

Structural traits of an eight year old secondary forest in the Central Amazon

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In 1992, a 17 ha agro-ecological field trial was established at the experimental site of EMBRAPA Amazônia Ocidental, situated 28 km north of Manaus, Amazonas, Brazil. The area, which was covered by an 8 year old secondary forest, had been slashed and burned in the conventional manner. A secondary forest of 1 ha was left standing as a reference. The area of 100 x 100 m was divided into 10 x 10 m plots and floristical and structural data of the vegetation of these plots were collected, such as

- Floristical composition of each of the plots, covering all the vascular plants (woody and herbaceous plants of all ages);
- Diameters of all the trunks of each species occurring in the plots with a diameter (BHD) > 2 cm;
- Additional species lists of all woody species with a stem diameter < 2 cm and of the herbaceous species occurring in the plots.

In addition, all the species occurring in the "1 ha secondary forest" were classified on the basis of growth-form types, using a growth-form system specially designed for the vegetation under study. The use history of the forest is known on the whole and the vegetation changes have been observed since 1992. Moreover, surveys in soil fauna and litter decomposition are being carried out in the same area (SHIFT group of ENV 52). The site has therefore become a considerable scientific value for applied ecological research activities in the region.

The poster presents the floristical composition, stratification and growth-form structure of the vegetation in the "1 ha secondary forest". The variation of the vegetation within the 1 ha area is analysed with the aid of multivariate analyses (PCA) of the floristical composition of the plots, and the resulting ordination model is displayed as a covariance biplot. The spatial distribution of some dominant species is displayed as contour diagrams. Conclusions are drawn from the floristical and structural analyses concerning the key environmental factors leading to the vegetation studied, and the influence of the surveys on vegetation development, i.e. disturbance such as trampling and cutting of trees, is discussed. Hypotheses are also developed concerning the future evolution of the "1 ha secondary forest".