

Odds And Ends Before Jumping Into the Nitty-Gritty

Sourcing Some Functions

Prior to learning how to analyze data with non-detects in R, we will download some functions that I wrote to make doing data analysis easier. These functions are saved in a *script* file, so we can use the `source()` function to read them in. The functions are saved for you in a file called *GuidanceFunctions.R*.

```
>source("h:/GuidanceFunctions.R")
```

Sourcing Some Functions

If the functions have been sourced correctly, you should be able to find them when listing the objects in your workspace.

```
>ls()
```

```
[1] "DiffCI"          "PairDiffCI"    "calcP"  
[4] "denominator"    "makePaired"    "numerator"  
[7] "signs"
```

Loading Libraries/Packages In R

At the beginning of the day we discussed how one of the advantages of R is the fact that it has many add on packages for specific data analysis situations. One of these add-on packages is called NADA (Non-detects And Data Analysis), and it is mainly functions from this package that we will be using to analyze our water quality data containing censoring.

Libraries/Packages

To download and use the NADA library in R, the following instructions can be used:

1. Click on the Packages menu.
2. Select the option *Install Package(s)*.
3. Select a *mirror* to use when downloading (Canada(BC)) and click okay.
4. Select the NADA package from the packages menu.
5. Type `>library(NADA)` in the R console.

Choose your own adventure workshop component!

Try typing `>?Cen`. If the HTML help pops up talking about a function used to create a censored data object, stop here! You have successfully rescued the Princess, and the Kingdom is at peace:)

Otherwise....

The Kingdom and Princess are still in peril, and you will need to follow the instructions on the next slide to save the day!!

Tricks to Load Libraries

1. Create a folder where you want to store libraries in a directory that you have user access(eg.C:/username/R/libs).
2. Define the environment variable R_LIBS. You can do this in System Information→Advanced→Environment Variables. This environment variable should be given the pathway to the folder you created in step 1
3. Now try typing `>?Cen` to see if you have successfully rescued the Princess!!

Odds And Ends Complete!!