Supplementary Material

1 SUPPLEMENTARY TABLES AND FIGURES

1.1 Tables

Table S1: Species present along a fire disturbance gradient in lowland Brazilian Atlantic Forest

Species	High	Medium	Low	Secondary	Mature	Code
Actinostemon verticillatus	0	0	0	0	1	Acvert
Annona dolabripetala	0	0	0	0	1	Andola
Annona sylvatica	0	0	0	0	1	Ansylv
Apuleia leiocarpa	0	0	0	0	1	Apleio
Astrocaryum aculeatissimum	0	0	0	0	1	Asacul
Astronium graveolens	0	0	0	0	1	Asgrav
Attalea humilis	1	1	1	0	1	Athumi
Bathysa mendoncaei	0	0	0	0	1	Bamend
Brosimum glaziovii	0	0	0	0	1	Brglaz
Brosimum guianense	0	0	1	1	1	Brguia
Calophyllum brasiliense	0	0	0	1	0	Cabras
Cabralea canjerana	0	0	0	0	1	Cacanj
Calyptranthes lucida	0	0	0	0	1	Caluci
Casearia sylvestris	0	0	1	1	1	Casylv
Cecropia pachystachya	0	0	1	0	1	Cepach
Chrysobalanaceae sp2	0	0	0	0	1	Chsp2
Copaifera langsdorffii	0	0	0	0	1	Colang
Cordia trichoclada	0	0	0	1	0	Cotric
Couepia venosa	0	0	0	0	1	Coveno
Cryptocarya moschata	0	0	0	0	1	Crmosc
Cryptocarya saligna	0	0	0	0	1	Crsali
Cupania furfuracea	0	0	0	1	1	Cufurf
Cupania racemosa	0	0	0	0	1	Curace
Cupania schizoneura	0	0	0	0	1	Cuschi
Cybistax antisyphilitica	1	0	0	0	0	Cyanti
Cybianthus sp1	0	0	0	0	1	Cysp1
Duguetia sessilis	0	0	0	0	1	Dusess
Ecclinusa ramiflora	0	0	0	0	1	Ecrami
Erythroxylum cuspidifolium	0	0	0	0	1	Ercusp
Eriotheca pentaphylla	0	0	0	0	1	Erpent
Eugenia candolleana	0	0	0	0	1	Eucand
Eugenia excelsa	0	0	0	0	1	Euexce
Eugenia macahensis	0	0	0	0	1	Eumaca
Eugenia oblongata	0	0	0	0	1	Euoblo
Eugenia pisiformis	0	0	0	0	1	Eupisi
Euphorbiaceae sp1	0	0	0	0	1	Eusp1

Eugenia sp4	0	0	0	0	1	Eusp4
Eugenia subundulata	0	0	0	0	1	Eusubu
Faramea multiflora	0	0	0	0	1	Famult
Garcinia gardneriana	0	0	0	0	1	Gagard
Gomidesia crocea	0	0	0	0	1	Gocroc
Guapira areolata	0	0	0	0	1	Guareo
Guatteria campestris	0	0	0	1	1	Gucamp
Guatteria candolleana	0	0	0	0	1	Gucand
Guarea guidonia	0	0	1	0	0	Guguid
Guarea macrophylla	0	0	0	0	1	Gumacr
Guapira nitida	0	0	0	0	1	Guniti
Guapira opposita	0	0	0	1	1	Guoppo
Helicostylis tomentosa	0	0	0	0	1	Hetome
Himatanthus bracteatus	0	0	0	1	0	Hibrac
Hymenolobium janeirense	0	0	0	0	1	Hyjane
Hieronyma oblonga	0	0	0	0	1	Hyoblo
Inga laurina	0	0	1	1	0	Inlaur
Inga sp1	0	0	1	0	0	Insp1
Lacistema pubescens	0	0	0	1	1	Lapube
Licaria bahiana	0	0	0	0	1	Libahi
Licaria guianensis	0	0	0	0	1	Liguia
Mabea fistulifera	0	0	0	0	1	Mafist
Maytenus samydaeformis	0	0	0	0	1	Masamy
Marlierea tomentosa	0	0	0	0	1	Matome
Macrotorus utriculatus	0	0	0	0	1	Mautri
Miconia albicans	0	1	0	1	0	Mialbi
Miconia cinnamomifolia	0	0	1	1	1	Micinn
Micropholis crassipedicellata	0	0	0	0	1	Micras
Micropholis gardneriana	0	0	0	0	1	Migard
Miconia lepidota	0	0	0	0	1	Milepi
Miconia prasina	0	0	0	1	0	Mipras
Miconia sp1	0	0	0	0	1	Misp1
Mollinedia glabra	0	0	0	0	1	Moglab
Moquiniastrum polymorphum	1	1	1	1	0	Mopoly
Myrcia anacardiifolia	0	0	0	1	0	Myanac
Myrcia anceps	0	0	0	1	0	Myance
Myrsine coriacea	0	0	1	1	0	Mycori
Myrcia ilheosensis	0	0	0	1	0	Myilhe
Myrcia splendens	1	0	1	1	1	Mysple
Naucleopsis oblongifolia	0	0	0	0	1	Naoblo
Nectandra nitidula	0	0	0	0	1	Neniti
Nectandra oppositifolia	0	0	0	1	1	Neoppo
Nectandra reticulata	0	0	1	0	0	Nereti
Ocotea divaricata	0	0	0	0	1	Ocdiva
Ocotea laxa	0	0	0	0	1	Oclaxa

Ocotea odorifera	0	0	0	0	1	Ocodor
Ocotea schottii	0	0	0	0	1	Ocscho
Pera glabrata	0	1	0	1	0	Peglab
Plathymenia reticulata	0	0	0	0	1	Plreti
Pouteria bangii	0	0	0	0	1	Pobang
Pouteria bullata	0	0	0	0	1	Pobull
Poecilanthe falcata	0	0	0	0	1	Pofalc
Pourouma guianensis	0	0	0	0	1	Poguia
Pouteria sp1	0	0	0	0	1	Posp1
Pradosia lactescens	0	0	0	0	1	Prlact
Protium widgrenii	0	0	0	0	1	Prwidg
Pseudobombax grandiflorum	0	0	0	0	1	Psgran
Psychotria vellosiana	0	0	0	1	0	Psvell
Rhodostemonodaphne macrocalyx	0	0	0	0	1	Rhmacr
Rinorea guianensis	0	0	0	0	1	Riguia
Rubiaceae sp5	0	0	0	0	1	Rusp5
Sarcaulus brasiliensis	0	0	0	0	1	Sabras
Sagotia racemosa	0	0	0	0	1	Sarace
Sapotaceae sp2	0	0	0	0	1	Sasp2
Sapotaceae sp6	0	0	0	0	1	Sasp6
Schinus terebinthifolius	0	0	1	1	0	Sctere
Senefeldera verticillata	0	0	0	0	1	Severt
Simarouba amara	0	0	0	0	1	Siamar
Siparuna guianensis	0	0	0	1	0	Siguia
Siparuna reginae	0	0	0	0	1	Siregi
Sorocea guilleminiana	0	0	0	0	1	Soguil
Stryphnodendron pulcherrimum	0	0	1	0	0	Stpulc
Swartzia apetala	0	0	0	0	1	Swapet
Tapirira guianensis	0	0	0	1	0	Taguia
Tachigali pilgeriana	0	0	0	0	1	Tapilg
Tetrastylidium grandifolium	0	0	0	0	1	Tegran
Tovomita paniculata	0	0	0	0	1	Topani
Trichilia tomentosa	0	0	0	0	1	Trtome
Urbanodendron bahiense	0	0	0	0	1	Urbahi
Urbanodendron verrucosum	0	0	0	0	1	Urverr
Virola bicuhyba	0	0	0	0	1	Vibicu
Vismia guianensis	0	0	0	1	0	Viguia
Vismia martiana	0	0	0	1	0	Vimart
Xylosma glaberrima	0	0	0	1	0	Xyglab
Xylopia sericea	0	0	1	1	0	Xyseri

Table S2. Pairwise comparisons for each structural variable for five areas along a fire disturbance gradient in the Brazilian Atlantic Forest (High disturbance: four fire events, 0.5 year after the last fire, Medium disturbance: three fire events, 8 years after the last fire, Low disturbance: one fire event, 20 years after the last fire, Secondary Forests: no fire event, regeneration at least since 1956, and Mature Forests, no fire events. Comparisons were performed using a one-way permutation ANOVA with pairwise post-hoc tests (Basso et al 2009)

Comparison	Dominance	Simpson's diversity	Tree density (ind/ha)	Mean canopy height (m)	Mean geographic area (km)
High-Medium	Diff = -0.02 (p= 0.933)	Diff = 0.01 (p= 0.957)	Diff = -3.39 (p= 0.552)	Diff = -0.18 (p= 0.925)	Diff = -23.14 (p= 0.888)
High-Low	Diff = 0.11 (p= 0.744)	Diff = -0.2 (p= 0.463)	Diff = -10.11 (p= 0.055) .	Diff = -0.66 (p= 0.708)	Diff = -142.6 (p= 0.39)
High-Sec.	Diff = 0.47 (p= 0.143)	Diff = -0.6 (p= 0.02) *	Diff = -15.67 (p < 0.001) ***	Diff = -1.5 (p= 0.427)	Diff = -319.95 (p= 0.039) *
High-Mature	Diff = 0.95 (p < 0.001) ***	Diff = -0.81 (p= 0.001) **	Diff = -11.06 (p= 0.041) *	Diff = -5.46 (p < 0.001) ***	Diff = 230.68 (p= 0.139)
Medium-Low	Diff = 0.13 (p= 0.715)	Diff = -0.22 (p= 0.449)	Diff = -6.72 (p= 0.215)	Diff = -0.47 (p= 0.794)	Diff = -119.47 (p= 0.474)
Medium-Sec.	Diff = 0.5 (p= 0.119)	Diff = -0.61 (p= 0.032) *	Diff = -12.28 (p= 0.014) *	Diff = -1.32 (p= 0.509)	Diff = -296.81 (p= 0.064) .
Medium-Mature	Diff = 0.97 (p < 0.001) ***	Diff = -0.83 (p < 0.001) ***	Diff = -7.67 (p= 0.164)	Diff = -5.28 (p < 0.001) ***	Diff = 253.82 (p= 0.127)
Low-Sec.	Diff = 0.37 (p= 0.268)	Diff = -0.4 (p= 0.166)	Diff = -5.56 (p= 0.308)	Diff = -0.84 (p= 0.664)	Diff = -177.35 (p= 0.315)
Low-Mature	Diff = 0.84 (p= 0.002) **	Diff = -0.61 (p= 0.026) *	Diff = -0.94 (p= 0.892)	Diff = -4.8 (p= 0.002) **	Diff = 373.28 (p= 0.018) *
Sec.-Mature	Diff = 0.48 (p= 0.136)	Diff = -0.21 (p= 0.486)	Diff = 4.61 (p= 0.453)	Diff = -3.96 (p= 0.009) **	Diff = 550.63 (p < 0.001) ***

Table S3. Table S2 (cont.)

Comparison	Basal area (m/ha)	LAI	Grass cover (%)	Mean plant ramification (number of trunks)
High-Medium	Diff = -0.03 (p= 0.793)	Diff = -0.87 (p= 0.266)	Diff = 66.08 (p= 0.005) **	Diff = -0.37 (p= 0.545)
High-Low	Diff = -0.1 (p= 0.303)	Diff = -1.42 (p= 0.055) .	Diff = 65.44 (p= 0.006) **	Diff = 0.61 (p= 0.351)
High-Sec.	Diff = -0.13 (p= 0.181)	Diff = -1.89 (p= 0.003) **	Diff = 83.44 (p= 0.002) **	Diff = 1.37 (p= 0.017) *
High-Mature	Diff = -0.3 (p< 0.001) ***	Diff = -2.38 (p < 0.001) ***	Diff = 87.08 (p < 0.001) ***	Diff = 1.3 (p= 0.027) *
Medium-Low	Diff = -0.07 (p= 0.452)	Diff = -0.54 (p= 0.451)	Diff = -0.63 (p= 0.983)	Diff = 0.98 (p= 0.11)
Medium-Sec.	Diff = -0.1 (p= 0.282)	Diff = -1.02 (p= 0.173)	Diff = 17.37 (p= 0.538)	Diff = 1.74 (p= 0.001) **
Medium-Mature	Diff = -0.27 (p= 0.002) **	Diff = -1.51 (p= 0.023) *	Diff = 21.01 (p= 0.463)	Diff = 1.67 (p= 0.001) **
Low-Sec.	Diff = -0.03 (p= 0.799)	Diff = -0.47 (p= 0.555)	Diff = 18 (p= 0.543)	Diff = 0.76 (p= 0.226)
Low-Mature	Diff = -0.2 (p= 0.026) *	Diff = -0.97 (p= 0.173)	Diff = 21.64 (p= 0.459)	Diff = 0.69 (p= 0.271)
Sec.-Mature	Diff = -0.17 (p= 0.05) .	Diff = -0.49 (p= 0.503)	Diff = 3.64 (p= 0.892)	Diff = -0.07 (p= 0.906)

Table S4. Pairwise comparisons for each functional response trait for five areas along a fire disturbance gradient in the Brazilian Atlantic Forest (High disturbance:four fire events, 0.5 year after the last fire, Medium disturbance: three fire events, 8 years after the last fire, Low disturbance: one fire event, 20 years after thelast fire, Secondary Forests: no fire event, regeneration at least since 1956, and Mature Forests, no fire events. Comparisons were performed using a one-way permutation ANOVA with pairwise post-hoc tests (Basso et al 2009)

Comparison	SLA	Wood density	Bark thickness	Seed mass
High-Medium	Diff = -0.02 (p= 0.983)	Diff = 0 (p= 0.818)	Diff = 0.01 (p= 0.985)	Diff = 0.08 (p= 0.755)
High-Low	Diff = -0.61 (p= 0.55)	Diff = 0 (p= 0.843)	Diff = 0.13 (p= 0.727)	Diff = 0.06 (p= 0.801)
High-Sec.	Diff = -1.55 (p= 0.118)	Diff = -0.01 (p= 0.564)	Diff = 0.46 (p= 0.186)	Diff = 0.05 (p= 0.871)
High-Mature	Diff = -3.1 (p< 0.001) ***	Diff = -0.06 (p= 0.018) *	Diff = 1.08 (p< 0.001) ***	Diff = -0.57 (p= 0.005) **
Medium-Low	Diff = -0.59 (p= 0.571)	Diff = 0 (p= 0.957)	Diff = 0.12 (p= 0.732)	Diff = -0.01 (p= 0.949)
Medium-Sec.	Diff = -1.53 (p= 0.139)	Diff = -0.01 (p= 0.633)	Diff = 0.45 (p= 0.18)	Diff = -0.03 (p= 0.9)
Medium-Mature	Diff = -3.08 (p< 0.001) ***	Diff = -0.05 (p= 0.047) *	Diff = 1.07 (p= 0.002) **	Diff = -0.65 (p< 0.001) ***
Low-Sec.	Diff = -0.94 (p= 0.389)	Diff = -0.01 (p= 0.595)	Diff = 0.33 (p= 0.354)	Diff = -0.02 (p= 0.933)
Low-Mature	Diff = -2.49 (p= 0.012) *	Diff = -0.05 (p= 0.025) *	Diff = 0.94 (p= 0.001) **	Diff = -0.64 (p= 0.005) **
Sec.-Mature	Diff = -1.55 (p= 0.128)	Diff = -0.04 (p= 0.053) .	Diff = 0.61 (p= 0.083) .	Diff = -0.62 (p= 0.003) **