

BOSQUE ECOSYSTEM MONITORING PROGRAM

Litterfall Monitoring Directions

Litterfall Monitoring Background

All 10 litterfall tubs remain in the field at the same location for continuous collection month to month, year to year to determine differences in plant production, species composition or amounts of reproductive parts or wood at each site. Assessing litterfall can help to quantify gross measures of forest productivity, ecosystem health and native versus exotic species composition.

Litterfall Monitoring Materials

- 10 lunch-size paper bags
- Sharpie
- grocery bag to hold paper bags
- monthly monitoring data sheet, clipboard and pen

Litterfall Monitoring Directions

Locate tubs using the site map. At each tub, empty all contents into the associated bag labeled with the site name, date of collection (include the year!) and tub letter.

When there is a stick lying across the tub, break off ends that are outside of the tub area and include only portions lying across the tub. If there is a large stick, mark the edges of where it lies across your tub using a Sharpie, noting what is in versus out of the tub. Label the stick with the site name, tub letter and collection date.

Record on data form that each tub was emptied and note if any tubs were unusual (turned upside down, missing, etc.)

Dry bags with samples in an oven at 60°C for at least 48 hours. Remove from oven and seal in plastic bags until ready to process.

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
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: _____

Litterfall Lab Materials

- litterfall data sheet
- dried leaf samples
- top load balances
- weighing dishes (aluminum pie pans/plastic bowls and plates)
- forceps
- pencil
- vegetation vouchers

Litterfall Lab Directions

On the data sheet, write the site name, collection date on the bags and your name in the space "lab work done by." Processing bags A to J is the best procedure to follow to reduce the chance of writing data in the wrong location.

Place a large weighing dish or pie plate onto the scale and zero out the balance. Empty contents of bag A onto that plate and record total weight in grams.

Using forceps, sort the sample into the categories listed on the data sheet. Not all species will be present at each

BOSQUE ECOSYSTEM MONITORING PROGRAM

Litterfall Monitoring Directions

site. Little bits and pieces of leaves must be accounted for. Determine the species of these pieces and add them to the plastic plate that contains those leaves.

Place an empty pie plate or plastic plate onto the scale and zero it out again. Empty the individual species onto that plate and write that weight in the correct location on your data sheet. Make sure the scale reads 0.0 each time before dumping leaves, reproductive parts or wood onto the plate.

Record samples that have a scale weight of 0.0 g as <0.1 g. Write a dash in the areas where no plants were present. Check your math! Is the sum of the parts within 0.3 g of the total weight? If not, reweigh everything.

Repeat steps above for each of the ten samples.



Site Name: _____ Collection Date: _____

Field Collection by: _____ Labwork by: _____

Species	A	B	C	D	E	F	G	H	I	J
Cottonwood										
Willow spp.										
Seepwillow										
NM olive										
Thicket Creeper										
Indigo bush										
Saltcedar										
Russian olive										
Elm										
Mulberry										
Other Plant Leaves										
Cottonwood										
Willow										
Russian olive										
Saltcedar										
Other Repro. Parts										
WOOD										
Total Weight										

N
L
a
t
i
v
e

E
x
o
t
i
c

R
e
c
o
r
d
e
d

Bosque Ecosystem Monitoring Program: Leaf Litter Lab

Lab Directions: Throw out all non-vegetation materials (*i.e. hair, scat, dirt, insects*) BEFORE beginning.
Record measurements in grams (g). Species that have a scale reading of 0.0g should be recorded as <0.1g.
TARE your scale EVERY time!
The difference between the sum of weights and total weight should be 0.3g or less. If it is more, reweigh everything.

Data entry: File: _____ Entry by: _____ Date: _____