FOREST INVENTORY: FLORESTA NACIONAL DO JAMARI – JAM_A01_2011_INVENTORY

1.0 INTRODUCTION

Field Inventory of Floresta Nacional do Jamari (Jamari National Forest, Rondônia state, Brazil) was conducted using a basal-area weighted sample with a ratio of 1:10 for trees greater than 5 cm along 500m transects. According to this sampling procedure a 5cm tree was measured within 50cm of the transect, whereas a 50 cm tree would be measured within 5m of the transect. A total of 2 transects were measured.

Omission errors have been identified in this data set, therefore its usage should be done with caution.

2.0 INVENTORY DATA RECORDED - .CSV FILE CONTENT

For each tree the following measurements were recorded/calculated:

area: A code name given to the area.

transect: the transect number.

tree: tree number

common_name: tree common name.

scientific_name: tree scientific name.

family_name: tree family name

WSD (g/cm3):

If tree alive:
wood specific gravity - oven-dry wood over green volume (Chave et al, 2009[1]).

If tree dead (standing dead):
Dead trees are divided into 5 decay classes (Keller et al, 2004[2]),

DBH (cm): Diameter at breast height, 1.3 m above the ground.

BA(m2): individual basal area.

AGB(Mg): individual Above Ground Biomass

If tree is alive: AGB (Mg) = 0.0509*WSD*DBH^2*Htot (Chave, 2005[3])
If tree is dead (standing dead): AGB(Mg)=Necromass volume (Palace, 2007[4]) * WSD
If palm (alive or dead): AGB (Mg) = {exp[0.9285 ln(DBH^2) + 5.7236]1.05001}/10^3 (Nascimento and Laurence, 2002[5])
If liana (alive or dead): AGB (Mg) = exp[−1.484 + 2.657 ln(D)] (Schnitzer et al, 2006[6])

Area_sampled(ha) = DBH/plot area. This is the area sampled for an individual stem.

BA_AS(m^2): basal area per hectare.

AGB_AS(Mg) Above Ground Biomass per hectare.

type(class) Divided into four classes:

Liana (L): woody vines, inclusion was based on the position of the vine at 1.3 m above the ground, not the rooting position.

Palms (P): leafed palms, inclusion based on the diameter at the ground surface. Litter was removed from around the base for measurement.

Trunked palms (Pt): palms with a trunk measurable at 1.3 m

Other (O): Trees

canopy (class): Position of crown with respect to surrounding canopies, split into 3 classes.
E: Emergent, above surrounding tree canopies

C: Canopy level, at the same height as the main forest canopy of surrounding trees. This class includes both dominant and super-dominants.

S: Suppressed, trees below the height of the dominant canopy layer.

light (class): Crown Illumination Index, divided into three classes.

1: Entire crown surface gets direct sunlight.

2: A section of the crown surface receives direct sunlight.

3: The crown surface only receives indirect light.

dead: Standing dead.

D: Tree is dead

A: Tree is alive

dclass: Decomposition Class (Keller et al, 2004[2])

Hcom: Commercial Height (m), measured using a clinometer and tape as the height of the lowest leaf (bottom of the canopy)

Htot: Total Height (m), measured using a clinometer and tape as the height to the highest point of the tree crown.

RN: (m) Radius to the north of the tree crown.

RS: (m) Radius to the south of the tree crown.

RE: (m) Radius to the east of the tree crown.

RW: (m) Radius to the west of the tree crown.

Date (ISO 8601): date

UTM_Easting: X coordinate of tree individual location calculated based on measurements of tree X position with respect to the transect.

UTM_Northing: Y coordinate of tree individual location calculated based on measurements of tree Y position with respect to the transect.

3.0 COMPLEMENTARY INFORMATION

NA = not available/not applicable

4.0 REFERENCES

[3]Chave, J., Andalo, C., Brown, S., Cairns, M. A., Chambers, J. Q., Eamus, D., Folster, H., Fromard, F., Higuchi, N., Kira, T., Lescure, J.-P., Nelson, B. W., Ogawa, H., Puig, H., Riera B. & Yamakura, T. (2005) Tree allometry and improved estimation of carbon stocks and balance in tropical forests. Oecologia 145: 87–99.

[1]Chave, J., Coomes, D., Jansen, S., Lewis, L.S., Swenson, N. & Zanne, A. (2009) Towards a worldwide wood economics spectrum. Ecology Letters, 12, 351–366.

[2]Keller, M., Palace, M., Asner, G.P., Pereira, R. & Silva, J.N.M.(2004) Coarse woody debris in undisturbed and logged forests in the eastern Brazilian Amazon. Global Change Biol. 10 (5), 784–795.

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[6]Schnitzer, S.A. DeWalt, S.J., Chave, J. (2006) Censusing and Measuring Lianas: A Quantitative Comparison of the Common Methods. Biotropica 38:5,581-591.