

Ecological Data Review

March-May 2006

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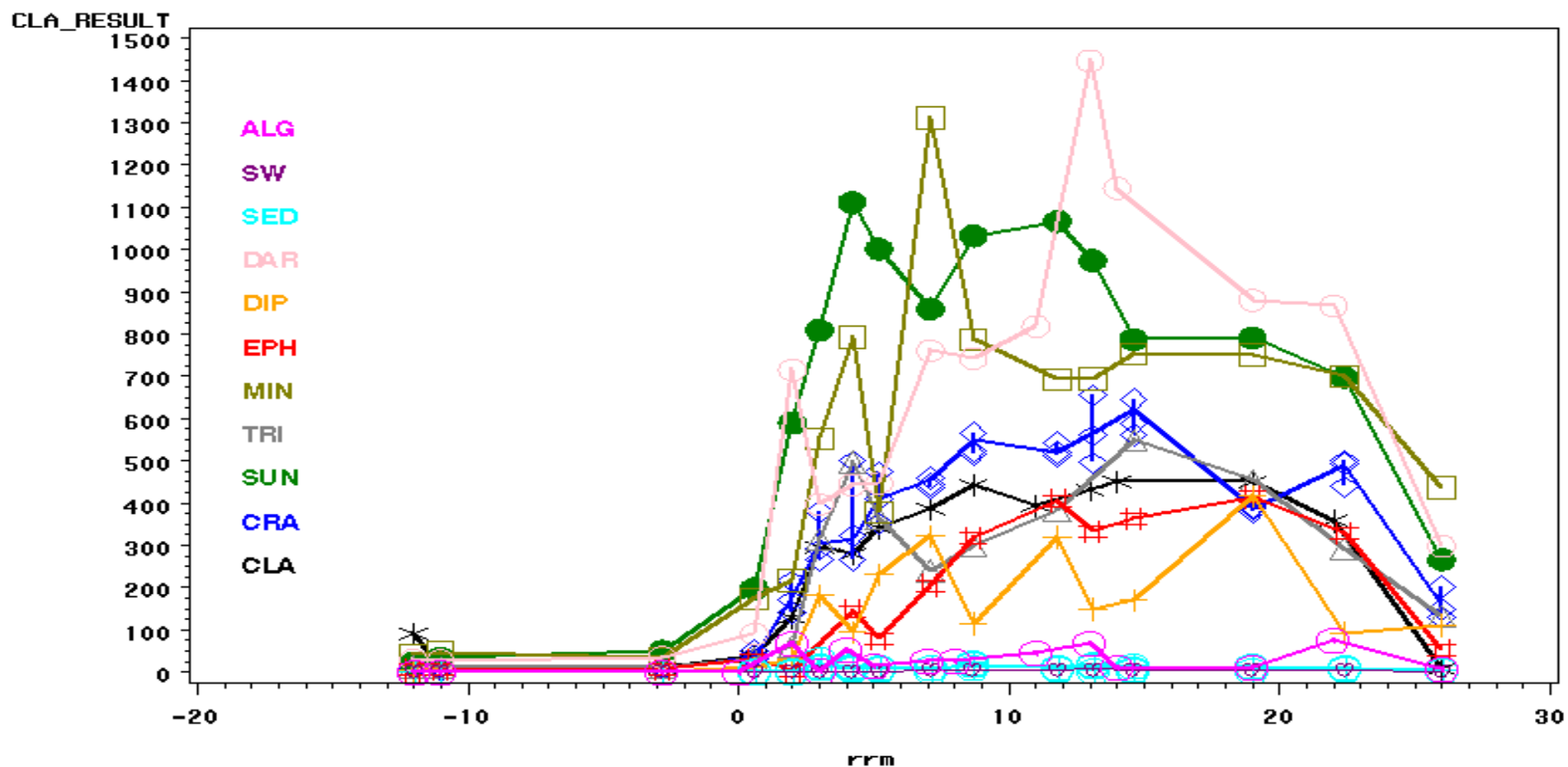
Issues of Statistical Interest

- **Are surface water, sediment, plant and animal tissue measurements at the same location and time on the same analyte correlated?**
- **Are some surface water or sediment analytes correlated with Hg or MHg at same location and time?**

Correlations Among “Species” for Same Analyte

Analyte Results

month=5 ANALYTE=METHYL MERCURY FILTERED=T PREPMTHD=NS PREPREP=NS



Correlations Among “Species” for Same Analyte

- *Clam, crayfish, trichoptera ,
ephemeroptera, diptera, sunfish, darter,
minnow, sediment, surface water*
measurements of Hg and MHg at same
location and time are all significantly,
highly positively correlated
 - *Algae* Hg and MHg is not significantly
correlated with any of the others
 - Only May data can be so analyzed

Correlations Among “Species” for Same Analyte

- **If these correlations hold, it should not be necessary to continue sampling all species**
 - **Need seasonality, storm info before eliminating species**

Correlations among Analytes at same Time and Location

- **Hg sediment samples highly correlated with cadmium, chromium, copper**
- **MHg sediment samples moderately correlated with cadmium, copper**

Correlations among Analytes at same Time and Location

- **Hg surface water samples highly correlated with chromium, TSS**
 - Moderately correlated with copper
- **MHg surface water samples highly correlated with cadmium, chromium, copper, TSS**
 - Moderately correlated with lead

Chemical Measurements

- **Measurements of analytes other than Hg, MHg, taken primarily at RRM 0.6, 3, 8.7, and 26 plus control locations**
 - **Little replication**
 - **Meaningful correlations consequently difficult to determine**