either zero or one hundred, which represents purity for the particular character. For example, the mean number of scales above the lateral line in Bonneville cutthroat trout is 42. The mean value for rainbow trout is 27. If the individual in question has 45 scales above the lateral line, then the resulting hybrid index will be negative. Therefore, we changed the -20 to 0.0 to avoid biasing the mean hybrid index score for the individual. This adjustment results in a score between 0 and 100 for all individuals.

$$(45 - 42) / (27 - 42) = -0.2$$
$$-0.2 \times 100 = -20.0$$
$$-20.0 = 0.0$$

All of the characters analyzed have an acceptable range for cutthroat and rainbow trout (Trotter, 1987 and Behnke, 1992). Normally, the mean of the character range is used for the purposes of the hybrid index formula. We found that the true mean of the character range did not result in the resolution necessary to determine the extent of hybridization. Thus, we altered the values for M_1 and M_2 to better define the ranges stated by Trotter and Behnke in relation to the hybrid index formula. The character ranges and values used in the hybrid formula for each species are listed in Tables 1-3. We have added the character ranges for Yellowstone cutthroat trout for comparison purposes (Table 4).

Table 1. Bonneville cutthroat trout character ranges.

Bonneville cutthroat trout			
Character	Range	Average	Used*
Scales above the lateral line	38-46	42	42.7
Lateral line scales	140-180	160	144.2
Pyloric caeca	25-55	40	48
Basibranchial teeth	up to 90	6	3
Gill rakers	16-21	18.5	not used

* This value was determined to result in a pure I value if the individual character count fell within the range of the respective species.

Table 2. Colorado River cutthroat trout character ranges.

Colorado River cutthroat trout			
Character	Range	Average	Used*
Scales above the lateral line	38-48	43	42.7
Lateral line scales	170-205	187	187
Pyloric caeca	25-45	35	41
Basibranchial teeth	yes	6	3
Gill rakers	17-21	19	not used

* This value was determined to result in a pure I value if the individual character count fell within the range of the respective species.

Table 3. Rainbow trout character ranges.

Rainbow trout			
Character	Range	Average	Used
Scales above the lateral line	26-28	27	27
Lateral line scales	120-140	130	130
Pyloric caeca	50-60	55	55
Basibranchial teeth	no	0	0
Gill rakers	17-24	19.5	not used

Table 4. Yellowstone cutthroat trout character ranges.

Yellowstone cutthroat trout			
Character	Range	Average	Used
Scales above the lateral line	38-48	43	not used
Lateral line scales	165-180	172.5	not used
Pyloric caeca	25-50	37.5	not used
Basibranchial teeth	yes	6	not used
Gill rakers	17-23	20	not used

Trotter and Behnke do not give a range for basibranchial teeth because the range varies greatly from region to region. However, Trotter points out that a reduction of basibranchial teeth are a sure sign of hybridization between cutthroat and rainbow trout. Based on the information provided by Behnke and fish that indicated no other signs of hybridization, we determined that 3 teeth would be sufficient to classify a pure individual.

Scale counts were taken a minimum of two times to insure a higher level of accuracy. The average between these multiple values was used in the formula for the V_H variable.

All characters were counted and, from the diagnostic characters, the formula was used to tabulate an index value for the respective characters for each individual analyzed. The mean of the diagnostic characters was calculated to determine a mean hybrid index score for each individual. For the purpose of easy referencing, we took the mean of all the individual hybrid index scores to determine an overall population hybrid index score.

RESULTS/DISCUSSION

Summary of Population Results

The results of the meristic analysis are reported below by subspecies, Bonneville cutthroat trout and Colorado River cutthroat trout. Results of the meristic analysis are summarized as hybrid index values for Bonneville and Colorado River cutthroat trout, respectively (Tables 5 and 6). The tables are organized according to water identification number followed by the population or water body name. This allows easy comparison among water bodies within the same drainage.

Individual index numbers are given in the body of the table followed by the population mean. Caution should be used when interpreting the mean hybrid index score. It can be misleading because individuals with low index numbers buffer the population mean. For this reason we have included the individual indices as well. Hybrid individuals, which are those individuals with indices between thirty and seventy have been highlighted for quick reference. Notice of the highlighted individuals will help determine how the population mean is being affected by low

scoring individuals and high scoring individuals.

Table 5. Bonneville cutthroat trout hybrid index results.

		Individual Hybrid Indices											Results	
Water ID. #	Population	1	2	3	4	5	6	7	8	9	10	Mean	#HI	#HC
Goshute Res.	Johnson Cr.- SF	x	x	x	x	x	11.5	1.2	3.5	4.3	15.8	7.3	0 / 5	2
IV AA 010A 02	City Cr.	9.9	23.0	14.5	17.0	32.9	13.6	21.5	2.7	6.7	18.6	16.0	1	11
IV AA 020	Red Butte Cr.	4.3	5.9	9.9	7.5	5.7	25.0	27.1	12.3	34.9	9.9	14.2	1	8
IV AA 030	Emigration Cr.	14.6	15.8	x	24.2	x	10.7	4.3	10.7	x	21.1	14.5	0 / 7	6
IV AA 040A 01	Mountain Dell Cr.	5.1	1.9	4.3	0.0	5.9	5.1	8.3	11.5	8.3	9.1	6.0	0	2
IV AA 090A 01	Bell Canyon - Dry Cr.	36.5	3.5	23.4	25.7	80.9	65.6	0.0	1.9	0.0	5.9	24.3	3	12
IV AP 150A	Hardscrabble Cr.	30.1	3.5	0.3	0.0	0.0	8.7	8.7	13.0	0.0	25.3	9.0	1	5
IV AP 150A 02	Arthur Fork	0.0	5.1	50.4	26.1	0.3	5.9	26.5	6.7	13.0	35.9	17.0	2	7
IV AP 150A 04	Walton Cr.	0.0	0.0	25.0	0.0	19.8	0.0	25.0	6.7	5.9	10.7	9.3	0	3
IV AP 150A 05	Shingle Mill Cr.	17.4	1.5	1.5	7.5	3.5	0.3	x	x	x	7.5	5.6	0 / 7	2
IV AP 150O 01	Toll Canyon Cr.	1.1	9.2	11.4	0.0	28.8	11.0	5.9	5.1	14.3	3.6	9.0	0	1
IV AP 230A	Chalk Cr.- SF	17.0	3.5	15.8	3.5	4.3	16.6	20.8	28.7	20.2	25.0	15.5	0	8
IV AP 230A 05	Fish Cr.	32.2	27.7	11.4	5.7	7.9	12.1	13.3	7.9	11.4	x	14.4	1 / 9	4
IV AP 230C	Chalk Cr.- EF	5.1	0.0	1.0	9.9	2.7	5.9	7.5	4.3	5.7	22.4	6.4	0	2
IV AP 280 01	Silver Cr.	2.7	5.9	1.1	1.1	7.5	13.1	17.8	5.1	15.8	1.9	7.2	0	3
IV AQ 040A 03C 01	Curtis Cr.	11.0	0.0	5.1	9.1	0.3	12.3	26.1	1.1	7.5	0.0	7.2	0	4
IV AQ 040A 07	Logan River #7	0.4	0.0	0.0	30.5	29.3	4.3	28.5	1.1	3.5	0.0	9.8	1	4
IV AQ 240A 01	Deer Cr.	19.4	0.0	0.0	13.4	17.4	34.9	16.7	23.4	0.0	30.1	15.5	2	9

Hybrid Individuals

x = Individuals too small, damaged, or absent for accurate results.
#HI = Number of hybrid individuals (of a total of 10).
#HC = Number of hybridized characters (of a total of 40).

Table 6. Colorado River cutthroat trout hybrid index results.

		Individual Hybrid Indices											Results	
Water ID. #	Population	1	2	3	4	5	6	7	8	9	10	Mean	#HI	#HC
I AJ 110D	Boulder Cr. - WF	7.1	4.2	7.7	9.8	14.7	14.7	6.4	6.5	12.4	15.1	9.9	0	4
I AJ 160E 01	Whites Cr.- lower	39.5	33.6	9.0	34.6	46.8	28.3	27.8	53.4	42.3	23.9	33.9	6	18
I AJ 160E 02	Whites Cr.- upper	10.5	17.5	21.5	11.4	17.1	13.6	10.5	7.0	12.7	11.2	13.3	0	11
I BQ 050B 01	Geyser Cr.	7.1	32.0	28.8	19.2	11.1	16.3	15.6	27.5	25.1	18.7	20.1	1	11
I BQ 070C	Beaver Cr. (La Sals)	22.0	5.4	64.9	41.7	41.4	56.5	60.9	45.3	16.7	23.5	37.8	6	17
II 536LU	GR 177	6.8	5.7	18.0	6.1	3.5	14.5	0.3	6.9	5.0	48.4	11.5	1	4
II 596	Gilbert Lake (GR 150)	12.7	15.8	3.1	28.5	14.5	14.9	16.5	7.5	7.0	5.7	12.6	0	6
II 596K	GR 153	22.6	14.9	13.8	11.4	4.6	4.6	x	22.0	18.9	11.4	13.8	0 / 9	8
II AI 120G 01	Big Bear Cr.	19.8	15.4	15.3	45.7	21.9	x	3.9	51.7	19.8	55.9	27.7	2 / 9	11
II AI 130I 01	Tie Fork- lower	38.0	29.3	37.4	31.4	38.1	39.0	23.0	9.6	29.7	27.4	30.3	5	19
II AI 130I 02	Tie Fork- upper	26.1	11.9	22.1	18.0	29.5	31.8	28.7	28.2	20.3	11.7	22.8	1	14
II AK 190	Tabbyune Cr.	18.4	19.7	13.1	44.9	7.3	12.7	19.3	16.3	8.8	36.0	19.7	1	12
II AK 190A	White River- RF	15.8	22.4	40.6	11.9	23.3	23.1	29.6	22.6	43.7	20.9	25.4	2	15
II AK 190A 01	Johnson Fork	38.1	9.9	25.3	55.1	20.8	3.1	15.7	5.0	23.7	22.8	22.0	2	10
II AK 190B 01	White River- LF	15.4	27.5	7.1	x	16.2	49.1	7.0	42.3	27.6	21.2	23.7	2 / 9	7
II AK 190B 01A 01	White River- MF	19.7	15.9	19.2	21.2	22.1	30.8	29.1	7.7	8.1	18.7	19.2	1	9
II AO	Range Cr.	30.7	20.4	27.7	24.3	41.2	36.8	28.6	12.5	51.8	56.5	33.0	5	20
II BE 020B 05	Milk Cr.	13.9	5.3	15.2	4.9	2.0	20.1	7.5	5.3	12.1	13.8	10.0	0	5
II BE 060H 02	Timber Canyon Cr.	12.4	35.3	5.4	0.0	6.2	19.3	36.2	17.8	3.2	10.0	14.6	2	8
II BH 010A 04	Dry Fork	x	x	2.9	9.6	18.0	12.4	0.0	6.4	10.3	1.1	7.6	0 / 8	4
II BH 010B 01	Brownie Cr.- SF	6.7	7.0	12.3	8.8	2.6	0.9	7.5	7.9	8.3	10.1	7.2	0	3
II CH 030A 01	Elk Cr.	3.3	3.9	11.6	18.2	9.6	11.2	19.7	38.3	44.7	9.9	17.0	2	7
II CI 030A 01	Daggett Cr.	4.4	47.1	0.0	24.7	38.3	2.4	5.9	9.1	3.7	11.0	14.7	2	5
II CK 020B	Smiths Fork- WF (high)	5.0	15.5	17.7	5.1	17.4	25.3	12.8	7.6	16.4	14.2	13.7	0	8
II CK 020B 02	Steel Cr.	7.9	17.8	21.2	9.2	18.2	44.2	13.8	32.1	7.4	42.0	21.4	3	13
II CK 040 01	Blacks Fork- EF (low)	0.0	7.6	10.9	12.3	0.0	0.4	12.2	0.0	20.1	3.9	6.7	0	4
II CK 040 02	Blacks Fork- EF (high)	7.5	7.2	0.3	0.0	5.7	2.7	4.4	7.7	6.6	4.2	4.6	0	0
II CK 040A 01	Little EF- Blacks Fork	9.7	19.1	0.2	4.2	9.9	9.0	7.8	12.1	17.8	5.6	9.5	0	7
II CK 050 01	Blacks Fork- WF (low)	39.0	16.5	9.1	16.3	27.2	3.5	7.7	6.5	26.4	12.1	16.4	1	7
II CK 050 02	Blacks Fork- WF (high)	8.8	19.4	10.3	18.2	28.6	0.0	6.4	8.7	8.9	0.2	11.0	0	4
II CK 050A	Blacks Fork- MF	41.2	3.2	4.0	4.4	5.9	14.0	14.7	4.5	4.6	7.4	10.4	1	4
II CK 050B 01	Brush Cr.	9.5	4.2	16.7	4.4	6.2	21.9	7.8	9.4	3.7	21.0	10.5	0	4

Hybrid Individuals

x = Individuals too small, damaged, or absent for accurate results.

#HI = Number of hybrid individuals (of a total of 10).

#HC = Number of hybridized characters (of a total of 40).

It is important to note that individuals with scores close to zero are not more pure then those close to thirty. It simply indicates that individuals close to zero are more average in their character ranges to those observed by Trotter and Behnke. Individuals with hybrid indices close to thirty may have one hybridized character or may have several character counts that fall close to edge of the acceptable range. However, in general, individuals with hybrid indices close to 30 are more similar to cutthroat trout than individuals with hybrid indices close to 70.

As another level of interpretation, we have added the number of hybridized individuals (#HI) and the number of hybridized characters (#HC) to the right side of the table. Hybridized individuals (#HI) and hybridized characters (#HC) have individual and character hybrid indices over thirty. In addition, it is important to note that there is no correlation among the population hybrid index (mean), the number of hybridized individuals, and the number of hybridized characters. The data used to determine this information in addition to calculating the overall population hybrid index is located in the appendices (Appendix A and Appendix B).

Individual Population Results

Bonneville cutthroat trout

Johnson Creek - South Fork Goshute Reservation	Analysis of Johnson Creek - South Fork did not result in the detection of any hybrid individuals. Five individuals were analyzed from this population. Analysis of two individuals resulted in the detection of possible hybridized characters. One individual was slightly low in the scales above the lateral line(35) and the other had reduced basibranchial teeth (2).
City Creek IV AA 010A 02	Analysis of City Creek resulted in the detection of one hybrid individual. This individual (#5) had reduced scale counts along the lateral line (132) as well as above the lateral line (35). Eight out of the ten individuals had slightly low scales above the lateral line counts resulting in a high number of hybrid characters. However, low above the lateral line scale counts could be a population trait.
Red Butte Creek IV AA 020	Analysis of Red Butte Creek resulted in the detection of one hybrid individual (#9). The hybrid individual was low on both lateral line scale (130) and above the lateral line scale counts (36). Four additional individuals were low in their above the lateral line scale counts.
Emigration Creek IV AA 030	Analysis of Emigration Creek did not result in the detection of any hybrid individuals. Seven individuals were analyzed in this population. Three of these seven had reduced numbers of scales above the lateral line.

Mountain Dell Creek IV AA 040A 01	Analysis of Mountain Dell Creek did not result in the detection of any hybrid individuals. Four individuals were slightly low on their above the lateral line scale counts.
Bell Canyon - Dry Creek IV AA 090A 01	Analysis of Bell Canyon - Dry Creek resulted in the detection of two hybrid individuals. However, one of these (#6) may be a pure rainbow trout. The individual scored 65.6 on the hybrid index formula. The only character that was not within the acceptable range for rainbow trout was the lateral line scale count. This individual had a count of 141. Literature states that rainbow trout may have as many as 140 scales along the lateral line. This fish is most likely a rainbow trout. The other hybrid individual was number 1. This individual scored low on scales above the lateral line as well as having no basibranchial teeth. Low or absent basibranchial teeth were common in this population. Individual number 5 was determined to be a pure rainbow trout by field observation. Meristic analysis confirmed this observation.
Hardscrabble Creek IV AP 150A	Analysis of Hardscrabble Creek resulted in the detection of one hybrid individual. Individual number one scored 30.1 due in part to its absence of basibranchial teeth. Reduced basibranchial teeth was a common occurrence in this population. The remaining characters were within the acceptable ranges for Bonneville cutthroat trout.
Arthur Fork IV AP 150A 02	Analysis of Arthur Fork resulted in the detection of two hybrid individuals. Individual number 10 had slightly low lateral line scale counts (138) and no basibranchial teeth. Individual number 3 had reduced basibranchial teeth (1), low lateral line scale counts (132), and slightly low scales above the lateral line (35). Two additional individuals had reduced basibranchial teeth.
Walton Creek IV AP 150A 04	Analysis of Walton Creek did not result in the detection of any hybrid individuals. Two individuals did not have basibranchial teeth. The remaining characters fell within the acceptable ranges for Bonneville cutthroat trout.
Shingle Mill Creek IV AP 150A 05	Analysis of Shingle Mill Creek did not result in the detection of any hybrid individuals. Seven individuals were analyzed from this population. Individual number 1 had reduced basibranchial teeth (2). The remaining characters were within the acceptable ranges for Bonneville cutthroat trout.

Toll Canyon Creek IV AP 150O 01	Analysis of Toll Canyon Creek did not result in the detection of any hybrid individuals. One individual had low lateral line scale counts (133), but all other characters were within the acceptable ranges for Bonneville cutthroat trout. Seven of the individuals were damaged during preservation and do not have basibranchial teeth counts. The remaining character counts on these individuals were acceptable.
Chalk Creek - South Fork IV AP 230A	Analysis of Chalk Creek - South Fork did not result in the detection of any hybrid individuals. This population had reduced basibranchial teeth in seven of the individuals which accounts in part for its higher score. The remaining characters were within the acceptable ranges for Bonneville cutthroat trout.
Fish Creek IV AP 230A 05	Analysis of Fish Creek resulted in the detection of one hybrid (#1). This individual should most likely be thrown out because the pyloric caeca count was not possible. This left only three characters to be averaged for the individuals score. This individual had reduced basibranchial teeth which gave it the hybrid score (32.2). If the pyloric caeca index was added, the individual would not have been a hybrid. Individual number 2 had decreased basibranchial teeth as well as a slightly lower above the lateral line scale count (36). Individual number 10 was thrown out due to damage. All other individuals were acceptable.
Chalk Creek - East Fork IV AP 230C	Analysis of Chalk Creek - East Fork did not result in the detection of any hybrid individuals. Individual number 10 had low lateral line scale counts (132). The remaining characters were acceptable for Bonneville cutthroat trout.
Silver Creek IV AP 280	Analysis of Silver Creek did not result in the detection of any hybrid individuals. This population only has two individuals with questionable marks (#6 and #7). Both individuals had low above the lateral line scale counts (35 and 32). The remaining characters were within the acceptable ranges for Bonneville cutthroat trout.
Curtis Creek IV AQ 040A 03C	Analysis of Curtis Creek did not result in the detection of any hybrid individuals. Individual number 7 did not have basibranchial teeth. Individuals number 4 and number 6 had slightly low above the lateral line counts (37 and 35). The remaining characters were within the acceptable ranges for Bonneville cutthroat trout.

Logan River #7
IV AQ 040A 07

Analysis of Station 7 of the Logan River resulted in the detection of one hybrid individual. This individual (#4) had only one basibranchial tooth and had a reduced number of lateral line scales (137). Two other individuals had no basibranchial teeth. The remaining characters were within the acceptable ranges for Bonneville cutthroat trout.

Deer Creek
IV AQ 240A 01

Analysis of Deer Creek resulted in the detection of two hybrid individuals. Individual number 6 had no basibranchial teeth and a slightly low above the lateral line scale count (36). The other individual (#10) had character counts within the acceptable ranges for Bonneville cutthroat trout except for the absence of basibranchial teeth. Reduced basibranchial teeth were common in this population.

Colorado River cutthroat trout

Boulder Creek - West Fork
I AJ 110D

Analysis of West Fork of Boulder Creek did not result in the detection of any hybrid individuals. Two individuals had reduced lateral line scale counts of 168 and 165. Two additional individuals had low lateral line scale counts of 157 and 154. The remaining characters were within acceptable ranges for Colorado River cutthroat trout.

Whites Creek - lower
I AJ 160E 01

Analysis of Lower Whites Creek resulted in a hybridized population score from the numerous hybrid character counts throughout all of the individuals. All of the individuals with index values that indicate hybridization had reduced lateral line scales ranging from 137 to 167 and no basibranchial teeth. All of the individuals analyzed had reduced lateral line scale counts. All but two individuals had reduced basibranchial teeth counts.

Whites Creek - upper
I AJ 160E 02

Analysis of Upper Whites Creek did not result in the detection of any hybrid individuals. All of the individuals except number 8 in this population had reduced lateral line scale counts. Two have reduced basibranchial teeth (2). The remaining characters were within the acceptable ranges for Colorado River cutthroat trout.

Geyser Creek
I BQ 050B

Analysis of Geyser Creek resulted in the detection of one hybrid individual. This individual (#2) had a reduced number of lateral line scales (161) and a reduced number of basibranchial teeth (2). Low lateral line scale counts appeared in 9 of the 10 individuals accounting for the higher population score. The remaining characters were within the acceptable ranges for Colorado River cutthroat trout.

Beaver Creek (La Sals) I BQ 070C	Analysis of the Beaver Creek population resulted in the detection of six hybrid individuals. Individuals number 5, number 6, number 7, and number 8 had reduced lateral line scale counts (142 to 169) and reduced basibranchial teeth counts (0 to 2). In addition, individual number 3 and number 4 had reduced above the lateral line scale counts.
GR 177 II 536 LU	Analysis of GR 177 resulted in the detection of one hybrid individual. That individual (#10) had a reduced number of lateral line scales (144) and no basibranchial teeth. Two other individuals had reduced lateral line scale counts (149 and 163). The remaining characters were within the acceptable ranges for Colorado River cutthroat trout.
Gilbert Lake II 596	Analysis of Gilbert Lake did not result in the detection of any hybrids. Reduced lateral line scale counts occurred in 5 of the 10 individuals. One individual had no basibranchial teeth. All other characters were within the acceptable ranges of Colorado River cutthroat trout.
GR 153 II 596K	Analysis of GR 153 did not result in the detection of any hybrids. Seven of the nine individuals analyzed had reduced lateral line scale counts. The counts ranged from 138 to 161 in these 7 individuals. The remaining characters were within the acceptable ranges for Colorado River cutthroat trout.
Big Bear Creek II AI 129G 01	Analysis of Big Bear Creek resulted in the detection of three hybrids. Individual number 4 had reduced lateral line scale counts (160), above the lateral line scale counts(37), and no basibranchial teeth. Individuals number 8 and number 10 had no basibranchial teeth and a low number of lateral line scales(136). Four additional individuals had reduced numbers of basibranchial teeth.
Tie Fork - lower II AI 130I 01	Analysis of the Tie Fork resulted in the detection of five hybrid individuals. Individuals number 3, number 4, number 5, and number 6 had reduced above the lateral line scale counts (32 to 37), and low lateral line scale counts (138 to 155). In addition to low scale counts, individual number 1 also had a high number of pyloric caeca. High pyloric caeca counts was unusual for the cutthroat populations analyzed.

Tie Fork - upper II AI 130I 02	Analysis of upper Tie Fork resulted in the detection of one hybrid individual. This individual had a low lateral line scale count (145) and a high pyloric caeca count. One other individual in this population had a high pyloric caeca count. Low lateral line scale counts were common in this population. All individuals were below 170 scales. The remaining characters were within the acceptable ranges for Colorado River cutthroat trout.
Tabbyune Creek II AK 190C 01	Analysis of Tabbyune Creek resulted in the detection of two hybrid individuals. Both individuals had low lateral line scale counts (155 and 143), and low basibranchial teeth counts (0 and 1). Low lateral line scale counts were common in this populations (7 of the 10 individuals).
White River - Right Fork II AK 190A	Analysis of Right Fork of the White River resulted in the detection of two hybrid individuals. Individual number 3 had low lateral line scale counts (152) and no basibranchial teeth. Individual number 9 had a low lateral line scale count of 143 and only had one basibranchial tooth. Low lateral line scale counts existed in all of the individuals and reduced numbers of basibranchial teeth were also common.
White River - Right Fork (upper) II AK 190A	Analysis of Upper Right Fork of the White River resulted in the detection of one hybrid individual. This individual had a low number of lateral line scales (143) and a reduced number of scales above the lateral line (36). Eight of the 10 individuals had a reduced lateral line scale count. The remaining characters were within the acceptable ranges for Colorado River cutthroat trout.
Johnson Fork II AK 190A 01	Analysis of Johnson Fork resulted in the detection of two hybrid individuals. Individual number 1 only had one basibranchial tooth and had a low lateral line scale count (148). Individual number 4 also had a low lateral line scale count of 135 and no basibranchial teeth. One additional individual had an absence of basibranchial teeth. Six additional individuals had low lateral line scale counts.
White River - Left Fork II AK 190B	Analysis of Left Fork of the White River resulted in the detection of two hybrid individuals. The first individual (#6) had a low scale count of 144 and only one basibranchial tooth. The other individual (#8) had an extremely low lateral line scale count (123). Its remaining characters were within the acceptable ranges for Colorado River cutthroat trout. Low lateral line scale counts were found in four additional individuals.

Range Creek II AO	Analysis of Range Creek resulted in the detection of five hybrid individuals. Individuals number 1 and number 6 had low scale counts (149 and 137, respectfully). Above the lateral line scale counts were 34 in both individuals. Individuals number 5, number 9, and number 10 had low scale counts and a reduced number of basibranchial teeth. Low lateral line scale counts were present in all of the individuals.
Milk Creek II BE 020B 05	Analysis of Milk Creek did not result in the detection of any hybrid individuals. The only problem detected in this population was a slightly low lateral line scale count in 5 individuals. Basibranchial teeth were strong in this population. All individuals had at least 4 teeth with one individual having 15. The remaining characters are within the acceptable ranges for Colorado River cutthroat trout.
Timber Canyon Creek II BE 060H 02	Analysis of Timber Canyon Creek resulted in the detection of two hybrid individuals. Individual number 2 had a reduced lateral line scale count of 164 and also lacked basibranchial teeth. Individual number 7 had a reduced lateral line scale count of 141 and only 2 basibranchial teeth. Three additional individuals had reduced lateral line scale counts.
Dry Fork II BH 010A 04	Analysis of Dry Fork did not result in the detection of any hybrids. Individuals number 4, number 5, and number 6 had slightly reduced lateral line scale counts of 165, 165, and 164. The remaining characters were within the acceptable ranges for Colorado River cutthroat trout.
Brownie Creek - South Fork II BH 010B 01	Analysis of the South Fork of Brownie Creek did not result in the detection of any hybrid individuals. Four individuals (#3, #8, #9,and #10) had slightly reduced numbers of lateral line scale counts (159, 169, 168, and 164). All individuals had many basibranchial teeth ranging from 5 to 17 which is strong evidence for purity. The remaining characters are within the acceptable ranges for Colorado River cutthroat trout.
Elk Creek II CI 030A 01	Analysis of Elk Creek resulted in the detection of two hybrid individuals. Individuals number 8 and number 9 had low lateral line scale counts (158 and 152) and no basibranchial teeth. Three additional individuals had low lateral line scale counts. The remaining characters were within the acceptable ranges for Colorado River cutthroat trout.

Daggett Creek II CI 030A 01	Analysis of Daggett Creek resulted in the detection of two hybrid individuals. Individual number 2 had a low lateral line scale count of 156 an no basibranchial teeth. Individual number 5 was boarder line on the above the lateral line scale count (37) and had no basibranchial teeth. One additional individual had a reduced number of lateral line scales.
Smiths Fork - West Fork (high) II CK 020B	Analysis of Smiths Fork - Upper West Fork did not result in the detection of any hybrid individuals. One individual had an absence of basibranchial teeth. Six individuals had reduced lateral line scales ranging from 145 to 168. The remaining characters were within the acceptable ranges for Colorado River cutthroat trout.
Steel Creek II CK 020B 02	Analysis of Steel Creek resulted in the detection of three hybrid individuals. Individual number 6 had a lateral line scale count of 162 and no basibranchial teeth. Individual number 10 had a lateral line scale count of 131 and only 2 basibranchial teeth. The above the lateral line scale count was slightly low at 37. The third individual (#8) was within the acceptable ranges on every count except it had no basibranchial teeth. Two additional individuals had low lateral line scale counts.
Blacks Fork - East Fork (low) II CK 040 01	Analysis of Lower East Fork of the Blacks Fork River did not result in the detection of any hybrid individuals. The only potentail problem was a reduced number of lateral line scale counts in four individuals. The remaining characters were within the acceptable ranges for Colorado River cutthroat trout.
Blacks Fork - East Fork (high) II CK 040 02	Analysis of Upper East Fork of the Blacks Fork River did not result in the detection of any hybrid individuals. All characters were within the acceptable ranges for Colorado River cutthroat trout.
Blacks Fork - Little East Fork II CK 040A 01	Analysis of Little East Fork of the Blacks Fork River did not result in the detection of any hybrid individuals. Five individuals had slightly reduced lateral line scale counts. One individual had only one basibranchial tooth. The remaining characters were within the acceptable ranges for Colorado River cutthroat trout.
Blacks Fork - West Fork (low) II CK 050 01	Analysis of Lower West Fork of the Blacks Fork River resulted in the detection of one hybrid individual. This individual had a low lateral line scale count of 155 and no basibranchial teeth. Four additional individuals had low lateral line scale counts.

Blacks Fork - West Fork (high) II CK 050 02	Analysis of Upper West Fork of the Blacks Fork River did not result in the detection of any hybrid individuals. Two individuals had reduced lateral line scale counts (164 and 159). Two individuals had reduced basibranchial teeth (1 and 0). The remaining characters were within the acceptable ranges for Colorado River cutthroat trout.
Blacks Fork - Middle Fork II CK 050A	Analysis of Middle Fork of the Blacks Fork River resulted in the the detection of one hybrid individual. This individual had a low lateral line scale count of 150 and no basibranchial teeth. One additional individual had a low lateral line scale count of 154. The remaining characters were within the acceptable ranges for Colorado River cutthroat trout.
Brush Creek II CK 050B	Analysis of Brush Creek did not result in the detection of any hybrid individuals. Four individuals had low lateral line scale counts ranging from 144 to 166. The remaining characters were within the acceptable ranges for Colorado River cutthroat trout.

Limitations of the Hybrid Index

There are a few limitations associated with the hybrid index formula that need to be addressed to dispel errors in interpreting the results. The problem with overlapping character ranges has already been mentioned. Overlapping character ranges limit the hybrid index formula by restricting the depth of hybridization that can be resolved.

The hybrid index formula can not be used to distinguish hybridization between cutthroat subspecies and may bias results of rainbow X cutthroat hybridization. Some of the individuals analyzed, particularly Colorado River cutthroat trout with indices around thirty may be Yellowstone X Colorado cutthroat trout hybrids instead of Colorado cutthroat trout X rainbow trout hybrids. This is due to the lower lateral line scale count range acceptable for Yellowstone cutthroat trout (see Table 4). Bonneville X Yellowstone cutthroat trout hybrids will all have indices under the acceptable range (30) when compared to Bonneville cutthroat trout X rainbow trout hybrids. This is due to the nature of the formula and the character ranges of Yellowstone cutthroat trout relative to those of Bonneville cutthroat trout and rainbow trout. To distinguish potential inter-subspecific hybridization among cutthroat trout, the individuals need to be analyzed on a molecular level in addition to a phenotypical level. Molecular analysis will assess subspecies hybridization in addition to interspecific hybridization.

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APPENDICES

Appendix A

Each data sheet is organized for persons entering data in the spreadsheet upon completion of meristic analysis. The top left corner illustrates the hybrid index formula. Following the formula is the water body or population name and corresponding Water ID number. The instructions printed near the top are to guide the person entering the data on the spreadsheet. The main body of the sheet reflects the raw data (U), variables for the equation (R2 for rainbow, C or B for cutthroat), index numbers for each character (I), and individual index scores. In the bottom left corner is the population average. Characters or individuals with an 'x' are those that were damaged, too small, or non-existent. Also shown is the data for gill raker counts. The 'x' in the column labeled 'I' removes that particular index score from the individuals average score. Likewise any x's in the cell labeled 'Average I' will not affect the population mean at the bottom.

Hybrid Index = 100 *[(U-B)/(R-B)]

Rainbow X Bonneville Cutthroat Trout Analysis

Population: **South Fork - Johnson Creek**
Water ID: Goshute Reservation

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	x	x	x	x	x	x	x	x	x	x
Lateral Line Scales	130.0	144.2	x	x	x	x	x	x	x	x	x	x
Gill Rakers	20.5	18.5	0.0	x	0.0	x	0.0	x	0.0	x	0.0	x
Basibranchial Teeth	0.0	3.0	0.0	x	0.0	x	0.0	x	0.0	x	0.0	x
Pyloric Caeca	55.0	48.0	0.0	x	0.0	x	0.0	x	0.0	x	0.0	x
			Average I =	x	**Average I =**	x	**Average I =**	x	**Average I =**	x	**Average I =**	x

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	35.5	**45.9**	43.5	**0.0**	40.5	**14.0**	40.0	**17.2**	38.0	**29.9**
Lateral Line Scales	130.0	144.2	144.5	**0.0**	143.5	**4.9**	169.0	**0.0**	175.5	**0.0**	168.0	**0.0**
Gill Rakers	20.5	18.5	17.0	x	16.0	x	18.0	x	18.0	x	16.0	x
Basibranchial Teeth	0.0	3.0	6.0	**0.0**	5.0	**0.0**	3.0	**0.0**	9.0	**0.0**	2.0	**33.3**
Pyloric Caeca	55.0	48.0	28.0	**0.0**	27.0	**0.0**	35.0	**0.0**	31.0	**0.0**	31.0	**0.0**
			Average I =	**11.5**	**Average I =**	**1.2**	**Average I =**	**3.5**	**Average I =**	**4.3**	**Average I =**	**15.8**

Population Average = 7.3

0 = Bonneville
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-B)/(R-B)]

Rainbow X Bonneville Cutthroat Trout Analysis

Population: **City Creek**
Water ID: IV AA 010A 02

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	36.5	39.5	35.0	49.0	35.5	45.9	32.0	68.2	35.5	45.9
Lateral Line Scales	130.0	144.2	149.0	0.0	156.0	0.0	142.5	12.0	147.0	0.0	132.0	85.9
Gill Rakers	20.5	18.5	17.0	x	19.0	x	18.0	x	17.0	x	19.0	x
Basibranchial Teeth	0.0	3.0	5.0	0.0	8.0	0.0	10.0	0.0	13.0	0.0	9.0	0.0
Pyloric Caeca	55.0	48.0	36.0	0.0	51.0	42.9	35.0	0.0	43.0	0.0	40.0	0.0
			Average I =	**9.9**	**Average I =**	**23.0**	**Average I =**	**14.5**	**Average I =**	**17.0**	**Average I =**	**32.9**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	35.5	45.9	35.5	45.9	41.0	10.8	38.5	26.8	34.0	55.4
Lateral Line Scales	130.0	144.2	143.0	8.5	138.5	40.1	159.5	0.0	155.5	0.0	141.5	19.0
Gill Rakers	20.5	18.5	17.0	x	17.0	x	19.0	x	18.0	x	18.0	x
Basibranchial Teeth	0.0	3.0	3.0	0.0	8.0	0.0	10.0	0.0	7.0	0.0	7.0	0.0
Pyloric Caeca	55.0	48.0	38.0	0.0	39.0	0.0	40.0	0.0	36.0	0.0	39.0	0.0
			Average I =	**13.6**	**Average I =**	**21.5**	**Average I =**	**2.7**	**Average I =**	**6.7**	**Average I =**	**18.6**

Population Average = 16.0

0 = Bonneville
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-B)/(R-B)]

Rainbow X Bonneville Cutthroat Trout Analysis

Population: **Red Butte Creek**
Water ID: IV AA 020

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	40.0	17.2	39.0	23.6	36.5	39.5	38.0	29.9	40.0	17.2
Lateral Line Scales	130.0	144.2	150.5	0.0	148.0	0.0	152.0	0.0	146.0	0.0	150.5	0.0
Gill Rakers	20.5	18.5	19.0	x	18.0	x	18.0	x	17.0	x	18.0	x
Basibranchial Teeth	0.0	3.0	10.0	0.0	6.0	0.0	8.0	0.0	10.0	0.0	5.0	0.0
Pyloric Caeca	55.0	48.0	28.0	0.0	28.0	0.0	28.0	0.0	33.0	0.0	*	x
			Average I =	**4.3**	**Average I =**	**5.9**	**Average I =**	**9.9**	**Average I =**	**7.5**	**Average I =**	**5.7**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	35.5	45.9	37.5	33.1	35.0	49.0	36.5	39.5	36.5	39.5
Lateral Line Scales	130.0	144.2	136.5	54.2	133.5	75.4	147.5	0.0	130.0	100.0	147.5	0.0
Gill Rakers	20.5	18.5	18.0	x	18.0	x	17.0	x	18.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	9.0	0.0	7.0	0.0	10.0	0.0	8.0	0.0	9.0	0.0
Pyloric Caeca	55.0	48.0	33.0	0.0	29.0	0.0	27.0	0.0	31.0	0.0	29.0	0.0
			Average I =	**25.0**	**Average I =**	**27.1**	**Average I =**	**12.3**	**Average I =**	**34.9**	**Average I =**	**9.9**

Population Average = 14.2

0 = Bonneville
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-B)/(R-B)]

Rainbow X Bonneville Cutthroat Trout Analysis

Population: **Emigration Creek**
Water ID: IV AA 030

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	33.5	58.6	38.0	29.9	x	x	38.0	29.9	x	x
Lateral Line Scales	130.0	144.2	149.0	0.0	158.0	0.0	x	x	145.5	0.0	x	x
Gill Rakers	20.5	18.5	19.0	x	17.0	x	x	x	16.0	x	x	x
Basibranchial Teeth	0.0	3.0	4.0	0.0	2.0	33.3	x	x	1.0	66.7	x	x
Pyloric Caeca	55.0	48.0	31.0	0.0	35.0	0.0	x	x	31.0	0.0	x	x
			Average I =	**14.6**	**Average I =**	**15.8**	**Average I =**	**x**	**Average I =**	**24.2**	**Average I =**	**x**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	36.0	42.7	40.0	17.2	36.0	42.7	x	x	38.5	26.8
Lateral Line Scales	130.0	144.2	153.0	0.0	163.5	0.0	145.0	0.0	x	x	136.0	57.7
Gill Rakers	20.5	18.5	20.0	x	17.0	x	17.0	x	x	x	17.0	x
Basibranchial Teeth	0.0	3.0	4.0	0.0	6.0	0.0	4.0	0.0	x	x	5.0	0.0
Pyloric Caeca	55.0	48.0	35.0	0.0	38.0	0.0	35.0	0.0	x	x	35.0	0.0
			Average I =	**10.7**	**Average I =**	**4.3**	**Average I =**	**10.7**	**Average I =**	**x**	**Average I =**	**21.1**

Population Average = 14.5

0 = Bonneville
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-B)/(R-B)]

Rainbow X Bonneville Cutthroat Trout Analysis

Population: **Mountain Dell Creek**
Water ID: IV AA 040A 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	39.5	20.4	41.5	7.6	40.0	17.2	43.5	0.0	39.0	23.6
Lateral Line Scales	130.0	144.2	162.5	0.0	159.5	0.0	162.0	0.0	154.0	0.0	169.5	0.0
Gill Rakers	20.5	18.5	18.0	x	20.0	x	18.0	x	18.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	7.0	0.0	12.0	0.0	4.0	0.0	5.0	0.0	8.0	0.0
Pyloric Caeca	55.0	48.0	46.0	0.0	34.0	0.0	40.0	0.0	41.0	0.0	44.0	0.0
			Average I =	**5.1**	**Average I =**	**1.9**	**Average I =**	**4.3**	**Average I =**	**0.0**	**Average I =**	**5.9**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	39.5	20.4	37.5	33.1	35.5	45.9	37.5	33.1	37.0	36.3
Lateral Line Scales	130.0	144.2	151.0	0.0	149.0	0.0	156.5	0.0	153.5	0.0	154.0	0.0
Gill Rakers	20.5	18.5	18.0	x	16.0	x	16.0	x	15.0	x	18.0	x
Basibranchial Teeth	0.0	3.0	6.0	0.0	6.0	0.0	5.0	0.0	4.0	0.0	6.0	0.0
Pyloric Caeca	55.0	48.0	41.0	0.0	33.0	0.0	43.0	0.0	37.0	0.0	47.0	0.0
			Average I =	**5.1**	**Average I =**	**8.3**	**Average I =**	**11.5**	**Average I =**	**8.3**	**Average I =**	**9.1**

Population Average = 5.9

0 = Bonneville
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-B)/(R-B)]

Rainbow X Bonneville Cutthroat Trout Analysis

Population: **Bell Canyon - Dry Creek**
Water ID: IV AA 090a 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	35.5	45.9	40.5	14.0	38.5	26.8	37.0	36.3	29.0	87.3
Lateral Line Scales	130.0	144.2	149.0	0.0	153.5	0.0	179.0	0.0	155.0	0.0	135.0	64.8
Gill Rakers	20.5	18.5	20.0	x	16.0	x	16.0	x	15.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	0.0	100.0	6.0	0.0	1.0	66.7	1.0	66.7	0.0	100.0
Pyloric Caeca	55.0	48.0	37.0	0.0	36.0	0.0	41.0	0.0	36.0	0.0	53.0	71.4
			Average I =	**36.5**	**Average I =**	**3.5**	**Average I =**	**23.4**	**Average I =**	**25.7**	**Average I =**	**80.9**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	27.5	96.8	44.5	0.0	41.5	7.6	44.0	0.0	39.0	23.6
Lateral Line Scales	130.0	144.2	141.0	22.5	154.5	0.0	176.5	0.0	156.0	0.0	156.0	0.0
Gill Rakers	20.5	18.5	16.0	x	19.0	x	16.0	x	18.0	x	19.0	x
Basibranchial Teeth	0.0	3.0	0.0	100.0	7.0	0.0	4.0	0.0	3.0	0.0	14.0	0.0
Pyloric Caeca	55.0	48.0	51.0	42.9	45.0	0.0	41.0	0.0	39.0	0.0	37.0	0.0
			Average I =	**65.6**	**Average I =**	**0.0**	**Average I =**	**1.9**	**Average I =**	**0.0**	**Average I =**	**5.9**

Population Average = 24.3

0 = Bonneville
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-B)/(R-B)]

Rainbow X Bonneville Cutthroat Trout Analysis

Population: **Hardscrabble Creek**
Water ID: IV AP 150A

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	39.5	20.4	40.5	14.0	42.5	1.3	45.0	0.0	45.0	0.0
Lateral Line Scales	130.0	144.2	159.0	0.0	175.0	0.0	160.5	0.0	155.5	0.0	152.0	0.0
Gill Rakers	20.5	18.5	18.0	x	17.0	x	18.0	x	17.0	x	16.0	x
Basibranchial Teeth	0.0	3.0	0.0	100.0	10.0	0.0	6.0	0.0	5.0	0.0	3.0	0.0
Pyloric Caeca	55.0	48.0	38.0	0.0	44.0	0.0	42.0	0.0	36.0	0.0	40.0	0.0
			Average I =	**30.1**	**Average I =**	**3.5**	**Average I =**	**0.3**	**Average I =**	**0.0**	**Average I =**	**0.0**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	42.5	1.3	42.5	1.3	42.0	4.5	44.0	0.0	42.5	1.3
Lateral Line Scales	130.0	144.2	158.5	0.0	157.5	0.0	165.0	0.0	152.0	0.0	158.0	0.0
Gill Rakers	20.5	18.5	18.0	x	17.0	x	15.0	x	17.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	2.0	33.3	2.0	33.3	2.0	33.3	7.0	0.0	0.0	100.0
Pyloric Caeca	55.0	48.0	34.0	0.0	35.0	0.0	49.0	14.3	40.0	0.0	45.0	0.0
			Average I =	**8.7**	**Average I =**	**8.7**	**Average I =**	**13.0**	**Average I =**	**0.0**	**Average I =**	**25.3**

Population Average = 9.0

0 = Bonneville
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-B)/(R-B)]

Rainbow X Bonneville Cutthroat Trout Analysis

Population: **Arthur Fork**
Water ID: IV AP 150A 02

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	44.5	0.0	39.5	20.4	35.0	49.0	42.0	4.5	42.5	1.3
Lateral Line Scales	130.0	144.2	159.5	0.0	161.0	0.0	132.0	85.9	147.0	0.0	150.0	0.0
Gill Rakers	20.5	18.5	19.0	x	18.0	x	19.0	x	19.0	x	15.0	x
Basibranchial Teeth	0.0	3.0	3.0	0.0	5.0	0.0	1.0	66.7	0.0	100.0	4.0	0.0
Pyloric Caeca	55.0	48.0	39.0	0.0	38.0	0.0	45.0	0.0	32.0	0.0	37.0	0.0
			Average I =	**0.0**	**Average I =**	**5.1**	**Average I =**	**50.4**	**Average I =**	**26.1**	**Average I =**	**0.3**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	39.0	23.6	39.5	20.4	38.5	26.8	37.5	33.1	43.5	0.0
Lateral Line Scales	130.0	144.2	144.5	0.0	141.5	19.0	169.8	0.0	141.5	19.0	138.0	43.7
Gill Rakers	20.5	18.5	17.0	x	18.0	x	18.0	x	19.0	x	20.0	x
Basibranchial Teeth	0.0	3.0	9.0	0.0	1.0	66.7	4.0	0.0	5.0	0.0	0.0	100.0
Pyloric Caeca	55.0	48.0	35.0	0.0	34.0	0.0	40.0	0.0	39.0	0.0	40.0	0.0
			Average I =	**5.9**	**Average I =**	**26.5**	**Average I =**	**6.7**	**Average I =**	**13.0**	**Average I =**	**35.9**

Population Average = 17.0

0 = Bonneville
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-B)/(R-B)]

Rainbow X Bonneville Cutthroat Trout Analysis

Population: **Walton Creek**
Water ID: IV AP 150A 04

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	45.0	0.0	43.5	0.0	43.5	0.0	44.5	0.0	38.0	29.9
Lateral Line Scales	130.0	144.2	172.5	0.0	171.5	0.0	154.0	0.0	178.0	0.0	140.0	29.6
Gill Rakers	20.5	18.5	17.0	x	16.0	x	18.0	x	19.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	9.0	0.0	6.0	0.0	0.0	100.0	4.0	0.0	x	x
Pyloric Caeca	55.0	48.0	43.0	0.0	32.0	0.0	45.0	0.0	37.0	0.0	29.0	0.0
			Average I =	**0.0**	**Average I =**	**0.0**	**Average I =**	**25.0**	**Average I =**	**0.0**	**Average I =**	**19.8**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	45.5	0.0	45.0	0.0	38.5	26.8	39.0	23.6	36.0	42.7
Lateral Line Scales	130.0	144.2	153.5	0.0	153.5	0.0	157.0	0.0	147.5	0.0	149.5	0.0
Gill Rakers	20.5	18.5	17.0	x	18.0	x	17.0	x	16.0	x	16.0	x
Basibranchial Teeth	0.0	3.0	x	x	0.0	100.0	3.0	0.0	6.0	0.0	4.0	0.0
Pyloric Caeca	55.0	48.0	35.0	0.0	33.0	0.0	38.0	0.0	25.0	0.0	27.0	0.0
			Average I =	**0.0**	**Average I =**	**25.0**	**Average I =**	**6.7**	**Average I =**	**5.9**	**Average I =**	**10.7**

Population Average = 9.3

0 = Bonneville
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-B)/(R-B)]

Rainbow X Bonneville Cutthroat Trout Analysis

Population: **Shingle Mill Creek**
Water ID: IV AP 150A 05

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	37.0	36.3	42.0	4.5	42.0	4.5	38.0	29.9	40.5	14.0
Lateral Line Scales	130.0	144.2	154.5	0.0	162.5	0.0	169.5	0.0	151.0	0.0	160.0	0.0
Gill Rakers	20.5	18.5	16.0	x	17.0	x	14.0	x	17.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	2.0	33.3	x	x	x	x	3.0	0.0	4.0	0.0
Pyloric Caeca	55.0	48.0	35.0	0.0	35.0	0.0	39.0	0.0	38.0	0.0	41.0	0.0
			Average I =	**17.4**	**Average I =**	**1.5**	**Average I =**	**1.5**	**Average I =**	**7.5**	**Average I =**	**3.5**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	42.5	1.3	x	x	x	x	x	x	38.0	29.9
Lateral Line Scales	130.0	144.2	177.0	0.0	x	x	x	x	x	x	172.5	0.0
Gill Rakers	20.5	18.5	14.0	x	x	x	x	x	x	x	17.0	x
Basibranchial Teeth	0.0	3.0	4.0	0.0	x	x	x	x	x	x	5.0	0.0
Pyloric Caeca	55.0	48.0	35.0	0.0	x	x	x	x	x	x	32.0	0.0
			Average I =	**0.3**	**Average I =**	**x**	**Average I =**	**x**	**Average I =**	**x**	**Average I =**	**7.5**

Population Average = 5.6

0 = Bonneville
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-B)/(R-B)]

Rainbow X Bonneville Cutthroat Trout Analysis

Population: **Toll Canyon Creek**
Water ID: IV AP 150O 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	42.0	4.5	41.0	10.8	38.0	29.9	43.0	0.0	41.5	7.6
Lateral Line Scales	130.0	144.2	159.0	0.0	140.5	26.1	142.0	15.5	157.0	0.0	133.0	78.9
Gill Rakers	20.5	18.5	16.0	x	20.0	x	16.0	x	17.0	x	14*	x
Basibranchial Teeth	0.0	3.0	4.0	0.0	4.0	0.0	7.0	0.0	Yes	0.0	N/A	x
Pyloric Caeca	55.0	48.0	32.0	0.0	39.0	0.0	25.0	0.0	33.0	0.0	30.0	0.0
			Average I =	**1.1**	**Average I =**	**9.2**	**Average I =**	**11.4**	**Average I =**	**0.0**	**Average I =**	**28.8**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	43.0	0.0	39.0	23.6	42.5	1.3	39.5	20.4	41.0	10.8
Lateral Line Scales	130.0	144.2	139.5	33.1	145.0	0.0	141.5	19.0	141.0	22.5	146.0	0.0
Gill Rakers	20.5	18.5	18.0	x	15.0	x	18.0	x	16.0	x	18.0	x
Basibranchial Teeth	0.0	3.0	N/A	x	Yes	0.0	Yes	0.0	N/A	x	N/A	x
Pyloric Caeca	55.0	48.0	35.0	0.0	36.0	0.0	33.0	0.0	33.0	0.0	37.0	0.0
			Average I =	**11.0**	**Average I =**	**5.9**	**Average I =**	**5.1**	**Average I =**	**14.3**	**Average I =**	**3.6**

Population Average = 9.0

0 = Bonneville
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-B)/(R-B)]

Rainbow X Bonneville Cutthroat Trout Analysis

Population: **South Fork - Chalk Creek**
Water ID: IV AP 230A

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	42.5	1.3	40.5	14.0	38.0	29.9	40.5	14.0	40.0	17.2
Lateral Line Scales	130.0	144.2	161.0	0.0	161.5	0.0	170.5	0.0	152.5	0.0	151.0	0.0
Gill Rakers	20.5	18.5	17.0	x	17.0	x	15.0	x	15.0	x	16.0	x
Basibranchial Teeth	0.0	3.0	1.0	66.7	3.0	0.0	2.0	33.3	4.0	0.0	3.0	0.0
Pyloric Caeca	55.0	48.0	34.0	0.0	32.0	0.0	29.0	0.0	40.0	0.0	36.0	0.0
			Average I =	**17.0**	**Average I =**	**3.5**	**Average I =**	**15.8**	**Average I =**	**3.5**	**Average I =**	**4.3**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	44.0	0.0	42.0	4.5	37.0	36.3	40.5	14.0	46.5	0.0
Lateral Line Scales	130.0	144.2	139.5	33.1	142.5	12.0	142.5	12.0	146.0	0.0	159.0	0.0
Gill Rakers	20.5	18.5	18.0	x	17.0	x	18.0	x	19.0	x	16.0	x
Basibranchial Teeth	0.0	3.0	2.0	33.3	1.0	66.7	1.0	66.7	1.0	66.7	0.0	100.0
Pyloric Caeca	55.0	48.0	26.0	0.0	29.0	0.0	28.0	0.0	34.0	0.0	34.0	0.0
			Average I =	**16.6**	**Average I =**	**20.8**	**Average I =**	**28.7**	**Average I =**	**20.2**	**Average I =**	**25.0**

Population Average = 15.5

0 = Bonneville
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-B)/(R-B)]

Rainbow X Bonneville Cutthroat Trout Analysis

Population: **Fish Creek**
Water ID: IV AP 230A 05

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	38.0	29.9	36.0	42.7	38.0	29.9	40.0	17.2	39.0	23.6
Lateral Line Scales	130.0	144.2	152.0	0.0	144.0	1.4	142.0	15.5	156.0	0.0	151.0	0.0
Gill Rakers	20.5	18.5	19.0	x	16.0	x	18.0	x	18.0	x	16.0	x
Basibranchial Teeth	0.0	3.0	1.0	66.7	1.0	66.7	7.0	0.0	5.0	0.0	12.0	0.0
Pyloric Caeca	55.0	48.0	39*	x	35.0	0.0	42.0	0.0	32*	x	31*	x
			Average I =	**32.2**	**Average I =**	**27.7**	**Average I =**	**11.4**	**Average I =**	**5.7**	**Average I =**	**7.9**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	37.0	36.3	39.0	23.6	39.0	23.6	38.0	29.9	x	x
Lateral Line Scales	130.0	144.2	157.0	0.0	140.0	29.6	169.0	0.0	142.0	15.5	x	x
Gill Rakers	20.5	18.5	18.0	x	20.0	x	18.0	x	17.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	7.0	0.0	9.0	0.0	22.0	0.0	7.0	0.0	1.0	66.7
Pyloric Caeca	55.0	48.0	N/A*	x	38.0	0.0	33*	x	31.0	0.0	N/A*	x
			Average I =	**12.1**	**Average I =**	**13.3**	**Average I =**	**7.9**	**Average I =**	**11.4**	**Average I =**	**x**

Population Average = 14.4

0 = Bonneville
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-B)/(R-B)]

Rainbow X Bonneville Cutthroat Trout Analysis

Population: **East Fork - Chalk Creek**
Water ID: IV AP 230C

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	39.5	20.4	43.0	0.0	42.0	4.5	36.5	39.5	41.0	10.8
Lateral Line Scales	130.0	144.2	156.5	0.0	165.5	0.0	172.5	0.0	172.5	0.0	168.5	0.0
Gill Rakers	20.5	18.5	18.0	x	15.0	x	17.0	x	16.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	5.0	0.0	4.0	0.0	5.0	0.0	9.0	0.0	8.0	0.0
Pyloric Caeca	55.0	48.0	40.0	0.0	34.0	0.0	32.0	0.0	39.0	0.0	35.0	0.0
			Average I =	**5.1**	**Average I =**	**0.0**	**Average I =**	**1.1**	**Average I =**	**9.9**	**Average I =**	**2.7**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	39.0	23.6	38.0	29.9	40.0	17.2	41.0	10.8	43.0	0.0
Lateral Line Scales	130.0	144.2	164.0	0.0	152.0	0.0	153.0	0.0	142.5	12.0	131.5	89.4
Gill Rakers	20.5	18.5	15.0	x	16.0	x	16.0	x	18.0	x	22.0	x
Basibranchial Teeth	0.0	3.0	3.0	0.0	5.0	0.0	5.0	0.0	6.0	0.0	5.0	0.0
Pyloric Caeca	55.0	48.0	38.0	0.0	34.0	0.0	33.0	0.0	37.0	0.0	32.0	0.0
			Average I =	**5.9**	**Average I =**	**7.5**	**Average I =**	**4.3**	**Average I =**	**5.7**	**Average I =**	**22.4**

Population Average = 6.5

0 = Bonneville
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-B)/(R-B)]

Rainbow X Bonneville Cutthroat Trout Analysis

Population: **Silver Creek**
Water ID: IV AP 280 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	41.0	10.8	39.0	23.6	42.0	4.5	42.0	4.5	38.0	29.9
Lateral Line Scales	130.0	144.2	167.5	0.0	157.5	0.0	181.0	0.0	163.0	0.0	163.5	0.0
Gill Rakers	20.5	18.5	17.0	x	16.0	x	20.0	x	19.0	x	18.0	x
Basibranchial Teeth	0.0	3.0	8.0	0.0	13.0	0.0	7.0	0.0	4.0	0.0	9.0	0.0
Pyloric Caeca	55.0	48.0	35.0	0.0	41.0	0.0	32.0	0.0	31.0	0.0	24.0	0.0
			Average I =	**2.7**	**Average I =**	**5.9**	**Average I =**	**1.1**	**Average I =**	**1.1**	**Average I =**	**7.5**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	34.5	52.2	31.5	71.3	39.5	20.4	38.5	26.8	41.5	7.6
Lateral Line Scales	130.0	144.2	148.5	0.0	145.0	0.0	151.5	0.0	139.0	36.6	170.5	0.0
Gill Rakers	20.5	18.5	18.0	x	19.0	x	21.0	x	19.0	x	21.0	x
Basibranchial Teeth	0.0	3.0	8.0	0.0	4.0	0.0	8.0	0.0	9.0	0.0	6.0	0.0
Pyloric Caeca	55.0	48.0	38.0	0.0	35.0	0.0	33.0	0.0	34.0	0.0	30.0	0.0
			Average I =	**13.1**	**Average I =**	**17.8**	**Average I =**	**5.1**	**Average I =**	**15.8**	**Average I =**	**1.9**

Population Average = 7.2

0 = Bonneville
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-B)/(R-B)]

Rainbow X Bonneville Cutthroat Trout Analysis

Population: **Curtis Creek**
Water ID: IV AQ 040A 03C 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	41.0	10.8	45.5	0.0	39.5	20.4	37.0	36.3	42.5	1.3
Lateral Line Scales	130.0	144.2	156.5	0.0	154.5	0.0	164.0	0.0	170.5	0.0	178.5	0.0
Gill Rakers	20.5	18.5	18.0	x	19.0	x	18.0	x	19.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	2.0	33.3	6.0	0.0	8.0	0.0	5.0	0.0	7.0	0.0
Pyloric Caeca	55.0	48.0	48.0	0.0	40.0	0.0	43.0	0.0	30.0	0.0	44.0	0.0
			Average I =	**11.0**	**Average I =**	**0.0**	**Average I =**	**5.1**	**Average I =**	**9.1**	**Average I =**	**0.3**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	35.0	49.0	42.0	4.5	42.0	4.5	38.0	29.9	43.0	0.0
Lateral Line Scales	130.0	144.2	156.5	0.0	189.0	0.0	175.0	0.0	157.0	0.0	152.0	0.0
Gill Rakers	20.5	18.5	16.0	x	17.0	x	17.0	x	16.0	x	15.0	x
Basibranchial Teeth	0.0	3.0	6.0	0.0	0.0	100.0	19.0	0.0	6.0	0.0	11.0	0.0
Pyloric Caeca	55.0	48.0	43.0	0.0	34.0	0.0	46.0	0.0	33.0	0.0	46.0	0.0
			Average I =	**12.3**	**Average I =**	**26.1**	**Average I =**	**1.1**	**Average I =**	**7.5**	**Average I =**	**0.0**

Population Average = 7.3

0 = Bonneville
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-B)/(R-B)]

Rainbow X Bonneville Cutthroat Trout Analysis

Population: **Logan River**
Water ID: IV AQ 040A 07

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	42.5	1.3	46.5	0.0	46.0	0.0	42.5	1.3	40.0	17.2
Lateral Line Scales	130.0	144.2	175.5	0.0	163.0	0.0	157.0	0.0	136.5	54.2	174.0	0.0
Gill Rakers	20.5	18.5	17.0	x	17.0	x	17.0	x	18.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	9.0	0.0	3.0	0.0	8.0	0.0	1.0	66.7	0.0	100.0
Pyloric Caeca	55.0	48.0	N/A	x	39.0	0.0	37.0	0.0	33.0	0.0	40.0	0.0
			Average I =	**0.4**	**Average I =**	**0.0**	**Average I =**	**0.0**	**Average I =**	**30.5**	**Average I =**	**29.3**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	40.0	17.2	40.5	14.0	42.0	4.5	40.5	14.0	47.5	0.0
Lateral Line Scales	130.0	144.2	152.5	0.0	152.5	0.0	161.0	0.0	148.5	0.0	155.5	0.0
Gill Rakers	20.5	18.5	18.0	x	18.0	x	18.0	x	17.0	x	16.0	x
Basibranchial Teeth	0.0	3.0	4.0	0.0	0.0	100.0	7.0	0.0	3.0	0.0	5.0	0.0
Pyloric Caeca	55.0	48.0	32.0	0.0	29.0	0.0	29.0	0.0	36.0	0.0	34.0	0.0
			Average I =	**4.3**	**Average I =**	**28.5**	**Average I =**	**1.1**	**Average I =**	**3.5**	**Average I =**	**0.0**

Population Average = 9.8

0 = Bonneville
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-B)/(R-B)]

Rainbow X Bonneville Cutthroat Trout

Population: **Deer Creek**
Water ID: IV AQ 240A 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	41.0	10.8	43.0	0.0	44.0	0.0	39.5	20.4	37.0	36.3
Lateral Line Scales	130.0	144.2	155.5	0.0	162.5	0.0	155.0	0.0	161.0	0.0	159.0	0.0
Gill Rakers	20.5	18.5	17.0	x	14.0	x	15.0	x	18.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	1.0	66.7	4.0	0.0	3.0	0.0	2.0	33.3	2.0	33.3
Pyloric Caeca	55.0	48.0	44.0	0.0	39.0	0.0	38.0	0.0	38.0	0.0	35.0	0.0
			Average I =	**19.4**	**Average I =**	**0.0**	**Average I =**	**0.0**	**Average I =**	**13.4**	**Average I =**	**17.4**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	36.5	39.5	44.5	0.0	38.5	26.8	43.5	0.0	39.5	20.4
Lateral Line Scales	130.0	144.2	152.5	0.0	173.5	0.0	177.5	0.0	184.0	0.0	145.5	0.0
Gill Rakers	20.5	18.5	17.0	x	18.0	x	17.0	x	17.0	x	16.0	x
Basibranchial Teeth	0.0	3.0	0.0	100.0	1.0	66.7	1.0	66.7	4.0	0.0	0.0	100.0
Pyloric Caeca	55.0	48.0	26.0	0.0	36.0	0.0	30.0	0.0	33.0	0.0	36.0	0.0
			Average I =	**34.9**	**Average I =**	**16.7**	**Average I =**	**23.4**	**Average I =**	**0.0**	**Average I =**	**30.1**

Population Average = 15.5

0 = Bonneville
100 = Rainbow
30 - 70 = Hybrid

Appendix B

Each data sheet is organized for persons entering data in the spreadsheet upon completion of meristic analysis. The top left corner illustrates the hybrid index formula. Following the formula is the water body or population name and corresponding Water ID number. The instructions printed near the top are to guide the person entering the data on the spreadsheet. The main body of the sheet reflects the raw data (U), variables for the equation (R2 for rainbow, C or B for cutthroat), index numbers for each character (I), and individual index scores. In the bottom left corner is the population average. Characters or individuals with an 'x' are those that were damaged, too small, or non-existent. Also shown is the data for gill raker counts. The 'x' in the column labeled 'I' removes that particular index score from the individuals average score. Likewise any x's in the cell labeled 'Average I' will not affect the population mean at the bottom.

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Lower Whites Creek**
Water ID: I AJ 160E 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	46.0	0.0	44.0	0.0	44.0	0.0	44.5	0.0	39.5	20.4
Lateral Line Scales	130.0	187.0	154.0	57.9	167.5	34.2	166.5	36.0	165.0	38.6	149.0	66.7
Gill Rakers	20.5	19.0	17.0	x	19.0	x	20.0	x	18.0	x	20.0	x
Basibranchial Teeth	0.0	3.0	0.0	100.0	0.0	100.0	5.0	0.0	0.0	100.0	0.0	100.0
Pyloric Caeca	55.0	41.0	36.0	0.0	39.0	0.0	28.0	0.0	36.0	0.0	37.0	0.0
			Average I =	**39.5**	**Average I =**	**33.6**	**Average I =**	**9.0**	**Average I =**	**34.6**	**Average I =**	**46.8**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	39.5	20.4	41.5	7.6	38.5	26.8	40.5	14.0	44.0	0.0
Lateral Line Scales	130.0	187.0	134.0	93.0	147.0	70.2	137.5	86.8	136.5	88.6	151.5	62.3
Gill Rakers	20.5	19.0	19.0	x	17.0	x	16.0	x	19.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	4.0	0.0	2.0	33.3	0.0	100.0	1.0	66.7	2.0	33.3
Pyloric Caeca	55.0	41.0	35.0	0.0	30.0	0.0	30.0	0.0	34.0	0.0	36.0	0.0
			Average I =	**28.3**	**Average I =**	**27.8**	**Average I =**	**53.4**	**Average I =**	**42.3**	**Average I =**	**23.9**

Population Average = 33.9

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Upper Whites Creek**
Water ID: I AJ 160E 02

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	48.0	0.0	45.0	0.0	46.0	0.0	44.0	0.0	44.0	0.0
Lateral Line Scales	130.0	187.0	163.0	42.1	166.0	36.8	157.0	52.6	161.0	45.6	148.0	68.4
Gill Rakers	20.5	19.0	16.0	x	17.0	x	18.0	x	18.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	5.0	0.0	2.0	33.3	2.0	33.3	7.0	0.0	11.0	0.0
Pyloric Caeca	55.0	41.0	25.0	0.0	35.0	0.0	31.0	0.0	26.0	0.0	30.0	0.0
			Average I =	**10.5**	**Average I =**	**17.5**	**Average I =**	**21.5**	**Average I =**	**11.4**	**Average I =**	**17.1**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	43.0	0.0	45.0	0.0	46.0	0.0	44.0	0.0	42.0	4.5
Lateral Line Scales	130.0	187.0	156.0	54.4	163.0	42.1	171.0	28.1	158.0	50.9	164.0	40.4
Gill Rakers	20.5	19.0	20.0	x	18.0	x	17.0	x	18.0	x	20.0	x
Basibranchial Teeth	0.0	3.0	6.0	0.0	12.0	0.0	9.0	0.0	17.0	0.0	16.0	0.0
Pyloric Caeca	55.0	41.0	37.0	0.0	33.0	0.0	29.0	0.0	31.0	0.0	40.0	0.0
			Average I =	**13.6**	**Average I =**	**10.5**	**Average I =**	**7.0**	**Average I =**	**12.7**	**Average I =**	**11.2**

Population Average = 13.3

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Geyser Creek**
Water ID: I BQ 050B 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	41.0	10.8	40.0	17.2	41.0	10.8	40.0	17.2	43.0	0.0
Lateral Line Scales	130.0	187.0	181.0	10.5	161.0	45.6	144.0	75.4	153.0	59.6	168.0	33.3
Gill Rakers	20.5	19.0	18.0	x	18.0	x	19.0	x	17.0	x	20.0	x
Basibranchial Teeth	0.0	3.0	5.0	0.0	2.0	33.3	5.0	0.0	6.0	0.0	16.0	0.0
Pyloric Caeca	55.0	41.0	N/A	x	N/A	x	N/A	x	36.0	0.0	N/A	x
			Average I =	**7.1**	**Average I =**	**32.0**	**Average I =**	**28.8**	**Average I =**	**19.2**	**Average I =**	**11.1**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	40.0	17.2	42.0	4.5	40.0	17.2	43.0	0.0	43.0	0.0
Lateral Line Scales	130.0	187.0	169.0	31.6	154.0	57.9	153.0	59.6	144.0	75.4	155.0	56.1
Gill Rakers	20.5	19.0	19.0	x	16.0	x	21.0	x	17.0	x	19.0	x
Basibranchial Teeth	0.0	3.0	4.0	0.0	9.0	0.0	2.0	33.3	9.0	0.0	15.0	0.0
Pyloric Caeca	55.0	41.0	N/A	x	34.0	0.0	33.0	0.0	*	x	N/A	x
			Average I =	**16.3**	**Average I =**	**15.6**	**Average I =**	**27.5**	**Average I =**	**25.1**	**Average I =**	**18.7**

Population Average = 20.1

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Beaver Creek (La Sals)**
Water ID: I BQ 070C

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	42.0	4.5	41.0	10.8	35.0	49.0	36.0	42.7	40.0	17.2
Lateral Line Scales	130.0	187.0	171.0	28.1	184.0	5.3	142.0	78.9	159.0	49.1	145.0	73.7
Gill Rakers	20.5	19.0	19.0	x	19.0	x	20.0	x	21.0	x	16.0	x
Basibranchial Teeth	0.0	3.0	2.0	33.3	18.0	0.0	1.0	66.7	2.0	33.3	2.0	33.3
Pyloric Caeca	55.0	41.0	N/A	x	N/A	x	N/A	x	N/A	x	N/A	x
			Average I =	**22.0**	**Average I =**	**5.4**	**Average I =**	**64.9**	**Average I =**	**41.7**	**Average I =**	**41.4**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	42.0	4.5	41.0	10.8	42.0	4.5	42.0	4.5	41.0	10.8
Lateral Line Scales	130.0	187.0	150.0	64.9	146.0	71.9	169.0	31.6	161.0	45.6	153.0	59.6
Gill Rakers	20.5	19.0	18.0	x	17.0	x	17.0	x	19.0	x	41.0	x
Basibranchial Teeth	0.0	3.0	0.0	100.0	0.0	100.0	0.0	100.0	18.0	0.0	11.0	0.0
Pyloric Caeca	55.0	41.0	N/A	x	N/A	x	N/A	x	N/A	x	N/A	x
			Average I =	**56.5**	**Average I =**	**60.9**	**Average I =**	**45.3**	**Average I =**	**16.7**	**Average I =**	**23.5**

Population Average = **37.8**

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **GR 177**
Water ID: II 536LU

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	46.0	0.0	46.5	0.0	42.0	4.5	39.0	23.6	40.5	14.0
Lateral Line Scales	130.0	187.0	171.5	27.2	174.0	22.8	148.5	67.5	186.5	0.9	188.5	0.0
Gill Rakers	20.5	19.0	17.0	x	19.0	x	19.0	x	19.0	x	20.0	x
Basibranchial Teeth	0.0	3.0	4.0	0.0	7.0	0.0	7.0	0.0	8.0	0.0	8.0	0.0
Pyloric Caeca	55.0	41.0	33.0	0.0	28.0	0.0	37.0	0.0	39.0	0.0	38.0	0.0
			Average I =	**6.8**	**Average I =**	**5.7**	**Average I =**	**18.0**	**Average I =**	**6.1**	**Average I =**	**3.5**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	42.5	1.3	42.5	1.3	41.0	10.8	43.5	0.0	40.0	17.2
Lateral Line Scales	130.0	187.0	163.0	42.1	189.0	0.0	177.5	16.7	175.5	20.2	143.5	76.3
Gill Rakers	20.5	19.0	19.0	x	20.0	x	15.0	x	18.0	x	20.0	x
Basibranchial Teeth	0.0	3.0	*	x	7.0	0.0	5.0	0.0	5.0	0.0	0.0	100.0
Pyloric Caeca	55.0	41.0	30.0	0.0	29.0	0.0	40.0	0.0	29.0	0.0	32.0	0.0
			Average I =	**14.5**	**Average I =**	**0.3**	**Average I =**	**6.9**	**Average I =**	**5.0**	**Average I =**	**48.4**

Population Average = 11.5

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Gilbert Lake (GR 150)**
Water ID: II 596

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	45.0	0.0	44.0	0.0	44.0	0.0	48.0	0.0	44.0	0.0
Lateral Line Scales	130.0	187.0	158.0	50.9	151.0	63.2	180.0	12.3	179.0	14.0	154.0	57.9
Gill Rakers	20.5	19.0	18.0	x	20.0	x	20.0	x	21.0	x	21.0	x
Basibranchial Teeth	0.0	3.0	12.0	0.0	10.0	0.0	12.0	0.0	0.0	100.0	16.0	0.0
Pyloric Caeca	55.0	41.0	39.0	0.0	35.0	0.0	35.0	0.0	33.0	0.0	34.0	0.0
			Average I =	**12.7**	**Average I =**	**15.8**	**Average I =**	**3.1**	**Average I =**	**28.5**	**Average I =**	**14.5**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	44.0	0.0	42.0	4.5	44.0	0.0	43.0	0.0	43.0	0.0
Lateral Line Scales	130.0	187.0	157.0	52.6	152.0	61.4	178.0	15.8	171.0	28.1	174.0	22.8
Gill Rakers	20.5	19.0	18.0	x	18.0	x	20.0	x	19.0	x	19.0	x
Basibranchial Teeth	0.0	3.0	5.0	0.0	5.0	0.0	3.0	0.0	10.0	0.0	4.0	0.0
Pyloric Caeca	55.0	41.0	42.0	7.1	31.0	0.0	43.0	14.3	28.0	0.0	34.0	0.0
			Average I =	**14.9**	**Average I =**	**16.5**	**Average I =**	**7.5**	**Average I =**	**7.0**	**Average I =**	**5.7**

Population Average = 12.6

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **GR 153**
Water ID: II 596K

Meristic ID. Numbers

Character	Species average R2	Species average C	Ind # 1 U	Ind # 1 I	Ind # 2 U	Ind # 2 I	Ind # 3 U	Ind # 3 I	Ind # 4 U	Ind # 4 I	Ind # 5 U	Ind # 5 I
Scales Above Lat. Line	27.0	42.7	43.5	0.0	44.5	0.0	44.5	0.0	45.5	0.0	43.0	0.0
Lateral Line Scales	130.0	187.0	154.5	57.0	153.0	59.6	155.5	55.3	161.0	45.6	176.5	18.4
Gill Rakers	20.5	19.0	21.0	x	21.0	x	19.0	x	20.0	x	20.0	x
Basibranchial Teeth	0.0	3.0	2.0	33.3	6.0	0.0	5.0	0.0	6.0	0.0	5.0	0.0
Pyloric Caeca	55.0	41.0	35.0	0.0	36.0	0.0	30.0	0.0	31.0	0.0	29.0	0.0
			Average I =	**22.6**	**Average I =**	**14.9**	**Average I =**	**13.8**	**Average I =**	**11.4**	**Average I =**	**4.6**

Meristic ID. Numbers

Character	Species average R2	Species average C	Ind # 6 U	Ind # 6 I	Ind # 7 U	Ind # 7 I	Ind # 8 U	Ind # 8 I	Ind # 9 U	Ind # 9 I	Ind # 10 U	Ind # 10 I
Scales Above Lat. Line	27.0	42.7	46.5	0.0	x	x	42.5	1.3	41.0	10.8	43.0	0.0
Lateral Line Scales	130.0	187.0	176.5	18.4	x	x	137.5	86.8	150.0	64.9	161.0	45.6
Gill Rakers	20.5	19.0	18.0	x	x	x	23.0	x	21.0	x	18.0	x
Basibranchial Teeth	0.0	3.0	4.0	0.0	x	x	4.0	0.0	5.0	0.0	4.0	0.0
Pyloric Caeca	55.0	41.0	35.0	0.0	x	x	33.0	0.0	34.0	0.0	37.0	0.0
			Average I =	**4.6**	**Average I =**	**x**	**Average I =**	**22.0**	**Average I =**	**18.9**	**Average I =**	**11.4**

Population Average = 13.8

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Big Bear Creek**
Water ID: II AI 120G 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	39.5	20.4	39.5	20.4	42.0	4.5	37.0	36.3	40.5	14.0
Lateral Line Scales	130.0	187.0	153.5	58.8	167.5	34.2	171.0	28.1	160.5	46.5	145.0	73.7
Gill Rakers	20.5	19.0	16.0	x	19.0	x	18.0	x	17.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	4.0	0.0	7.0	0.0	5.0	0.0	0.0	100.0	5.0	0.0
Pyloric Caeca	55.0	41.0	34.0	0.0	42.0	7.1	45.0	28.6	35.0	0.0	37.0	0.0
			Average I =	**19.8**	**Average I =**	**15.4**	**Average I =**	**15.3**	**Average I =**	**45.7**	**Average I =**	**21.9**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	x	x	44.5	0.0	40.0	17.2	40.5	14.0	37.5	33.1
Lateral Line Scales	130.0	187.0	x	x	178.0	15.8	136.0	89.5	154.0	57.9	135.5	90.4
Gill Rakers	20.5	19.0	-	x	17.0	x	17.0	x	18.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	-	x	4.0	0.0	0.0	100.0	5.0	0.0	0.0	100.0
Pyloric Caeca	55.0	41.0	-	x	32.0	0.0	35.0	0.0	42.0	7.1	34.0	0.0
			Average I =	x	**Average I =**	**3.9**	**Average I =**	**51.7**	**Average I =**	**19.8**	**Average I =**	**55.9**

Population Average = 27.7

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Lower Tie Fork**
Water ID: II AI 130I 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	CC	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	34.5	52.2	37.5	33.1	31.5	71.3	36.5	39.5	32.0	68.2
Lateral Line Scales	130.0	187.0	154.5	57.0	158.0	50.9	142.5	78.1	138.0	86.0	139.0	84.2
Gill Rakers	20.5	19.0	17.0	x	18.0	x	18.0	x	22.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	4.0	0.0	2.0	33.3	12.0	0.0	5.0	0.0	6.0	0.0
Pyloric Caeca	55.0	41.0	47.0	42.9	37.0	0.0	25.0	0.0	34.0	0.0	37.0	0.0
			Average I =	**38.0**	**Average I =**	**29.3**	**Average I =**	**37.4**	**Average I =**	**31.4**	**Average I =**	**38.1**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	32.0	68.2	37.5	33.1	45.5	0.0	37.0	36.3	36.5	39.5
Lateral Line Scales	130.0	187.0	137.0	87.7	153.5	58.8	165.0	38.6	140.0	82.5	147.0	70.2
Gill Rakers	20.5	19.0	17.0	x	18.0	x	17.0	x	18.0	x	16.0	x
Basibranchial Teeth	0.0	3.0	5.0	0.0	10.0	0.0	4.0	0.0	6.0	0.0	4.0	0.0
Pyloric Caeca	55.0	41.0	39.0	0.0	41.0	0.0	38.0	0.0	41.0	0.0	41.0	0.0
			Average I =	**39.0**	**Average I =**	**23.0**	**Average I =**	**9.6**	**Average I =**	**29.7**	**Average I =**	**27.4**

Population Average = 30.3

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Upper Tie Fork**
Water ID: II AI 130I 02

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	39.0	23.6	42.0	4.5	41.5	7.6	40.5	14.0	41.5	7.6
Lateral Line Scales	130.0	187.0	141.0	80.7	162.5	43.0	141.0	80.7	154.0	57.9	143.0	77.2
Gill Rakers	20.5	19.0	18.0	x	18.0	x	17.0	x	17.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	5.0	0.0	6.0	0.0	4.0	0.0	12.0	0.0	2.0	33.3
Pyloric Caeca	55.0	41.0	36.0	0.0	35.0	0.0	36.0	0.0	38.0	0.0	38.0	0.0
			Average I =	**26.1**	**Average I =**	**11.9**	**Average I =**	**22.1**	**Average I =**	**18.0**	**Average I =**	**29.5**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	41.0	10.8	41.0	10.8	40.0	17.2	43.5	0.0	42.5	1.3
Lateral Line Scales	130.0	187.0	145.0	73.7	168.5	32.5	151.5	62.3	157.0	52.6	161.0	45.6
Gill Rakers	20.5	19.0	19.0	x	17.0	x	16.0	x	17.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	4.0	0.0	5.0	0.0	2.0	33.3	17.0	0.0	5.0	0.0
Pyloric Caeca	55.0	41.0	47.0	42.9	51.0	71.4	41.0	0.0	45.0	28.6	34.0	0.0
			Average I =	**31.8**	**Average I =**	**28.7**	**Average I =**	**28.2**	**Average I =**	**20.3**	**Average I =**	**11.7**

Population Average = 22.8

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Tabbyune Creek**
Water ID: II AK 190C 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	35.0	49.0	48.0	0.0	40.0	17.2	39.0	23.6	42.0	4.5
Lateral Line Scales	130.0	187.0	173.0	24.6	161.0	45.6	167.0	35.1	155.0	56.1	173.0	24.6
Gill Rakers	20.5	19.0	14.0	x	14.0	x	17.0	x	18.0	x	16.0	x
Basibranchial Teeth	0.0	3.0	5.0	0.0	2.0	33.3	5.0	0.0	0.0	100.0	3.0	0.0
Pyloric Caeca	55.0	41.0	33.0	0.0	36.0	0.0	37.0	0.0	33.0	0.0	31.0	0.0
			Average I =	**18.4**	**Average I =**	**19.7**	**Average I =**	**13.1**	**Average I =**	**44.9**	**Average I =**	**7.3**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	46.0	0.0	35.0	49.0	41.0	10.8	45.0	0.0	43.0	0.0
Lateral Line Scales	130.0	187.0	158.0	50.9	171.0	28.1	156.0	54.4	167.0	35.1	143.0	77.2
Gill Rakers	20.5	19.0	17.0	x	18.0	x	17.0	x	15.0	x	22.0	x
Basibranchial Teeth	0.0	3.0	3.0	0.0	3.0	0.0	4.0	0.0	5.0	0.0	1.0	66.7
Pyloric Caeca	55.0	41.0	38.0	0.0	32.0	0.0	41.0	0.0	38.0	0.0	28.0	0.0
			Average I =	**12.7**	**Average I =**	**19.3**	**Average I =**	**16.3**	**Average I =**	**8.8**	**Average I =**	**36.0**

Population Average = 19.6

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Right Fork - White River**
Water ID: II AK 190A

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	43.0	0.0	38.0	29.9	43.5	0.0	41.0	10.8	38.0	29.9
Lateral Line Scales	130.0	187.0	151.0	63.2	153.0	59.6	151.5	62.3	166.0	36.8	151.0	63.2
Gill Rakers	20.5	19.0	16.0	x	18.0	x	17.0	x	18.0	x	18.0	x
Basibranchial Teeth	0.0	3.0	4.0	0.0	4.0	0.0	0.0	100.0	4.0	0.0	3.0	0.0
Pyloric Caeca	55.0	41.0	24.0	0.0	30.0	0.0	30.0	0.0	36.0	0.0	35.0	0.0
			Average I =	**15.8**	**Average I =**	**22.4**	**Average I =**	**40.6**	**Average I =**	**11.9**	**Average I =**	**23.3**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	42.5	1.3	39.0	23.6	40.5	14.0	38.0	29.9	41.0	10.8
Lateral Line Scales	130.0	187.0	154.0	57.9	152.0	61.4	162.5	43.0	142.5	78.1	145.5	72.8
Gill Rakers	20.5	19.0	15.0	x	16.0	x	18.0	x	18.0	x	18.0	x
Basibranchial Teeth	0.0	3.0	2.0	33.3	2.0	33.3	2.0	33.3	1.0	66.7	4.0	0.0
Pyloric Caeca	55.0	41.0	35.0	0.0	31.0	0.0	32.0	0.0	34.0	0.0	35.0	0.0
			Average I =	**23.1**	**Average I =**	**29.6**	**Average I =**	**22.6**	**Average I =**	**43.7**	**Average I =**	**20.9**

Population Average = 25.4

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Johnson Fork**
Water ID: II AK 190A 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	40.0	17.2	43.0	0.0	42.5	1.3	38.0	29.9	41.5	7.6
Lateral Line Scales	130.0	187.0	148.0	68.4	164.5	39.5	200.0	0.0	135.5	90.4	152.0	61.4
Gill Rakers	20.5	19.0	19.0	x	15.0	x	19.0	x	17.0	x	18.0	x
Basibranchial Teeth	0.0	3.0	1.0	66.7	5.0	0.0	0.0	100.0	0.0	100.0	6.0	0.0
Pyloric Caeca	55.0	41.0	34.0	0.0	31.0	0.0	28.0	0.0	36.0	0.0	43.0	14.3
			Average I =	**38.1**	**Average I =**	**9.9**	**Average I =**	**25.3**	**Average I =**	**55.1**	**Average I =**	**20.8**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	42.0	4.5	41.5	7.6	44.0	0.0	39.0	23.6	37.5	33.1
Lateral Line Scales	130.0	187.0	182.5	7.9	155.5	55.3	175.5	20.2	150.5	64.0	154.0	57.9
Gill Rakers	20.5	19.0	20.0	x	15.0	x	18.0	x	17.0	x	16.0	x
Basibranchial Teeth	0.0	3.0	8.0	0.0	4.0	0.0	8.0	0.0	5.0	0.0	7.0	0
Pyloric Caeca	55.0	41.0	40.0	0.0	31.0	0.0	31.0	0.0	42.0	7.1	24.0	0
			Average I =	**3.1**	**Average I =**	**15.7**	**Average I =**	**5.0**	**Average I =**	**23.7**	**Average I =**	**22.8**

Population Average = 22.0

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Left Fork - White River**
Water ID: II AK 190B

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	41.5	7.6	41.0	10.8	42.5	1.3	x	x	38.5	26.8
Lateral Line Scales	130.0	187.0	165.0	38.6	130.5	99.1	175.5	20.2	x	x	174.5	21.9
Gill Rakers	20.5	19.0	18.0	x	19.0	x	18.0	x	x	x	18.0	x
Basibranchial Teeth	0.0	3.0	5.0	0.0	5.0	0.0	6.0	0.0	x	x	5.0	0.0
Pyloric Caeca	55.0	41.0	N/A	x	36.0	0.0	N/A	x	x	x	N/A	x
			Average I =	**15.4**	**Average I =**	**27.5**	**Average I =**	**7.1**	**Average I =**	**x**	**Average I =**	**16.2**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	42.0	4.5	41.5	7.6	38.5	26.8	39.5	20.4	41.5	7.6
Lateral Line Scales	130.0	187.0	143.5	76.3	175.5	20.2	122.5	100.0	151.5	62.3	143.0	77.2
Gill Rakers	20.5	19.0	19.0	x	18.0	x	16.0	x	19.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	1.0	66.7	7.0	0.0	3.0	0.0	5.0	0.0	5.0	0.0
Pyloric Caeca	55.0	41.0	N/A	x	27.0	0.0	N/A	x	N/A	x	27.0	0.0
			Average I =	**49.1**	**Average I =**	**7.0**	**Average I =**	**42.3**	**Average I =**	**27.6**	**Average I =**	**21.2**

Population Average = 23.7

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Upper Right Fork - White River**
Water ID: II AK 190A

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	40.5	14.0	38.5	26.8	41.5	7.6	38.5	26.8	39.0	23.6
Lateral Line Scales	130.0	187.0	150.0	64.9	166.0	36.8	147.5	69.3	154.0	57.9	150.0	64.9
Gill Rakers	20.5	19.0	20.0	x	18.0	x	18.0	x	18.0	x	20.0	x
Basibranchial Teeth	0.0	3.0	4.0	0.0	6.0	0.0	3.0	0.0	5.0	0.0	4.0	0.0
Pyloric Caeca	55.0	41.0	39.0	0.0	26.0	0.0	30.0	0.0	33.0	0.0	30.0	0.0
			Average I =	**19.7**	**Average I =**	**15.9**	**Average I =**	**19.2**	**Average I =**	**21.2**	**Average I =**	**22.1**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	35.5	45.9	40.0	17.2	43.5	0.0	42.0	4.5	42.0	4.5
Lateral Line Scales	130.0	187.0	143.0	77.2	130.5	99.1	169.5	30.7	171.0	28.1	147.0	70.2
Gill Rakers	20.5	19.0	16.0	x	18.0	x	18.0	x	16.0	x	20.0	x
Basibranchial Teeth	0.0	3.0	5.0	0.0	11.0	0.0	4.0	0.0	7.0	0.0	5.0	0.0
Pyloric Caeca	55.0	41.0	30.0	0.0	35.0	0.0	27.0	0.0	36.0	0.0	30.0	0.0
			Average I =	**30.8**	**Average I =**	**29.1**	**Average I =**	**7.7**	**Average I =**	**8.1**	**Average I =**	**18.7**

Population Average = 19.2

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Range Creek**
Water ID: II AO

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	34.0	55.4	39.5	20.4	35.5	45.9	41.5	7.6	37.5	33.1
Lateral Line Scales	130.0	187.0	148.5	67.5	152.0	61.4	150.0	64.9	155.0	56.1	131.0	98.2
Gill Rakers	20.5	19.0	17.0	x	19.0	x	17.0	x	18.0	x	19.0	x
Basibranchial Teeth	0.0	3.0	6.0	0.0	6.0	0.0	7.0	0.0	2.0	33.3	2.0	33.3
Pyloric Caeca	55.0	41.0	30.0	0.0	28.0	0.0	32.0	0.0	31.0	0.0	31.0	0.0
			Average I =	**30.7**	**Average I =**	**20.4**	**Average I =**	**27.7**	**Average I =**	**24.3**	**Average I =**	**41.2**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	33.5	58.6	37.0	36.3	40.5	14.0	31.5	71.3	34.5	52.2
Lateral Line Scales	130.0	187.0	136.5	88.6	142.5	78.1	166.5	36.0	147.5	69.3	145.0	73.7
Gill Rakers	20.5	19.0	18.0	x	19.0	x	20.0	x	17.0	x	18.0	X
Basibranchial Teeth	0.0	3.0	5.0	0.0	5.0	0.0	4.0	0.0	1.0	66.7	0.0	100.0
Pyloric Caeca	55.0	41.0	37.0	0.0	30.0	0.0	27.0	0.0	30.0	0.0	28.0	0.0
			Average I =	**36.8**	**Average I =**	**28.6**	**Average I =**	**12.5**	**Average I =**	**51.8**	**Average I =**	**56.5**

Population Average = 33.1

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Milk Creek**
Water ID: II BE 020B 05

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	41.0	**10.8**	47.5	**0.0**	39.5	**20.4**	41.0	**10.8**	46.0	**0.0**
Lateral Line Scales	130.0	187.0	161.5	**44.7**	175.0	**21.1**	164.0	**40.4**	182.0	**8.8**	186.5	**0.9**
Gill Rakers	20.5	19.0	18.0	**x**	19.0	**x**	19.0	**x**	20.0	**x**	18.0	**x**
Basibranchial Teeth	0.0	3.0	6.0	**0.0**	6.0	**0.0**	8.0	**0.0**	4.0	**0.0**	15.0	**0.0**
Pyloric Caeca	55.0	41.0	31.0	**0.0**	36.0	**0.0**	39.0	**0.0**	31.0	**0.0**	42.0	**7.1**
			Average I =	**13.9**	**Average I =**	**5.3**	**Average I =**	**15.2**	**Average I =**	**4.9**	**Average I =**	**2.0**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	40.0	**17.2**	44.0	**0.0**	43.5	**0.0**	47.5	**0.0**	43.5	**0.0**
Lateral Line Scales	130.0	187.0	151.0	**63.2**	170.0	**29.8**	175.0	**21.1**	159.5	**48.2**	155.5	**55.3**
Gill Rakers	20.5	19.0	17.0	**x**	20.0	**x**	19.0	**x**	17.0	**x**	20.0	**x**
Basibranchial Teeth	0.0	3.0	5.0	**0.0**	4.0	**0.0**	4.0	**0.0**	4.0	**0.0**	6.0	**0.0**
Pyloric Caeca	55.0	41.0	35.0	**0.0**	32.0	**0.0**	34.0	**0.0**	34.0	**0.0**	34.0	**0.0**
			Average I =	**20.1**	**Average I =**	**7.5**	**Average I =**	**5.3**	**Average I =**	**12.1**	**Average I =**	**13.8**

Population Average = 10.0

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Timber Canyon Creek**
Water ID: II BE 060H 02

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	41.0	10.8	43.0	0.0	40.0	17.2	44.0	0.0	41.0	10.8
Lateral Line Scales	130.0	187.0	165.0	38.6	163.5	41.2	184.5	4.4	189.5	0.0	179.0	14.0
Gill Rakers	20.5	19.0	19.0	x	18.0	x	19.0	x	18.0	x	16.0	x
Basibranchial Teeth	0.0	3.0	4.0	0.0	0.0	100.0	3.0	0.0	5.0	0.0	6.0	0.0
Pyloric Caeca	55.0	41.0	39.0	0.0	39.0	0.0	41.0	0.0	34.0	0.0	29.0	0.0
			Average I =	**12.4**	**Average I =**	**35.3**	**Average I =**	**5.4**	**Average I =**	**0.0**	**Average I =**	**6.2**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	47.5	0.0	38.0	29.9	39.5	20.4	42.5	1.3	42.5	1.3
Lateral Line Scales	130.0	187.0	181.0	10.5	140.5	81.6	158.0	50.9	180.5	11.4	165.0	38.6
Gill Rakers	20.5	19.0	19.0	x	17.0	x	19.0	x	15.0	x	16.0	x
Basibranchial Teeth	0.0	3.0	1.0	66.7	2.0	33.3	4.0	0.0	3.0	0.0	4.0	0.0
Pyloric Caeca	55.0	41.0	35.0	0.0	33.0	0.0	32.0	0.0	31.0	0.0	25.0	0.0
			Average I =	**19.3**	**Average I =**	**36.2**	**Average I =**	**17.8**	**Average I =**	**3.2**	**Average I =**	**10.0**

Population Average = 14.6

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Dry Fork**
Water ID: II BH 010A 04

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	x	x	x	x	44.0	0.0	45.5	0.0	46.0	0.0
Lateral Line Scales	130.0	187.0	x	x	x	x	180.5	11.4	165.0	38.6	165.0	38.6
Gill Rakers	20.5	19.0	x	x	x	x	19.0	x	17.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	x	x	x	x	13.0	0.0	9.0	0.0	2.0	33.3
Pyloric Caeca	55.0	41.0	x	x	x	x	34.0	0.0	36.0	0.0	31.0	0.0
			Average I =	x	**Average I =**	x	**Average I =**	2.9	**Average I =**	9.6	**Average I =**	18.0

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	37.5	33.1	44.0	0.0	39.5	20.4	46.0	0.0	42.0	4.5
Lateral Line Scales	130.0	187.0	177.5	16.7	191.0	0.0	184.0	5.3	163.5	41.2	189.5	0.0
Gill Rakers	20.5	19.0	19.0	x	18.0	x	18.0	x	16.0	x	19.0	x
Basibranchial Teeth	0.0	3.0	3.0	0.0	5.0	0.0	11.0	0.0	6.0	0.0	9.0	0.0
Pyloric Caeca	55.0	41.0	36.0	0.0	40.0	0.0	41.0	0.0	35.0	0.0	40.0	0.0
			Average I =	12.4	**Average I =**	0.0	**Average I =**	6.4	**Average I =**	10.3	**Average I =**	1.1

Population Average = 7.6

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **South Fork - Brownie Creek**
Water ID: II BH 010B 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	42.0	4.5	44.0	0.0	44.0	0.0	45.0	0.0	45.0	0.0
Lateral Line Scales	130.0	187.0	178.0	15.8	171.0	28.1	159.0	49.1	172.0	26.3	181.0	10.5
Gill Rakers	20.5	19.0	19.0	x	20.0	x	20.0	x	20.0	x	20.0	x
Basibranchial Teeth	0.0	3.0	15.0	0.0	10.0	0.0	11.0	0.0	6.0	0.0	13.0	0.0
Pyloric Caeca	55.0	41.0	N/A	x	35.0	0.0	28.0	0.0	N/A	x	29.0	0.0
			Average I =	**6.7**	**Average I =**	**7.0**	**Average I =**	**12.3**	**Average I =**	**8.8**	**Average I =**	**2.6**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	47.0	0.0	46.0	0.0	44.0	0.0	45.0	0.0	48.0	0.0
Lateral Line Scales	130.0	187.0	185.0	3.5	170.0	29.8	169.0	31.6	168.0	33.3	164.0	40.4
Gill Rakers	20.5	19.0	17.0	x	20.0	x	19.0	x	20.0	x	21.0	x
Basibranchial Teeth	0.0	3.0	17.0	0.0	5.0	0.0	7.0	0.0	22.0	0.0	7.0	0.0
Pyloric Caeca	55.0	41.0	24.0	0.0	39.0	0.0	35.0	0.0	32.0	0.0	31.0	0.0
			Average I =	**0.9**	**Average I =**	**7.5**	**Average I =**	**7.9**	**Average I =**	**8.3**	**Average I =**	**10.1**

Population Average = 7.2

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Elk Creek**
Water ID: II CH 030A 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	43.5	0.0	46.5	0.0	41.5	7.6	41.0	10.8	44.5	0.0
Lateral Line Scales	130.0	187.0	179.5	13.2	178.0	15.8	171.5	27.2	162.0	43.9	170.5	28.9
Gill Rakers	20.5	19.0	x	x	x	x	x	x	x	x	x	x
Basibranchial Teeth	0.0	3.0	3.0	0.0	5.0	0.0	x	x	x	x	x	x
Pyloric Caeca	55.0	41.0	30.0	0.0	34.0	0.0	27.0	0.0	31.0	0.0	32.0	0.0
			Average I =	**3.3**	**Average I =**	**3.9**	**Average I =**	**11.6**	**Average I =**	**18.2**	**Average I =**	**9.6**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	B	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	42.0	4.5	40.5	14.0	42.5	1.3	40.0	17.2	40.5	14.0
Lateral Line Scales	130.0	187.0	164.0	40.4	150.0	64.9	157.5	51.8	152.0	61.4	172.5	25.4
Gill Rakers	20.5	19.0	x	x	x	x	x	x	x	x	x	x
Basibranchial Teeth	0.0	3.0	6.0	0.0	5.0	0.0	0.0	100.0	0.0	100.0	4.0	0.0
Pyloric Caeca	55.0	41.0	29.0	0.0	39.0	0.0	33.0	0.0	29.0	0.0	26.0	0.0
			Average I =	**11.2**	**Average I =**	**19.7**	**Average I =**	**38.3**	**Average I =**	**44.7**	**Average I =**	**9.9**

Population Average = 17.0

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Daggett Creek**
Water ID: II CI 030A 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	44.0	0.0	37.5	33.1	50.0	0.0	42.5	1.3	37.5	33.1
Lateral Line Scales	130.0	187.0	177.0	17.5	155.5	55.3	190.5	0.0	169.5	30.7	175.5	20.2
Gill Rakers	20.5	19.0	20.0	x	19.0	x	19.0	x	20.0	x	19.0	x
Basibranchial Teeth	0.0	3.0	9.0	0.0	0.0	100.0	4.0	0.0	1.0	66.7	0.0	100.0
Pyloric Caeca	55.0	41.0	35.0	0.0	31.0	0.0	31.0	0.0	29.0	0.0	41.0	0.0
			Average I =	**4.4**	**Average I =**	**47.1**	**Average I =**	**0.0**	**Average I =**	**24.7**	**Average I =**	**38.3**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	43.5	0.0	45.5	0.0	41.0	10.8	45.0	0.0	42.0	4.5
Lateral Line Scales	130.0	187.0	181.5	9.6	173.5	23.7	172.5	25.4	178.5	14.9	164.5	39.5
Gill Rakers	20.5	19.0	20.0	x	22.0	x	19.0	x	20.0	x	20.0	x
Basibranchial Teeth	0.0	3.0	5.0	0.0	6.0	0.0	4.0	0.0	12.0	0.0	8.0	0.0
Pyloric Caeca	55.0	41.0	35.0	0.0	29.0	0.0	29.0	0.0	38.0	0.0	33.0	0.0
			Average I =	**2.4**	**Average I =**	**5.9**	**Average I =**	**9.1**	**Average I =**	**3.7**	**Average I =**	**11.0**

Population Average = 14.7

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **West Fork - Smiths Fork (high)**
Water ID: II CK 020B

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	46.0	0.0	38.5	26.8	37.5	33.1	39.5	20.4	41.0	10.8
Lateral Line Scales	130.0	187.0	175.5	20.2	167.0	35.1	165.5	37.7	145.5	72.8	153.5	58.8
Gill Rakers	20.5	19.0	17.0	x	15.0	x	18.0	x	18.0	x	15.0	x
Basibranchial Teeth	0.0	3.0	5.0	0.0	4.0	0.0	6.0	0.0	4.0	0.0	4.0	0.0
Pyloric Caeca	55.0	41.0	30.0	0.0	35.0	0.0	31.0	0.0	34.0	0.0	30.0	0.0
			Average I =	**5.0**	**Average I =**	**15.5**	**Average I =**	**17.7**	**Average I =**	**23.3**	**Average I =**	**17.4**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	42.5	1.3	42.5	1.3	42.5	1.3	44.5	0.0	40.0	17.2
Lateral Line Scales	130.0	187.0	195.5	0.0	158.5	50.0	170.5	28.9	168.5	32.5	164.5	39.5
Gill Rakers	20.5	19.0	19.0	x	18.0	x	19.0	x	17.0	x	18.0	x
Basibranchial Teeth	0.0	3.0	0.0	100.0	6.0	0.0	5.0	0.0	2.0	33.3	10.0	0.0
Pyloric Caeca	55.0	41.0	32.0	0.0	28.0	0.0	30.0	0.0	29.0	0.0	34.0	0.0
			Average I =	**25.3**	**Average I =**	**12.8**	**Average I =**	**7.6**	**Average I =**	**16.4**	**Average I =**	**14.2**

Population Average = 15.5

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Steel Creek**
Water ID: II CK 020B 02

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	46.5	0.0	47.0	0.0	40.0	17.2	45.5	0.0	45.0	0.0
Lateral Line Scales	130.0	187.0	169.0	31.6	184.5	4.4	148.5	67.5	185.0	3.5	164.5	39.5
Gill Rakers	20.5	19.0	17.0	x	16.0	x	19.0	x	18.0	x	18.0	x
Basibranchial Teeth	0.0	3.0	5.0	0.0	1.0	66.7	3.0	0.0	2.0	33.3	2.0	33.3
Pyloric Caeca	55.0	41.0	38.0	0.0	32.0	0.0	29.0	0.0	35.0	0.0	33.0	0.0
			Average I =	**7.9**	**Average I =**	**17.8**	**Average I =**	**21.2**	**Average I =**	**9.2**	**Average I =**	**18.2**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	37.5	33.1	43.0	0.0	42.5	1.3	41.5	7.6	37.0	36.3
Lateral Line Scales	130.0	187.0	162.0	43.9	155.5	55.3	171.5	27.2	174.5	21.9	131.0	98.2
Gill Rakers	20.5	19.0	17.0	x	18.0	x	17.0	x	18.0	x	16.0	x
Basibranchial Teeth	0.0	3.0	0.0	100.0	3.0	0.0	0.0	100.0	9.0	0.0	2.0	33.3
Pyloric Caeca	55.0	41.0	28.0	0.0	29.0	0.0	36.0	0.0	30.0	0.0	28.0	0.0
			Average I =	**44.2**	**Average I =**	**13.8**	**Average I =**	**32.1**	**Average I =**	**7.4**	**Average I =**	**42.0**

Population Average = 21.4

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **East Fork - Blacks Fork (low)**
Water ID: II CK 040 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	46.5	0.0	42.5	1.3	41.5	7.6	44.0	0.0	47.5	0.0
Lateral Line Scales	130.0	187.0	197.5	0.0	170.5	28.9	166.5	36.0	159.0	49.1	205.0	0.0
Gill Rakers	20.5	19.0	19.0	x	20.0	x	18.0	x	18.0	x	19.0	x
Basibranchial Teeth	0.0	3.0	7.0	0.0	5.0	0.0	8.0	0.0	7.0	0.0	6.0	0.0
Pyloric Caeca	55.0	41.0	31.0	0.0	31.0	0.0	40.0	0.0	31.0	0.0	29.0	0.0
			Average I =	**0.0**	**Average I =**	**7.6**	**Average I =**	**10.9**	**Average I =**	**12.3**	**Average I =**	**0.0**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	43.5	0.0	41.5	7.6	43.0	0.0	42.5	1.3	47.0	0.0
Lateral Line Scales	130.0	187.0	186.0	1.8	163.5	41.2	187.0	0.0	142.0	78.9	178.0	15.8
Gill Rakers	20.5	19.0	19.0	x	20.0	x	20.0	x	20.0	x	18.0	x
Basibranchial Teeth	0.0	3.0	6.0	0.0	7.0	0.0	6.0	0.0	6.0	0.0	10.0	0.0
Pyloric Caeca	55.0	41.0	27.0	0.0	35.0	0.0	31.0	0.0	25.0	0.0	32.0	0.0
			Average I =	**0.4**	**Average I =**	**12.2**	**Average I =**	**0.0**	**Average I =**	**20.1**	**Average I =**	**3.9**

Population Average = 6.7

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **East Fork - Blacks Fork (high)**
Water ID: II CK 040 02

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	41.0	10.8	44.5	0.0	42.5	1.3	43.5	0.0	44.0	0.0
Lateral Line Scales	130.0	187.0	176.0	19.3	170.5	28.9	187.0	0.0	190.0	0.0	174.0	22.8
Gill Rakers	20.5	19.0	20.0	x	17.0	x	17.0	x	19.0	x	17.0	x
Basibranchial Teeth	0.0	3.0	6.0	0.0	7.0	0.0	4.0	0.0	9.0	0.0	9.0	0.0
Pyloric Caeca	55.0	41.0	35.0	0.0	27.0	0.0	28.0	0.0	38.0	0.0	40.0	0.0
			Average I =	**7.5**	**Average I =**	**7.2**	**Average I =**	**0.3**	**Average I =**	**0.0**	**Average I =**	**5.7**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	41.0	10.8	42.0	4.5	45.0	0.0	43.0	0.0	43.0	0.0
Lateral Line Scales	130.0	187.0	189.0	0.0	179.5	13.2	169.5	30.7	172.0	26.3	177.5	16.7
Gill Rakers	20.5	19.0	20.0	x	17.0	x	19.0	x	20.0	x	18.0	x
Basibranchial Teeth	0.0	3.0	6.0	0.0	5.0	0.0	8.0	0.0	5.0	0.0	6.0	0.0
Pyloric Caeca	55.0	41.0	29.0	0.0	24.0	0.0	33.0	0.0	34.0	0.0	33.0	0.0
			Average I =	**2.7**	**Average I =**	**4.4**	**Average I =**	**7.7**	**Average I =**	**6.6**	**Average I =**	**4.2**

Population Average = 4.6

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Little East Fork - Blacks Fork**
Water ID: II CK 040A 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	42.5	1.3	43.5	0.0	44.5	0.0	42.0	4.5	42.0	4.5
Lateral Line Scales	130.0	187.0	165.5	37.7	181.5	9.6	186.5	0.9	180.0	12.3	167.0	35.1
Gill Rakers	20.5	19.0	18.0	x	20.0	x	19.0	x	19.0	x	19.0	x
Basibranchial Teeth	0.0	3.0	7.0	0.0	1.0	66.7	6.0	0.0	5.0	0.0	4.0	0.0
Pyloric Caeca	55.0	41.0	33.0	0.0	34.0	0.0	41.0	0.0	31.0	0.0	38.0	0.0
			Average I =	**9.7**	**Average I =**	**19.1**	**Average I =**	**0.2**	**Average I =**	**4.2**	**Average I =**	**9.9**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	43.5	0.0	41.0	10.8	42.0	4.5	46.0	0.0	41.5	7.6
Lateral Line Scales	130.0	187.0	166.5	36.0	175.5	20.2	162.0	43.9	165.5	37.7	178.5	14.9
Gill Rakers	20.5	19.0	19.0	x	18.0	x	20.0	x	19.0	x	20.0	x
Basibranchial Teeth	0.0	3.0	5.0	0.0	7.0	0.0	8.0	0.0	2.0	33.3	6.0	0.0
Pyloric Caeca	55.0	41.0	27.0	0.0	31.0	0.0	40.0	0.0	38.0	0.0	30.0	0.0
			Average I =	**9.0**	**Average I =**	**7.8**	**Average I =**	**12.1**	**Average I =**	**17.8**	**Average I =**	**5.6**

Population Average = 9.5

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **West Fork - Blacks Fork (low)**
Water ID: II CK 050 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	43.0	0.0	42.0	4.5	41.5	7.6	42.5	1.3	45.0	0.0
Lateral Line Scales	130.0	187.0	155.0	56.1	152.0	61.4	170.5	28.9	150.5	64.0	163.0	42.1
Gill Rakers	20.5	19.0	20.0	x	19.0	x	17.0	x	21.0	x	19.0	x
Basibranchial Teeth	0.0	3.0	0.0	100.0	9.0	0.0	4.0	0.0	8.0	0.0	1.0	66.7
Pyloric Caeca	55.0	41.0	27.0	0.0	36.0	0.0	36.0	0.0	40.0	0.0	32.0	0.0
			Average I =	**39.0**	**Average I =**	**16.5**	**Average I =**	**9.1**	**Average I =**	**16.3**	**Average I =**	**27.2**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	40.5	14.0	42.0	4.5	42.5	1.3	38.5	26.8	39.5	20.4
Lateral Line Scales	130.0	187.0	190.0	0.0	172.0	26.3	173.0	24.6	142.0	78.9	171.0	28.1
Gill Rakers	20.5	19.0	19.0	x	19.0	x	20.0	x	19.0	x	18.0	x
Basibranchial Teeth	0.0	3.0	6.0	0.0	9.0	0.0	5.0	0.0	5.0	0.0	7.0	0.0
Pyloric Caeca	55.0	41.0	35.0	0.0	30.0	0.0	30.0	0.0	31.0	0.0	33.0	0.0
			Average I =	**3.5**	**Average I =**	**7.7**	**Average I =**	**6.5**	**Average I =**	**26.4**	**Average I =**	**12.1**

Population Average = 16.4

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **West Fork - Blacks Fork (high)**
Water ID: II CK 050 02

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	41.0	10.8	41.0	10.8	44.0	0.0	39.0	23.6	42.5	1.3
Lateral Line Scales	130.0	187.0	173.0	24.6	188.0	0.0	163.5	41.2	159.0	49.1	179.5	13.2
Gill Rakers	20.5	19.0	17.0	x	20.0	x	22.0	x	20.0	x	18.0	x
Basibranchial Teeth	0.0	3.0	6.0	0.0	1.0	66.7	9.0	0.0	5.0	0.0	0.0	100.0
Pyloric Caeca	55.0	41.0	31.0	0.0	39.0	0.0	33.0	0.0	31.0	0.0	35.0	0.0
			Average I =	**8.8**	**Average I =**	**19.4**	**Average I =**	**10.3**	**Average I =**	**18.2**	**Average I =**	**28.6**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	44.5	0.0	43.0	0.0	40.0	17.2	37.5	33.1	46.0	0.0
Lateral Line Scales	130.0	187.0	208.0	0.0	172.5	25.4	177.0	17.5	185.5	2.6	186.5	0.9
Gill Rakers	20.5	19.0	21.0	x	21.0	x	20.0	x	20.0	x	21.0	x
Basibranchial Teeth	0.0	3.0	9.0	0.0	4.0	0.0	7.0	0.0	3.0	0.0	4.0	0.0
Pyloric Caeca	55.0	41.0	28.0	0.0	33.0	0.0	36.0	0.0	34.0	0.0	30.0	0.0
			Average I =	**0.0**	**Average I =**	**6.4**	**Average I =**	**8.7**	**Average I =**	**8.9**	**Average I =**	**0.2**

Population Average = 11.0

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Middle Fork - Blacks Fork**
Water ID: II CK 050A

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	45.5	0.0	42.5	1.3	42.0	4.5	46.5	0.0	43.5	0.0
Lateral Line Scales	130.0	187.0	150.0	64.9	180.5	11.4	180.5	11.4	177.0	17.5	173.5	23.7
Gill Rakers	20.5	19.0	20.0	x	20.0	x	20.0	x	20.0	x	19.0	x
Basibranchial Teeth	0.0	3.0	0.0	100.0	10.0	0.0	7.0	0.0	4.0	0.0	8.0	0.0
Pyloric Caeca	55.0	41.0	30.0	0.0	32.0	0.0	33.0	0.0	37.0	0.0	26.0	0.0
			Average I =	**41.2**	**Average I =**	**3.2**	**Average I =**	**4.0**	**Average I =**	**4.4**	**Average I =**	**5.9**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	39.0	23.6	45.0	0.0	42.5	1.3	43.0	0.0	39.0	23.6
Lateral Line Scales	130.0	187.0	168.5	32.5	153.5	58.8	177.5	16.7	176.5	18.4	183.5	6.1
Gill Rakers	20.5	19.0	18.0	x	19.0	x	19.0	x	21.0	x	21.0	x
Basibranchial Teeth	0.0	3.0	5.0	0.0	5.0	0.0	7.0	0.0	5.0	0.0	5.0	0.0
Pyloric Caeca	55.0	41.0	34.0	0.0	31.0	0.0	33.0	0.0	34.0	0.0	30.0	0.0
			Average I =	**14.0**	**Average I =**	**14.7**	**Average I =**	**4.5**	**Average I =**	**4.6**	**Average I =**	**7.4**

Population Average = 10.4

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **Brush Creek**
Water ID: II CK 050B 01

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	41.0	**10.8**	43.0	**0.0**	41.0	**10.8**	43.5	**0.0**	42.0	**4.5**
Lateral Line Scales	130.0	187.0	171.5	**27.2**	177.5	**16.7**	155.0	**56.1**	177.0	**17.5**	175.5	**20.2**
Gill Rakers	20.5	19.0	17.0	**x**	17.0	**x**	20.0	**x**	18.0	**x**	19.0	**x**
Basibranchial Teeth	0.0	3.0	3.0	**0.0**	5.0	**0.0**	5.0	**0.0**	20.0	**0.0**	5.0	**0.0**
Pyloric Caeca	55.0	41.0	33.0	**0.0**	35.0	**0.0**	39.0	**0.0**	40.0	**0.0**	34.0	**0.0**
			Average I =	**9.5**	**Average I =**	**4.2**	**Average I =**	**16.7**	**Average I =**	**4.4**	**Average I =**	**6.2**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	39.0	**23.6**	41.5	**7.6**	43.5	**0.0**	41.5	**7.6**	41.5	**7.6**
Lateral Line Scales	130.0	187.0	150.5	**64.0**	173.5	**23.7**	165.5	**37.7**	183.0	**7.0**	143.5	**76.3**
Gill Rakers	20.5	19.0	19.0	**x**	18.0	**x**	19.0	**x**	17.0	**x**	20.0	**x**
Basibranchial Teeth	0.0	3.0	7.0	**0.0**	4.0	**0.0**	7.0	**0.0**	8.0	**0.0**	9.0	**0.0**
Pyloric Caeca	55.0	41.0	35.0	**0.0**	35.0	**0.0**	34.0	**0.0**	40.0	**0.0**	37.0	**0.0**
			Average I =	**21.9**	**Average I =**	**7.8**	**Average I =**	**9.4**	**Average I =**	**3.7**	**Average I =**	**21.0**

Population Average = 10.5

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid

Hybrid Index = 100 *[(U-C)/(R-C)]

Rainbow X Colorado River Cutthroat Trout Analysis

Population: **West Fork - Boulder Creek**
Water ID: I AJ 110D

Meristic ID. Numbers

	Species average		Ind # 1		Ind # 2		Ind # 3		Ind # 4		Ind # 5	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	41.0	10.8	43.0	0.0	46.0	0.0	41.5	7.6	39.5	20.4
Lateral Line Scales	130.0	187.0	177.0	17.5	177.5	16.7	169.5	30.7	169.0	31.6	165.0	38.6
Gill Rakers	20.5	19.0	0.0	x	0.0	x	0.0	x	0.0	x	0.0	x
Basibranchial Teeth	0.0	3.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Pyloric Caeca	55.0	41.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Average I =	**32.1**	**Average I =**	**29.2**	**Average I =**	**7.7**	**Average I =**	**9.8**	**Average I =**	**39.7**

Meristic ID. Numbers

	Species average		Ind # 6		Ind # 7		Ind # 8		Ind # 9		Ind # 10	
Character	R2	C	U	I	U	I	U	I	U	I	U	I
Scales Above Lat. Line	27.0	42.7	45.5	0.0	43.0	0.0	42.5	1.3	40.0	17.2	41.5	7.6
Lateral Line Scales	130.0	187.0	153.5	58.8	172.5	25.4	173.0	24.6	168.5	32.5	157.0	52.6
Gill Rakers	20.5	19.0	0.0	x	0.0	x	0.0	x	0.0	x	0.0	x
Basibranchial Teeth	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pyloric Caeca	55.0	41.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			Average I =	**14.7**	**Average I =**	**6.4**	**Average I =**	**6.5**	**Average I =**	**12.4**	**Average I =**	**15.1**

Population Average = 17.3

0 = Colorado River
100 = Rainbow
30 - 70 = Hybrid