Assignment

derekogle.com/NCMTH107/modules/CE/RFilter_CE1

Coarse Woody Debris

Coarse woody debris (CWD) in lakes is important for aquatic systems as it provides refuge for young fish and invertebrates as well as providing areas for periphyton to grow. Coarse woody debris was studied in the north basin of Allequash Lake in northern Wisconsin. Among other things, the researchers recorded the diameter (cm) of CWD found in the lake littoral zone and a qualitative measure of the degree to which the location where the CWD was found was exposed to winds (low or medium). The observed data (sampled from information on the North Temperate Lakes Long Term Ecological Research website) are below.

diameter 21 15 18 23 18 17 19 17 15 22 16 20 16 17 18 15 16 24 24 23
exposure med med med low med low med med med med med med low med med med med low med med

diameter 18 17 19 17 17 15 17 18 19 31 25 15 17 34 16 18 19 15 16 15
exposure med med med med med med med med low med med med med low low med med med low med

diameter 20 23 34 20 17 20 15 34 18 24
exposure med med low med med med med med med med

Use this information to answer the following questions. Enter these data into a CSV file, load into R, and use R functions to answer all questions below (use R even though most questions can be answered by observing these simple data from the table above). For each question below indicate the number of individuals in the resultant data.frame. **Make sure to show the structure of the resultant data.frame in your R Code and Results section**.

1. Create a data.frame that contains only low-exposure sites.
2. Use a different (from above) method to create a data.frame that contains only low-exposure sites.
3. Create a data.frame that contains only sites where the CWD diameter was greater than 20 cm.
4. Create a data.frame that contains only sites that were low-exposure and the CWD diameter was greater than 20 cm.
5. Create a data.frame that contains only sites where the CWD diameter was between 20 and 30 cm.