

Structure and successional dynamics in Atlantic rainforest fragments with different disturbance histories in the south central region of São Paulo state, Brazil

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Introduction

The Atlantic Rainforest is one of the world hotspots and is under pressure from deforestation and fragmentation.

The aim of the study was to characterize vegetation structure and natural regeneration in Atlantic Rainforest fragments with different disturbance histories.

Methods

The sampling areas were: *area A, B, E, F*, selective logging of wood; *area C*, tree fall and landslides; *area D*, conserved and, *area G*, pasture until the 80s (Figure 1). In each area were allocated plots (5 x 5 m) to tree layer (DBH <5 cm) and the regenerating layer (5 x 1 m), totaling 90 plots in all seven areas. Phytosociological parameters, successional stage, dispersion syndromes and the Shannon-Wiener (H') diversity indexes, Jaccard similarity (C_j), and Pielou (J) fairness were calculated.

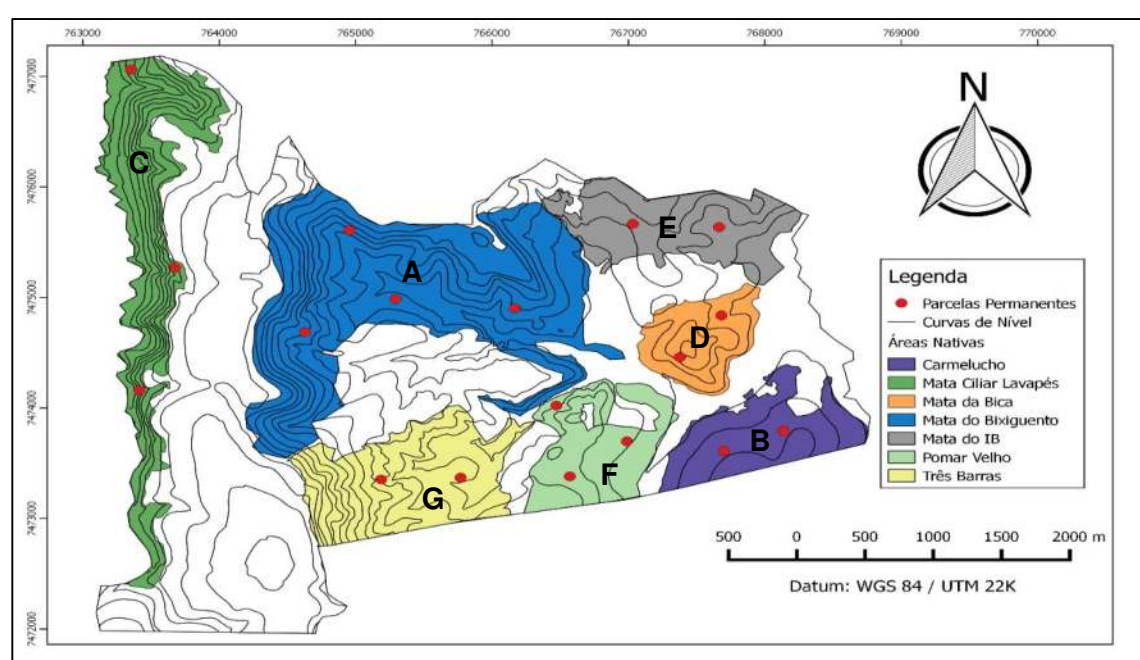


Figure 1. Study area, fragments Atlantic rainforest with different disturbance histories in Botucatu, São Paulo.

Results

Table 1. Structural parameters and diversity of fragments of the Atlantic rainforest.

Parameters	A	B	C	D	E	F	G
Richness	31	22	32	27	24	24	28
Individuals	173	165	199	90	120	110	225
Simpson_1-D	0,93	0,82	0,92	0,94	0,78	0,88	0,88
Shannon_H	2,91	2,12	2,88	3,03	2,12	2,62	2,57
Equitability_J	0,85	0,69	0,83	0,92	0,67	0,82	0,77

Acknowledgments



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Results

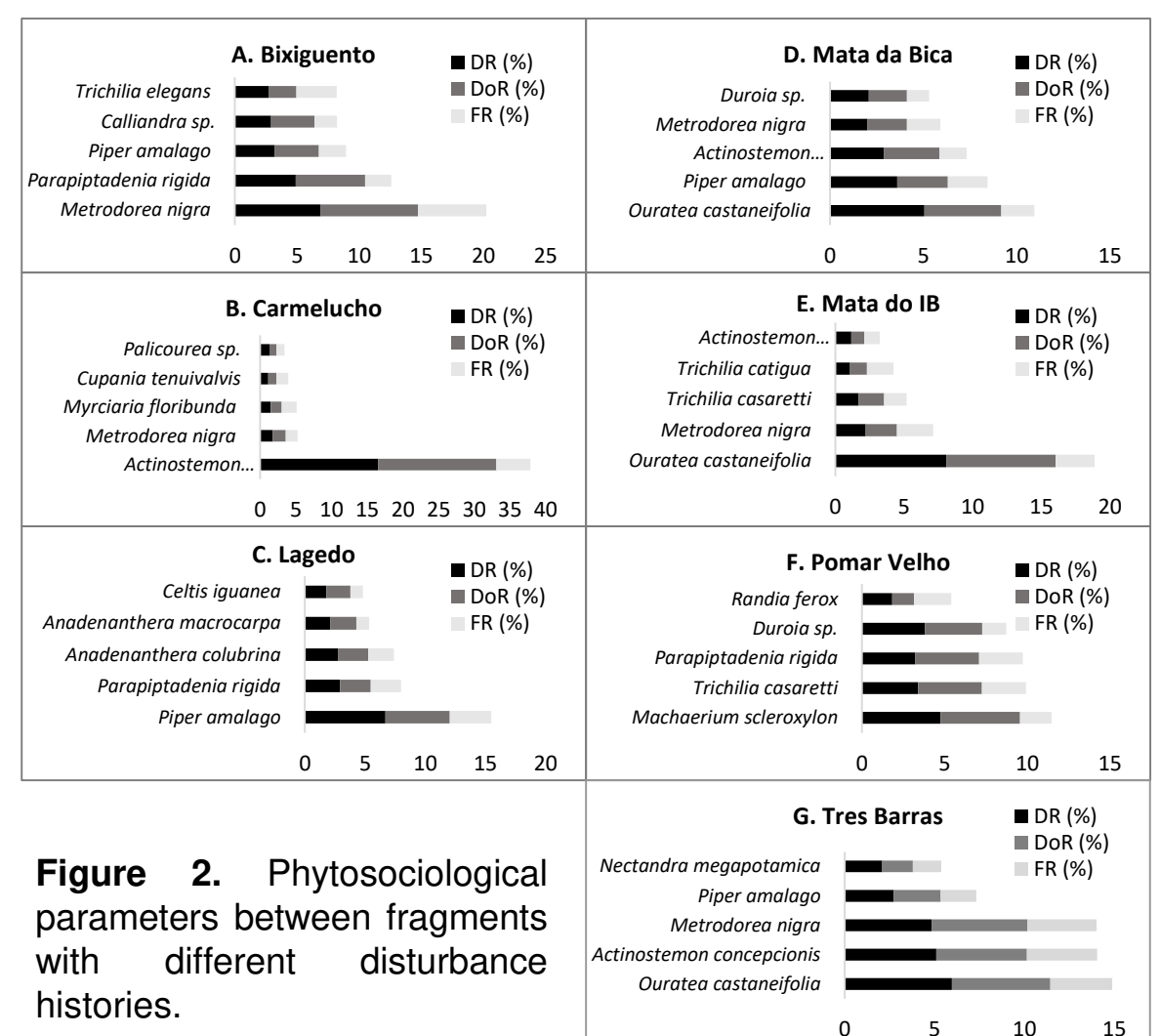
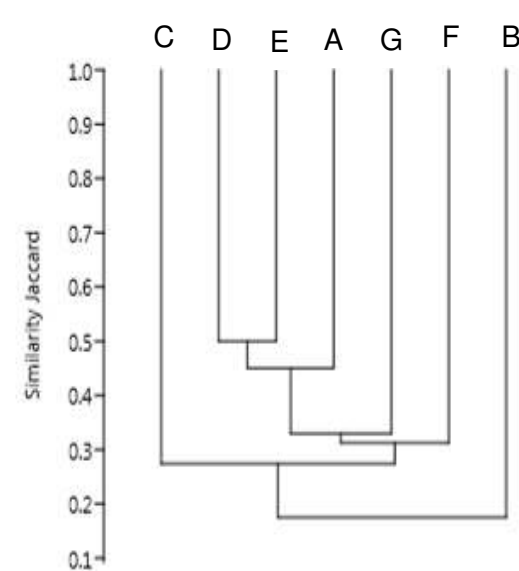
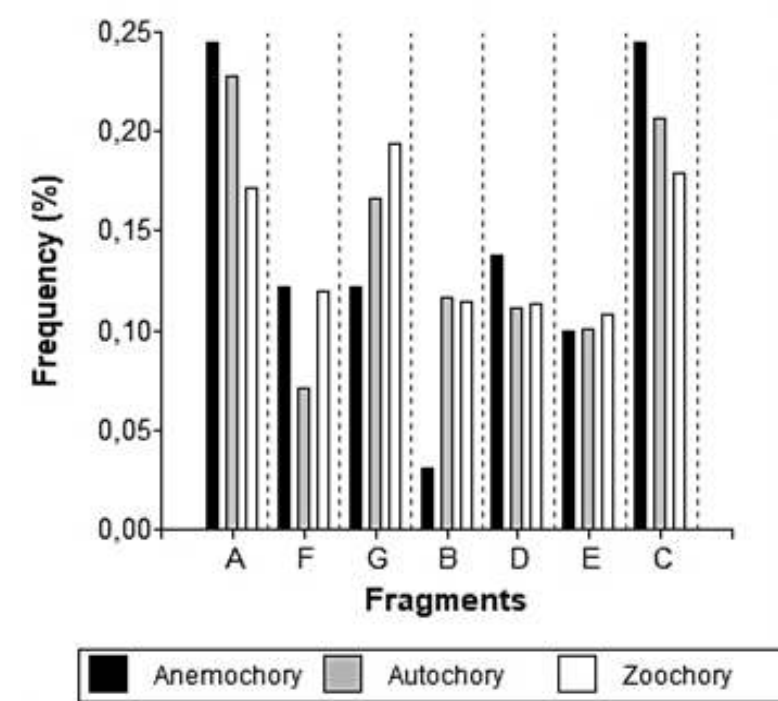


Figure 2. Phytosociological parameters between fragments with different disturbance histories.



(a)



(b)

Figure 3. Similarity Jaccard (a) and Frequency of the dispersion syndromes between fragments with different disturbance histories.

Conclusions

Although *area G* has been pasture in the past, it is noticeable that it presented good recovery capacity when compared to *area D*. *Area A* presented the largest ecological group of species, such as *Trichilia elegans* and *Trichilia clausenii*. Zoochory (56 %) was the predominant dispersion syndrome for the species studied.

References

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