BOSQUE ECOSYSTEM MONITORING PROGRAM

Weather Station Directions

Weather Station Background

Two rain gauges, one located in an open area and one under a forest canopy, are used to determine the effect of canopy cover intercepting precipitation before it hits the ground. Water is the most important factor in the region we live in; it keeps the Rio Grande valley functioning. We get 9-14 inches of rainfall per year.

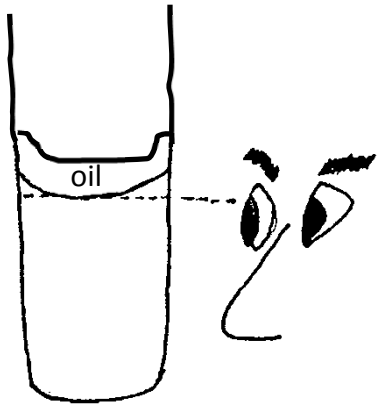
Temperature is a key environmental factor; it limits animal and plant activity and impacts evaporation and the water cycle. Temperature data can be looked at for its own sake and can be correlated with other data such as surface active arthropod activity.

Rain Gauge Monitoring Materials

- vegetable oil
- monthly monitoring data sheet, clipboard and pen

Precipitation Monitoring Directions

Locate rain gauges. Note if the gauge is the open or canopy one. Reading the gauge at eye level (see image), determine the amount of precipitation. Looking at the two numbers above and below the water level, count the number of dashes and determine the interval that each dash represents. Be sure to only record the water (NOT oil) level. Record in both inches and millimeters on data sheet (see image).



Empty the entire contents of the rain gauge and clean it out the best you can. Pour between 0.05 and 0.1 in of oil in the rain gauge and place it back in its stand. Record the amount of oil in the rain gauge in either mm or in on your data sheet. Find the other rain gauge and repeat instructions.

Bosque Ecosystem Monitoring Program: **Monthly Monitoring**

Site Name:_____ Collection Date: _____

Data Collected by:_____

Comments:

Groundwater Monitoring

Well	Depth from top of well to water table	Comments
North		
East		
Center		
South		
West		
Nearby Ditch		

Precipitation Monitoring

Gauge	Net amount of precipitation (less oil)		Amount of oil added	Comments
Canopy	(mm)	(inches)		
Open	(mm)	(inches)		

Litterfall Collection

Tub	Collected?	Comments (note if tubs were moved, turned over, etc.)
A		
B		
C		
D		
E		
F		
G		
H		
I		
J		

White copy (original) to be turned in to: Kim Eichhorst, UNM, Department of Biology, Albuquerque, NM 87131
Yellow copy to be turned in to Site Representative
Pink copy to be retained in collector's files

Data entry: file:_____ entry by: _____ date:_____

Temperature Logger Monitoring Materials

- laptop computer with logger software
- cable to connect logger to laptop
- trowel or shovel to dig out buried data loggers
- paper indicating locations of data loggers at each site

Temperature Logger Monitoring Directions

Using the paper that indicates locations of each logger, find temperature loggers one at a time. Use trowel or shovel to dig loggers that are in the dirt.

Connect logger to laptop. Follow software directions and download data. Write down the information needed about the file name and logger location. Follow software directions and reset data logger. Replace data logger in container. Be sure that casing is sealed correctly.

Replace data logger either in tree or in the soil. Be careful to put logger back exactly in place, or if move it, ***precisely*** record its new location.