Composite drawings of the two char species. The top drawing is a Dolly Varden and the bottom is a bull trout.

QUALITATIVE POSSIBILITIES FOR IDENTIFICATION

BULL TROUT
- larger, broader, flatter heads with more pointed snouts (and body rises quickly on dorsal surface after head)
- bodies are more slender and ventrally flattened
- somewhat longer upper jaws which appear to curve downward at their posterior ends
- larger and more separated spots on dorsal surfaces, particularly when their backs are viewed from above
  - bull trout with parr marks do not have them join or almost join across top of their bodies’ dorsal surface

DOLLY VARDEN
- heads which do not dominate their profiles and are more blunt.
- bodies are more oval and trout-like
- somewhat shorter upper jaws which are more straight
- smaller and more crowded spots on dorsal surfaces, particularly when their backs are viewed from above
- a few specimens have had some vermiculations on their dorsal surface and this has not been seen in bull trout
- Dolly Varden with parr marks have them join or almost join across top of their bodies’ dorsal surface
The measurements should be done in centimetres to the nearest millimetre.

**Identification Formula:** \[ \text{Identification Formula: } (0.629 \times \text{branchiostegal ray number} + 0.178 \times \text{total anal fin ray number} + 37.310 \times \left( \frac{\text{total upper jaw length}}{\text{standard length}} \right) - 21.8 \]

**Identification Formula Interpretation:** char < 0 are Dolly Varden and > 0 are bull trout.

**FIGURE 2.** Boxplots of the three best characters (A-C) and their multivariate combination (D) for discriminating bull trout and Dolly Varden (n = 1580). The horizontal line drawn through each box is each species' data median, and the vertical lines extending from them encompass their respective data ranges with statistical outliers being plotted as distinct points. Outliers are designated for values 1.5 X inter-quartile range. Nonoverlapping notches between each species' box in each set (A-D) indicate a statistical difference at a rough 5% significance level.