Growth pattern of *Couratari stellata* in a Tropical Rain Forest in the Southwestern Amazon

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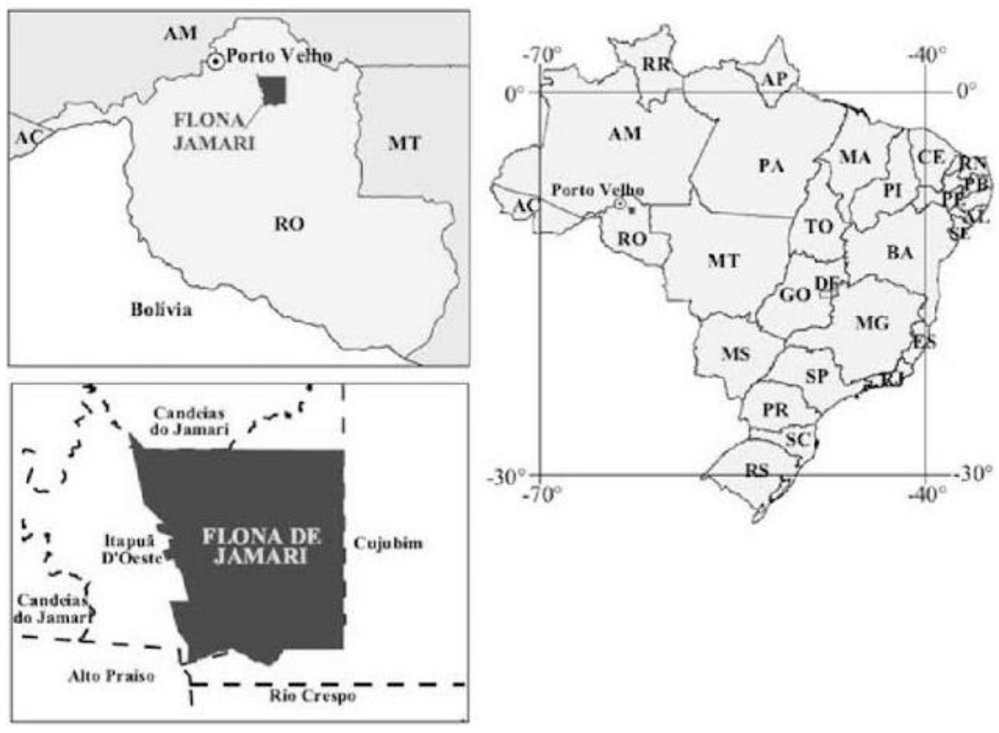
Introduction

The natural forest management, especially from the Amazon rainforest, is an important source of income and employment generation. However, there are gaps information about species that are managed, such as the growth pattern of commercial species, an important factor to ensure sustainable management.

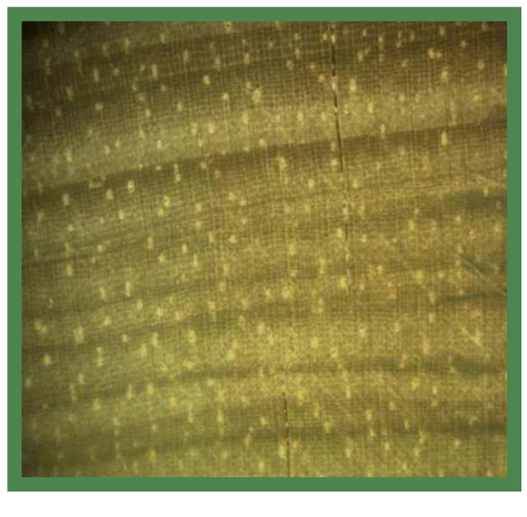
The aim was to describe the individual growth of Couratari stellata in the Jamari National Forest, Rondônia State, Brazil.

Material and Methods

- Dendrochronology was used for growth analysis, for this, 12 stem discs were collected.
- Six mixed models were tested to determine the growth pattern of C. stellata.

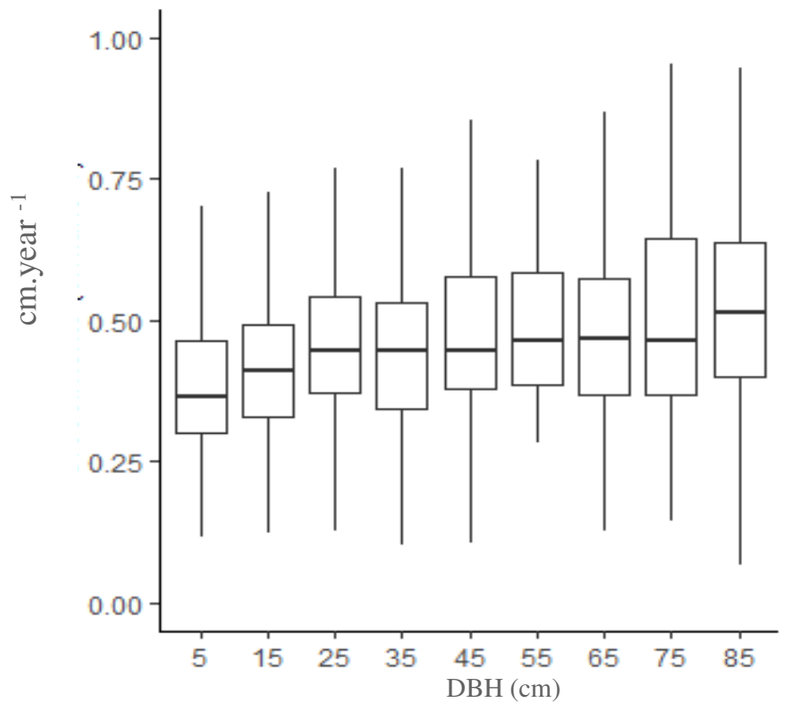


- **Discs samples and tree rings**

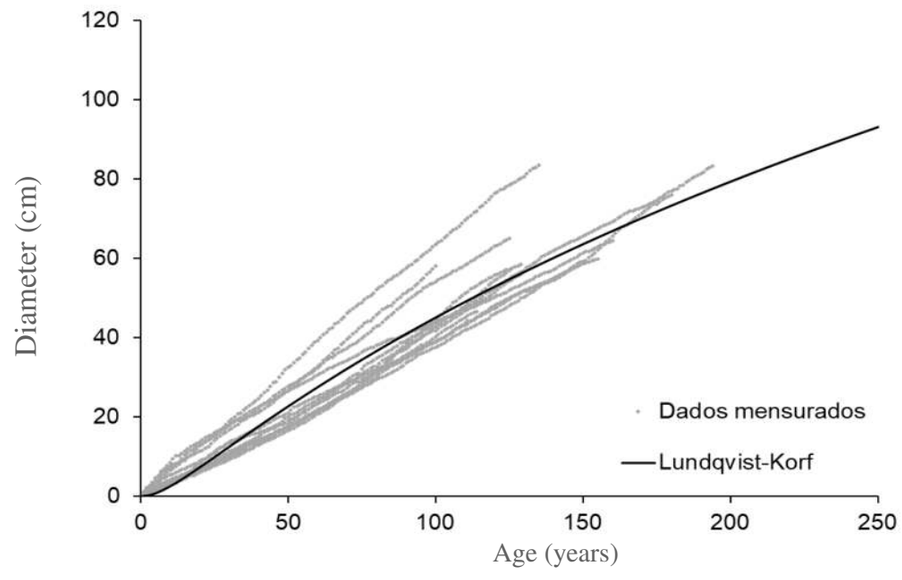


Results

- The trees had 143 years old (mean) and presented DBH (mean) = 65 cm, ranging from 46.5 to 83.4 cm.
- The diameter class that presented the largest average increment in diameter was 65 cm center class, with approximately 0.52 cm.year^{-1}, with the average annual increment = 0.45 cm.
- The Lundqvist model showed satisfactory statistical parameters for the growth
- Syx = 18.30%, $AICC$ = 1.07E+06 and BIC = 1.07E+06.



Increment in class diameter



Fitted model

Conclusions

Currently the diameter cut in the Brazil is 50 cm, but there are indications that the cutting diameter for C. stellata is from 75 cm in diameter, ensuring the wood quantity for the next cycle, if it is considered a cut rate compatible with the diameter structure of the stand.