Practical Stats Newsletter for January 2010

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1. Upcoming Courses
We still have openings for our two courses in February 2010:

Time Series and Forecasting (for frequently-collected data)
Golden, Colorado Feb. 16-17, 2010.

Nondetects And Data Analysis
Golden, Colorado Feb 18-19, 2010.

In late summer to fall 2010 we will offer our Applied Environmental Statistics (AES) class, and our Untangling Multivariate Relationships (UMR) class. We'll probably have a second Nondetects And Data Analysis (NADA) class offering, as well. But if you're interested in methods for frequently-collected (5, 15 minute etc. interval) data from remote-sensing or electronic monitors, or in forecasting into the future, hurry up and register for our February Time Series and Forecasting (TSF) course.

You can always find our complete course listing at
http://www.practicalstats.com/new_classes/classes.html

2. Comprehensive, free stat software
If you've gotten our newsletter since 2008 you've seen our reviews of statistical software under $600 – Aug and Sept 2008 newsletters:
http://www.practicalstats.com/news/news/bydate_files/08Aug_StatReview1.pdf
http://www.practicalstats.com/news/news/bydate_files/08Sept_StatReview2.pdf
Only one of the packages was sufficient for computing the procedures we cover in our foundational Applied Environmental Statistics course. Only this one package could do some but certainly not all of the procedures we teach in our TSF, NADA and UMR classes. At $599 it's a worthwhile competitor to the big names in statistics software.

If you're a long-time reader you might remember our November 2007 review of commercial stat software, complaining of their cost. And you might remember our summer 2006 newsletter on the free R statistical software system.
http://www.practicalstats.com/news/news/bydate_files/06Summer_R.pdf

http://www.practicalstats.com/news/news/bydate_files/07Nov_Sftwr.pdf

R is the most comprehensive statistical package in the world. When new methods are developed in statistics, the author is almost required to release an R library that performs the new method. So soon after the Nondetects And Data Analysis book came out, http://www.amazon.com/Nondetects-Data-Analysis-Statistics-Environmental/dp/0471671738/ref=sr_1_2?ie=UTF8&s=books&qid=1205031974&sr=8-2 the NADA for R package was released so that people could compute these methods without having to pay large sums of money. The use of R has grown across the world, and it is often the software of choice these days in university statistics classes. Why? Because its free. And in our stagnant economy, there's been great interest in using R by government agencies at all levels. Why? Because its free.

If R is so comprehensive, and its free, why doesn't everyone use it? R employs a command-line interface that some people find difficult to use. If you've done SAS programming, the effort is similar. But given R's comprehensive list of features and its continued availability and upgrades, we've begun using it in our Time Series, NADA and AES courses. We'll probably move to use it in our Multivariate class as well.

To make R easier for the novice user, John Fox of McMaster University has developed a remarkable package called R Commander (Rcmdr). R Commander provides a GUI front-end to R similar to that found in most commercial software packages. We now use Rcmdr to teach our Applied Environmental Statistics course. It does almost all that we present in AES, so would satisfy the needs of many environmental scientists for whom statistics is 'not their first love'. If you haven't yet tried R, try using the Rcmdr interface and see if R becomes easier to understand. Rcmdr prints the R commands that underlie each menu operation, so you can quickly become familiar with the R language by using Rcmdr.

Or take one of our courses and see how R can solve your statistical computing needs, especially if your agency is on a tight budget. In our AES class we get people up and using R, through Rcmdr, within minutes. For the cost of one software license that provides no knowledge or understanding, you can take one or two of our courses and get both the statistics software and the knowledge to use it at your desk, on your data. It is hard to convince the people with the purse strings, we know, but investment in training employees is one of the best returns on the dollar for any organization today.

For more information on R Commander, see
http://socserv.mcmaster.ca/jfox/Misc/Rcmdr/
http://en.wikipedia.org/wiki/R_Commander

3 Let others know about this newsletter

If you've gotten helpful hints on environmental statistics from this newsletter, let others know about it. So far it is free of advertising (except ours, of course). It's the primary communication vehicle for Practical Stats out to interested scientists, but it does cost us time and talent that could be used elsewhere. We are exploring other options of communication such as on LinkedIn. I

doubt we'll be tweeting our information – we don't have new info at 15-minute intervals, after all. Keep our interest in this newsletter going by encouraging others to sign up. If there's increasing interest as shown by increasing subscribers, the interest on our end will continue.

'Til next time,

Practical Stats (Dennis Helsel)
-- Make sense of your data