

Revision Date: May 1, 2008

LBA-ECO CD-10 Forest Litter Data for km 67 Tower Site, Tapajos National Forest

Summary:

This data set contains a single text file which reports litter type and mass in the old-growth upland forest at the Pará Western (Santarém) - km 67, Primary Forest Tower Site. This site is in the Tapajos National Forest located in north central Brazil. Measurements extend from July 2000 through June 2005.

Litter collection began in July 2000 using 40 circular, mesh screen traps (0.43 m diameter, 0.156 m²) randomly located throughout the 19.75-ha tree-survey area (Rice et al., 2004). Approximately every 14 days, litter was collected, sorted, oven dried at 60 degrees C, and weighed. The litterfall from each trap was sorted into (1) leaves, (2) fruits and flowers, (3) wood , <2 cm diameter, and (4) miscellaneous. Data values reported are the mean and standard error of the 40 mass measurements of each of the litter components and the combined total, that have been converted to the reporting units of Mg/ha/yr.

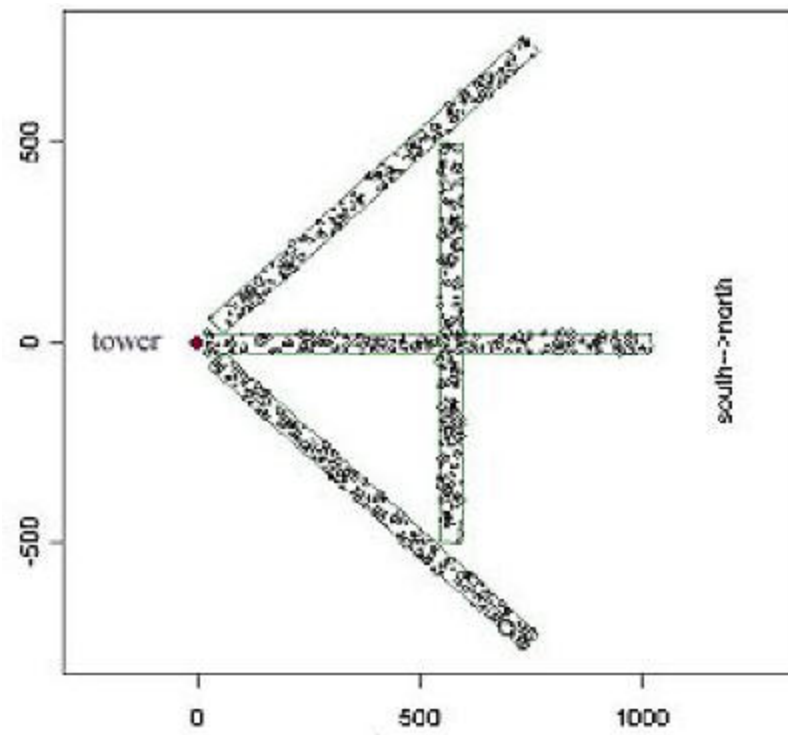


Figure 1. Sampling transect locations relative to tower.



Figure 2. Typical forest conditions surrounding the tower site.

Data Citation:

Cite this data set as follows:

Rice, A.H., E. P. Hammond, S. R. Saleska, L. Hutyyra, M. Palace, M. Keller, P. B. de Carmargo, K. Portilho, D. Marques and S. C. Wofsy. 2008. LBA-ECO CD-10 Forest Litter Data for km 67 Tower Site, Tapajos National Forest. Data set. Available on-line [<http://www.daac.ornl.gov>] from Oak Ridge National Laboratory Distributed Active Archive Center, Oak Ridge, Tennessee, U.S.A. doi:10.3334/ORNLDAAAC/862

Implementation of the LBA Data and Publication Policy by Data Users:

The LBA Data and Publication Policy [http://daac.ornl.gov/LBA/lba_data_policy.html] is in effect for a period of five (5) years from the date of archiving and should be followed by data users who have obtained LBA data sets from the ORNL DAAC. Users who download LBA data in the five years after data have been archived must contact the investigators who collected the data, per provisions 6 and 7 in the Policy.

This data set was archived in May of 2008. Users who download the data between May 2008 and April 2013 must comply with the LBA Data and Publication Policy.

Data users should use the Investigator contact information in this document to communicate with the data provider. Alternatively, the LBA Web Site [<http://lba.inpa.gov.br/lba/>] in Brazil will have current contact information.

Data users should use the Data Set Citation and other applicable references provided in this document to acknowledge use of the data.

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1. Data Set Overview:

Project: LBA (Large-Scale Biosphere-Atmosphere Experiment in the Amazon)

Activity: LBA-ECO

LBA Science Component: Carbon Dynamics

Team ID: CD-10 (Wofsy / Kirchhoff)

The investigators were Hutyra, Lucy; Pyle, Elizabeth Hammond; Wofsy, Steven C. and Saleska, Scott Reid . You may contact Hutyra, Lucy (lrhutyra@u.washington.edu)

LBA Data Set Inventory ID: CD10_Litter_Tapajos

Forest litterfall measurements at the km67 flux tower site, Tapajos National Forest, Santarem, Para, Brazil

These data may be updated or reprocessed from time to time, and it is the user's responsibility to insure that you have the most recent version of the data. For the latest version, please see the following web site: Harvard University, LBA Web Page (<http://www-as.harvard.edu/data/lbadata.html>)

Related Data Sets:

LBA-ECO CD-10 Ground-based Biometry Data at km 67 Tower Site, Tapajos National Forest

LBA-ECO CD-10 Coarse Woody Debris Data at km 67 Tower Site, Tapajos National Forest

2. Data Characteristics:

The litter data are reported in one comma separated ASCII text file, **lba_km67_litter_archive.txt**. Data values reported are the mean and standard error of the 40 mass measurements of each of the litter components and the combined total, that have been converted to the reporting units of Mg/ha/yr.

Data File Documentation:

Column = Description

ldate = collection date (yyyymmdd)

jd = julian date of collection (1 = 1/1/2000)

dT = delta-T, time since last collection (in days)

leaf = leaf litter mass (Mg/ha/yr)

leaf.se = standard error on leaf litter mass measurement

fruit = fruit litter mass (Mg/ha/yr)

fruit.se = standard error on fruit litter mass measurement

wood = woody litter mass (< 2 cm) (Mg/ha/yr)

wood.se = standard error on wood litter mass measurement

misc = misc other litter mass (Mg/ha/yr)

misc.se = standard error on misc other litter mass measurement

total = total all categories (Mg/ha/yr)

total.se = standard error on total litter mass measurement

Missing value code is "NA"
 Values are comma separated

Sample Data Record:

All of the litter data are reported in lba_km67_litter_archive.txt

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YYYYMMDD,cont.DOY,dT,leaf,leaf.se,fruit,fruit.se,wood,wood.se,misc,misc.se,total,total.se
20000714,196,14,6.58,0.7,0,NA,2.31,0.72,0.79,0.3,9.68,1.01
20000728,210,14,8.32,0.77,0.09,0.03,2.22,0.47,1.63,0.71,12.27,1.39
20000811,224,14,9.76,0.83,0.09,0.05,1.78,0.42,1.44,0.36,13.21,1.41
20000825,238,14,11.53,1.21,0.05,0.03,2.57,0.54,1.96,0.57,16.14,1.7
...
20050430,1947,14,5.6,0.46,0.67,0.2,1.88,0.35,0.44,0.08,9.5,1.1
20050514,1961,14,7.29,0.89,1.86,0.47,2.8,0.56,1.14,0.16,13.13,1.35
20050527,1974,13,8.77,0.72,1.77,0.42,2.93,0.6,1.73,0.46,15.23,1.5
20050611,1989,15,6.29,0.75,0.57,0.19,1.55,0.34,0.58,0.13,9.57,1.24
  
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Site boundaries: (All latitude and longitude given in degrees and fractions)

Site (Region)	Westernmost Longitude	Easternmost Longitude	Northernmost Latitude	Southernmost Latitude	Geodetic Datum
Para Western (Santarem) - km 67 Primary Forest Tower Site	-54.959	-54.959	-2.857	-2.857	World Geodetic System, 1984 (WGS-84)

(Para Western (Santarem))					
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Time period:The data set covers the

- Period 2000/07/14 to 2005/06/11.
- Temporal Resolution: biweekly (approximately every 14 days)

Platform/Sensor/Parameters measured include:

- FIELD INVESTIGATION / ANALYSIS / LITTER CHARACTERISTICS

3. Data Application and Derivation:

Biometry

4. Quality Assessment:

This is final data set.

5. Data Acquisition Materials and Methods:

Litter collection began in July 2000 using 40 circular, mesh screen traps (0.43 m diameter, 0.15 m²) randomly located throughout the 19.75-ha tree-survey area. Every 2 weeks, litter was collected, sorted, oven dried at 60 degrees C, and weighed. The litterfall sample from each trap was sorted into (1) leaves, (2) fruits and flowers, (3) wood <2 cm diameter, and (4) miscellaneous. The data archived extend from July 14, 2000 through June 2005.

Four permanent 50 x 1000 m transects were installed adjacent to the eddy-covariance tower in July of 1999 (Fig. 1), accounting for 19.75 ha of surveyed forest. Three transects originate near the tower and run in the predominant wind directions from the tower (northeast, east, and southeast), while the fourth runs north–south, intersecting the east transect at 550 m. The long, continuous transects aim to incorporate spatial heterogeneity throughout the tower footprint, avoiding bias associated with small scattered plots that can be disproportionately influenced by emergent trees.

Sensors used include:

- WEIGHING BALANCE

6. Data Access:

This data is available through the Oak Ridge National Laboratory (ORNL) Distributed Active Archive Center (DAAC) or the EOS Data Gateway.

Data Archive Center:

Contact for Data Center Access Information:

E-mail: uso@daac.ornl.gov

Telephone: +1 (865) 241-3952

FAX: +1 (865) 574-4665

7. References:

Rice, A.H., Hammond, E.P., Saleska, S.R., Hutya, L., Palace, M., Keller, M., de Carmargo, P.B., Portilho, K., Marques, D., Wofsy, S.C., Carbon Balance and Vegetation Dynamics in an old-growth Amazonian Forest, *Ecological Applications*, 14 (4), s55-s71, 2004.

Related Publications

- Rice, A.H., E.H. Pyle, S.R. Saleska, L. Hutya, M. Palace, M. Keller, P.B. de Camargo, K. Portilho, D.F. Marques, and S.C. Wofsy. 2004. Carbon balance and vegetation dynamics in an old-growth Amazonian forest. *Ecological Applications* 14(4):S55.