Cruise: 1978-90

Chief Scientist: Grant Gardner

Ship: Pandora II

Region: BC Inlets including Bute Inlet, Rivers Inlet, Douglas Channel & Portland Inlet

No project name known

Dates: March 11, 1978 to March 15, 1978 (likely longer but there were CTDs on those dates.)

Data were prepared for the archives by: Germaine Gatien

Date of Preparation of file for archive: 5 December 2014

**Summary of Original Data Available**

These data were originally collected by the Ocean Ecology group with the cruise number 78/2. When the data were prepared for the OSD Data Archive the cruise name was changed to 1978-90 because cruise number 1978-02 was already assigned to another cruise in the archive.

The data were available in a spreadsheet that included position, time, station name, depth, bottle #, 2 readings each for the left, middle and right thermometers , invivo fluorescence, Fluorescence scale, salinity, salinity analyst comments and extracted chlorophyll. At the surface there was usually only the middle thermometers, and below that usually left and right only, but sometimes left and middle or only left.

The hydrodata sheets including temperature, salinity, fluorescence and fluorescence scale were found for only the first 2 stations. No other original records were found. The 2 sheets found agree with the spreadsheet entries.

**PROCESSING STEPS**

The “invivo fluorescence” was compared with the extracted CHL. There is also a column with fluorescence scale. If the invivo values are plotted against CHL there is a lot of scatter and the invivo values are much higher than CHL. But if the invivo values are divided by the scale, then there is a somewhat tighter fit against CHL. When all bottles with a fluorescence reading are included the fluorescence is , with the invivo/scale values being about 72% of CHL, on average. The average ratio of (invivo/scale)/CHL for bottles with 0.2<CHL<.8 is ~1. So the value In Vivo / Scale was entered as Fluorescence:URU channel. See file Fluorescence\_Study.xlsx for details.

Temperature was determined by finding the median of the 4 readings except where there was a standard deviation of at least 0.1. In those cases the results were examined to see if some values looked clearly out of line. Where there are only 2 values, they were averaged and if there was only 1 that was used it. Problems were found for the following:

* Cast 1, 100m – the two right thermometers had equal values and they look reasonable. The two left readings differ from each other and from the right thermometer readings. So the right thermometer values were used.
* Cast #4, 150m – again the two left thermometers are out of line in the profile and disagree with the two right thermometers which give equal values. The right thermometers were used.
* Cast #7, 30m and 50m – The left thermometer readings differ from the middle readings and are out of line in profile. The middle readings were used.
* Cast #12 200m - Again the two left thermometers are out of line in the profile and disagree with the two right thermometers which give equal values. The right thermometers were used.
* Cast #13, 150m – The left thermometer readings differ from the middle readings and are out of line in profile, so the middle readings were used.

While the left thermometer readings are generally the ones out of line, they were sometimes higher and sometimes lower than the other readings.

Some reformatting and simplification was applied to the spreadsheet data. Conversion did not go well until a 6-line header was added, entering N in the top row for data that are to go in the headers only except for time and date. Those entries need to go into each line in order to allow the start time to be calculated. Unfortunately, that also led to a stop time appearing which is inappropriate and will be removed later. After a little manipulation the spreadsheet was converted to BOT files.

CLEAN was used to derive a Start and Stop Time.

REMOVE was used to remove TIME and DATE as channels.

Head Edit was used to add comments and to remove the END Time.

The final files are named \*CHE.

