Supplementary Information for **"**Pollination and seed dispersal are the most threatened processes of plant regeneration"

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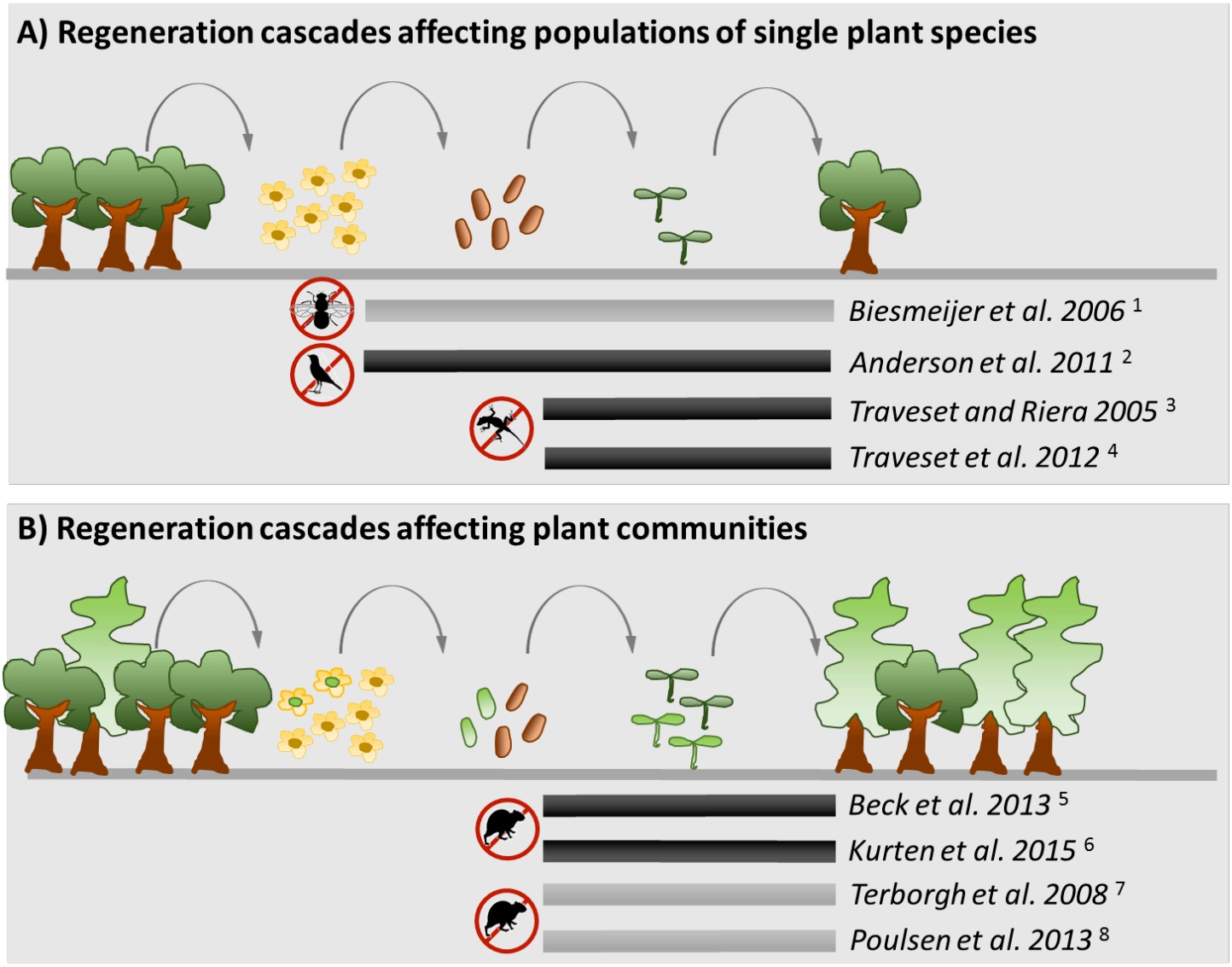
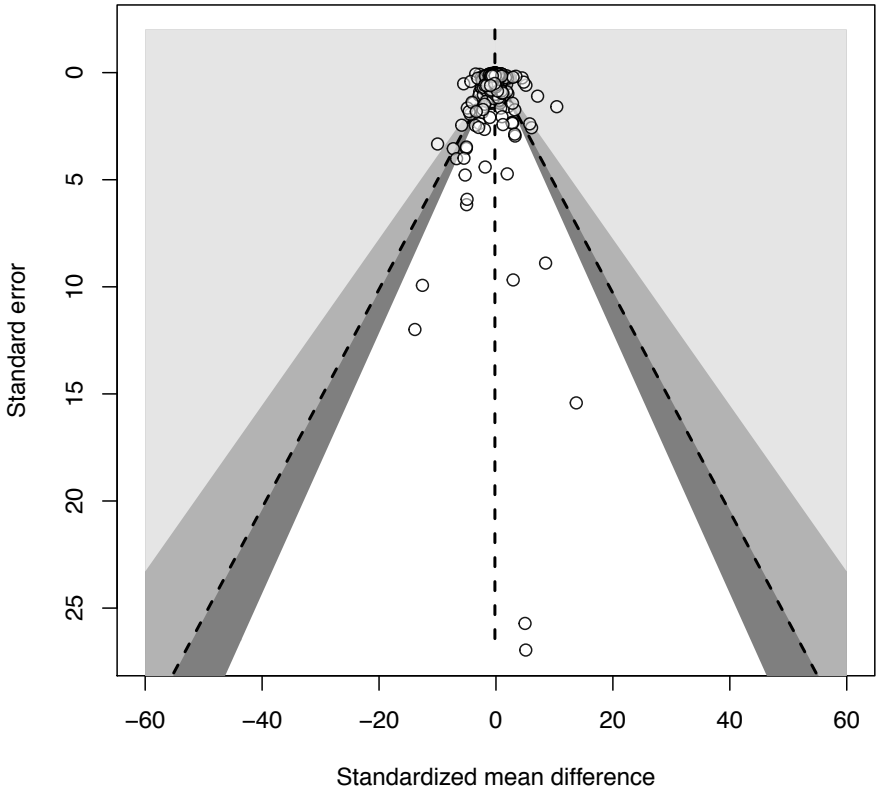


Supplementary Figure 1. Evidence of long-term cascading effects from disruptions of pollinators and seed dispersers throughout the plant regeneration cycle. (A) Negative responses of populations of single plant species and (B) plant community shifts. Black bars denote experimental exclusion and local extinction events, gray bars denote studies on regional defaunation. The length of each bar indicates the number of steps in the plant regeneration cycle covered by each study.

Supplementary Methods 1

Publication bias is a frequent phenomenon in meta-analysis, addressing that significant results are more likely to be published than non-significant results [9]. We tested for publication bias using a rank correlation test for plot asymmetry [10] with the meta package [11]. We did not find evidence for publication bias ($z = -1.35$, $p = 0.73$; Supplementary Figure 2).



Supplementary Figure 2. Funnel-plot visualizing the absence of potential publication bias of the studies included in the meta-analysis. Points represent all 408 comparisons of plant regeneration processes between natural and human disturbed forest.

Supplementary Methods 2

We added a spatial autocovariate as fixed effect to the two models to control for spatial autocorrelation [12,13]. After including this covariate, we calculated Moran's I values from the residuals of all models based on a matrix of inverse distance weights (compiled by the geosphere package [14]) using the library ape [15]. Moran's I was not significant for any of the models.

Supplementary Methods 3

To test whether our findings are consistent with a model including a phylogenetic correlation matrix, we tested the same model compiled with the metafor package [16] with the MCMCglmm package [17], which allows testing for phylogenetic autocorrelation. We calculated a phylogenetic tree based on plant taxonomy (Supplementary Table 1) using the ape package [15] and set all branches to the length of one. We included the phylogenetic autocorrelation matrix using the "ginverse" argument. We also included the study and the species as random effects. As fixed effects, we included regeneration process, seed size, absolute latitude and the spatial autocovariate. The estimated effect sizes were consistent with the estimated effect sizes calculated by the metafor package (Supplementary Table 2).

Supplementary Table 1. Tree species included in the meta-analysis on the effect of human forest disturbance on plant regeneration processes. Taxonomic classification for all 176 plant species was obtained from The Plant List Version 1.1 (www.theplantlist.org).

Species	Family	Order	Subclass	Class
Abies guatemalensis	Pinaceae	Pinales		Coniferopsida
Abies balsamea	Pinaceae	Pinales		Coniferopsida
Acacia aroma	Leguminosae	Fabales		Magnoliopsida
Acacia atramentaria	Leguminosae	Fabales		Magnoliopsida
Acacia brachybotrya	Leguminosae	Fabales		Magnoliopsida
Acacia caven	Leguminosae	Fabales		Magnoliopsida
Acacia dealbata	Leguminosae	Fabales		Magnoliopsida
Acacia furcatispina	Leguminosae	Fabales		Magnoliopsida
Acer spicatum	Sapindaceae	Sapindales		Magnoliopsida
Aextoxicon punctatum	Aextoxicaceae	Berberidopsidales		Magnoliopsida
Alseodaphne petiolaris	Lauraceae	Laurales		Magnoliopsida
Ampelocera hottlei	Ulmaceae	Rosales		Magnoliopsida
Anacardium excelsum	Anacardiaceae	Sapindales		Magnoliopsida
Anadenanthera peregrina	Leguminosae	Fabales		Magnoliopsida
Anaxagorea dolichocarpa	Annonaceae	Magnoliales		Magnoliopsida
Antiaris toxicaria	Moraceae	Rosales		Magnoliopsida
Antrocaryon klaineanum	Anacardiaceae	Sapindales		Magnoliopsida
Apeiba glabra	Malvaceae	Malvales		Magnoliopsida
Araucaria angustifolia	Araucariaceae	Pinales		Coniferopsida
Ardisia revoluta	Primulaceae	Ericales	Asteridae	Magnoliopsida
Aristolochia chilensis	Aristolochiaceae	Piperales		Magnoliopsida
Aristotelia chilensis	Elaeocarpaceae	Oxalidales		Magnoliopsida
Aspidosperma quebracho-blanco	Apocynaceae	Gentianales		Magnoliopsida
Astrocaryum aculeatissimum	Arecaceae	Arecales		Magnoliopsida
Astrocaryum aculeatum	Arecaceae	Arecales		Magnoliopsida
Astrocaryum gratum	Arecaceae	Arecales		Magnoliopsida
Astrocaryum mexicanum	Arecaceae	Arecales		Magnoliopsida
Astrocaryum murumuru	Arecaceae	Arecales		Magnoliopsida
Astrocaryum standleyanum	Arecaceae	Arecales		Magnoliopsida
Attalea butyracea	Arecaceae	Arecales		Magnoliopsida
Attalea humilis	Arecaceae	Arecales		Magnoliopsida
Beilschmiedia assamica	Lauraceae	Laurales		Magnoliopsida
Betula papyrifera	Betulaceae	Fagales		Magnoliopsida
Billia rosea	Sapindaceae	Sapindales		Magnoliopsida
Bocageopsis multiflora	Annonaceae	Magnoliales		Magnoliopsida
Bridelia micrantha	Phyllanthaceae	Malpighiales		Magnoliopsida
Brosimum alicastrum	Moraceae	Rosales		Magnoliopsida
Buchenavia grandis	Combretaceae	Myrtales		Magnoliopsida
Bursera simaruba	Burseraceae	Sapindales		Magnoliopsida
Byrsonima sericea	Malpighiaceae	Malpighiales		Magnoliopsida
Cabralea canjerana	Meliaceae	Sapindales		Magnoliopsida
Caesalpinia gilliesii	Leguminosae	Fabales		Magnoliopsida

Caesalpinia paraguariensis	Leguminosae	Fabales		Magnoliopsida
Calophyllum brasiliense	Clusiaceae	Malpighiales		Magnoliopsida
Canarium strictum	Burseraceae	Sapindales		Magnoliopsida
Carapa guianensis	Meliaceae	Sapindales		Magnoliopsida
Carapa nicaraguensis	Meliaceae	Sapindales		Magnoliopsida
Carapa procera	Meliaceae	Sapindales		Magnoliopsida
Carapa surinamensis	Meliaceae	Sapindales		Magnoliopsida
Cariniana micrantha	Lecythidaceae	Ericales	Asteridae	Magnoliopsida
Carpinus caroliniana	Betulaceae	Fagales		Magnoliopsida
Caryocar villosum	Caryocaraceae	Malpighiales		Magnoliopsida
Ceiba aesculifolia	Malvaceae	Malvales		Magnoliopsida
Celtis africana	Cannabaceae	Rosales		Magnoliopsida
Celtis zenkeri	Cannabaceae	Rosales		Magnoliopsida
Cercidium praecox subsp. glaucum	Leguminosae	Fabales		Magnoliopsida
Cestrum parqui	Solanaceae	Solanales	Lamiidae	Magnoliopsida
Chamaedorea allenii	Arecaceae	Arecales		Magnoliopsida
Chisocheton cumingianus subsp. balansae	Meliaceae	Sapindales		Magnoliopsida
Chlorocardium rodiei	Lauraceae	Laurales		Magnoliopsida
Choerospondias axillaris	Anacardiaceae	Sapindales		Magnoliopsida
Chrysophyllum albidum	Sapotaceae	Ericales	Asteridae	Magnoliopsida
Cinnamomum triplinerve	Lauraceae	Laurales		Magnoliopsida
Clusia lechleri	Clusiaceae	Malpighiales		Magnoliopsida
Clusia sp.	Clusiaceae	Malpighiales		Magnoliopsida
Clusia sphaerocarpa	Clusiaceae	Malpighiales		Magnoliopsida
Clusia trochiformis	Clusiaceae	Malpighiales		Magnoliopsida
Cochlospermum orinocense	Bixaceae	Malvales		Magnoliopsida
Cordia alliodora	Boraginaceae	Boraginales	Lamiidae	Magnoliopsida
Cordia americana	Boraginaceae	Boraginales	Lamiidae	Magnoliopsida
Cordia bicolor	Boraginaceae	Boraginales	Lamiidae	Magnoliopsida
Cordia millenii	Boraginaceae	Boraginales	Lamiidae	Magnoliopsida
Corylus heterophylla	Betulaceae	Fagales		Magnoliopsida
Corylus mandshurica	Betulaceae	Fagales		Magnoliopsida
Cryptocarya alba	Lauraceae	Laurales		Magnoliopsida
Dendropanax arboreus	Araliaceae	Apiales	Asteridae	Magnoliopsida
Dialium guianense	Leguminosae	Fabales		Magnoliopsida
Dicorynia guianensis	Leguminosae	Fabales		Magnoliopsida
Dillenia suffruticosa	Dilleniaceae	Dilleniales		Magnoliopsida
Dinizia excelsa	Leguminosae	Fabales		Magnoliopsida
Diospyros abyssinica	Ebenaceae	Ericales	Asteridae	Magnoliopsida
Dipteryx oleifera	Leguminosae	Fabales		Magnoliopsida
Dodonaea viscosa	Sapindaceae	Sapindales		Magnoliopsida
Duckeodendron cestroides	Solanaceae	Solanales	Lamiidae	Magnoliopsida
Dysoxylum gotadhora	Meliaceae	Sapindales		Magnoliopsida
Dysoxylum malabaricum	Meliaceae	Sapindales		Magnoliopsida
Dysoxylum sp.	Meliaceae	Sapindales		Magnoliopsida
Elaeocarpus serratus	Elaeocarpaceae	Oxalidales		Magnoliopsida
Embothrium coccineum	Proteaceae	Proteales		Magnoliopsida
Eperua falcata	Leguminosae	Fabales		Magnoliopsida

Eremophila glabra	Scrophulariaceae	Lamiales	Lamiidae	Magnoliopsida
Erythroxylum pelleterianum	Erythroxylaceae	Malpighiales		Magnoliopsida
Euterpe edulis	Arecaceae	Arecales		Magnoliopsida
Euterpe precatoria	Arecaceae	Arecales		Magnoliopsida
Fagus grandifolia subsp. Mexicana	Fagaceae	Fagales		Magnoliopsida
Fagus sylvatica	Fagaceae	Fagales		Magnoliopsida
Ficus americana	Moraceae	Rosales		Magnoliopsida
Ficus aurea	Moraceae	Rosales		Magnoliopsida
Ficus lutea	Moraceae	Rosales		Magnoliopsida
Ficus racemosa	Moraceae	Rosales		Magnoliopsida
Ficus thonningii	Moraceae	Rosales		Magnoliopsida
Goupia glabra	Goupiaceae	Malpighiales		Magnoliopsida
Gustavia superba	Lecythidaceae	Ericales	Asteridae	Magnoliopsida
Harungana madagascariensis	Hypericaceae	Malpighiales		Magnoliopsida
Hedyosmum angustifolium	Chloranthaceae	Chloranthales		Magnoliopsida
Hedyosmum racemosum	Chloranthaceae	Chloranthales		Magnoliopsida
Heliconia acuminata	Heliconiaceae	Zingiberales		Magnoliopsida
Heliconia tortuosa	Heliconiaceae	Zingiberales		Magnoliopsida
Hieronyma oblonga	Phyllanthaceae	Malpighiales		Magnoliopsida
Hymenaea oblongifolia	Leguminosae	Fabales		Magnoliopsida
Jacaranda copaia	Bignoniaceae	Lamiales	Lamiidae	Magnoliopsida
Juglans mandshurica	Juglandaceae	Fagales		Magnoliopsida
Juniperus thurifera	Cupressaceae	Pinales		Coniferopsida
Lapageria rosea	Philesiaceae	Liliales		Magnoliopsida
Lecythis ampla	Lecythidaceae	Ericales	Asteridae	Magnoliopsida
Leptonychia usambarensis	Malvaceae	Malvales		Magnoliopsida
Manilkara bidentata	Sapotaceae	Ericales	Asteridae	Magnoliopsida
Manilkara zapota	Sapotaceae	Ericales	Asteridae	Magnoliopsida
Miconia albicans	Melastomataceae	Myrtales		Magnoliopsida
Miconia boliviensis	Melastomataceae	Myrtales		Magnoliopsida
Minquartia guianensis	Olacaceae	Santalales		Magnoliopsida
Myrcia paivae	Myrtaceae	Myrtales		Magnoliopsida
Myrsine coriacea	Primulaceae	Ericales	Asteridae	Magnoliopsida
Myrsine juergensenii	Primulaceae	Ericales	Asteridae	Magnoliopsida
Myrtus communis	Myrtaceae	Myrtales		Magnoliopsida
Nectandra ambigens	Lauraceae	Laurales		Magnoliopsida
Nothofagus glauca	Nothofagaceae	Fagales		Magnoliopsida
Nothofagus obliqua	Nothofagaceae	Fagales		Magnoliopsida
Ochroma pyramidale	Malvaceae	Malvales		Magnoliopsida
Ocotea floribunda	Lauraceae	Laurales		Magnoliopsida
Ocotea valeriana	Lauraceae	Laurales		Magnoliopsida
Ocotea whitei	Lauraceae	Laurales		Magnoliopsida
Oenocarpus bacaba	Arecaceae	Arecales		Magnoliopsida
Oenocarpus mapora	Arecaceae	Arecales		Magnoliopsida
Opuntia quimilo	Cactaceae	Caryophyllales		Magnoliopsida
Otoba novogranatensis	Myristicaceae	Magnoliales		Magnoliopsida
Palicourea buchtienii	Rubiaceae	Gentianales	Lamiidae	Magnoliopsida
Panopsis costaricensis	Proteaceae	Proteales		Magnoliopsida
Parashorea malaanonan	Dipterocarpaceae	Malvales		Magnoliopsida
Parkia multijuga	Leguminosae	Fabales		Magnoliopsida

Parkia pendula	Leguminosae	Fabales		Magnoliopsida
Paypayrola blanchetiana	Violaceae	Malpighiales		Magnoliopsida
Pentacme siamensis	Dipterocarpaceae	Malvales		Magnoliopsida
Phoebe sp.	Lauraceae	Laurales		Magnoliopsida
Picea glauca	Pinaceae	Pinales		Coniferopsida
Pinus ayacahuite	Pinaceae	Pinales		Coniferopsida
Pinus koraiensis	Pinaceae	Pinales		Coniferopsida
Pinus pseudostrobus	Pinaceae	Pinales		Coniferopsida
Pinus pseudostrobus var. apulcensis	Pinaceae	Pinales		Coniferopsida
Pinus sylvestris	Pinaceae	Pinales		Coniferopsida
Polyalthia simiarum	Annonaceae	Magnoliales		Magnoliopsida
Polyscias fulva	Araliaceae	Apiales	Asteridae	Magnoliopsida
Populus tremuloides	Salicaceae	Malpighiales		Magnoliopsida
Poulsenia armata	Moraceae	Rosales		Magnoliopsida
Pradosia cochlearia	Sapotaceae	Ericales	Asteridae	Magnoliopsida
Prosopis kuntzei	Leguminosae	Fabales		Magnoliopsida
Prosopis nigra	Leguminosae	Fabales		Magnoliopsida
Prunus africana	Rosaceae	Rosales		Magnoliopsida
Prunus virginiana	Rosaceae	Rosales		Magnoliopsida
Pseudolmedia spuria	Moraceae	Rosales		Magnoliopsida
Psychotria bangii	Rubiaceae	Gentianales	Lamiidae	Magnoliopsida
Psychotria mapourioides	Rubiaceae	Gentianales	Lamiidae	Magnoliopsida
Psychotria muscosa	Rubiaceae	Gentianales	Lamiidae	Magnoliopsida
Psychotria suterella	Rubiaceae	Gentianales	Lamiidae	Magnoliopsida
Psychotria tenuinervis	Rubiaceae	Gentianales	Lamiidae	Magnoliopsida
Quararibea funebris	Malvaceae	Malvales		Magnoliopsida
Quercus ilex	Fagaceae	Fagales		Magnoliopsida
Quercus mongolica	Fagaceae	Fagales		Magnoliopsida
Quercus pyrenaica	Fagaceae	Fagales		Magnoliopsida
Rhamnus ludovici-salvatoris	Rhamnaceae	Rosales		Magnoliopsida
Rhus virens	Anacardiaceae	Sapindales		Magnoliopsida
Ricinodendron heudelotii	Euphorbiaceae	Malpighiales		Magnoliopsida
Schinopsis balansae	Anacardiaceae	Sapindales		Magnoliopsida
Schinopsis lorentzii	Anacardiaceae	Sapindales		Magnoliopsida
Senna aphylla	Leguminosae	Fabales		Magnoliopsida
Senna artemisioides	Leguminosae	Fabales		Magnoliopsida
Senna multijuga	Leguminosae	Fabales		Magnoliopsida
Shorea laxa	Dipterocarpaceae	Malvales		Magnoliopsida
Sideroxylon portoricense	Sapotaceae	Ericales	Asteridae	Magnoliopsida
Simarouba amara	Simaroubaceae	Sapindales		Magnoliopsida
Sorbus aucuparia	Rosaceae	Rosales		Magnoliopsida
Sorbus torminalis	Rosaceae	Rosales		Magnoliopsida
Spondias mombin	Anacardiaceae	Sapindales		Magnoliopsida
Stenocereus quevedonis	Cactaceae	Caryophyllales		Magnoliopsida
Strychnos madagascariensis	Loganiaceae	Gentianales	Lamiidae	Magnoliopsida
Swietenia macrophylla	Meliaceae	Sapindales		Magnoliopsida
Syagrus romanzoffiana	Arecaceae	Arecales		Magnoliopsida
Symplocos coccinea	Symplocaceae	Ericales	Asteridae	Magnoliopsida
Tapirira mexicana	Anacardiaceae	Sapindales		Magnoliopsida
Ternstroemia lineata	Pentaphylacaceae	Ericales	Asteridae	Magnoliopsida

Tetragastris altissima	Burseraceae	Sapindales	Magnoliopsida
Trilepisium madagascariense	Moraceae	Rosales	Magnoliopsida
Triplaris weigeltiana	Polygonaceae	Caryophyllales	Magnoliopsida
Virola flexuosa	Myristicaceae	Magnoliales	Magnoliopsida
Virola koschnyi	Myristicaceae	Magnoliales	Magnoliopsida
Virola kwatae	Myristicaceae	Magnoliales	Magnoliopsida
Virola michelii	Myristicaceae	Magnoliales	Magnoliopsida
Virola sp.	Myristicaceae	Magnoliales	Magnoliopsida
Welfia regia	Arecaceae	Arecales	Magnoliopsida
Xymalos monospora	Monimiaceae	Laurales	Magnoliopsida
Ziziphus lotus	Rhamnaceae	Rosales	Magnoliopsida
Ziziphus mistol	Rhamnaceae	Rosales	Magnoliopsida

Supplementary Table 2. Estimated effect sizes and 95 % confidence interval (CI) based on a meta-analytic model using the MCMCglmm library [17]. We added the study and species as random effects, and a phylogenetic correlation matrix based on a taxonomic phylogenetic tree, to the model.

	Hedge's *d*	**lower 95% CI**	**upper 95% CI**
Pollination	-0.74	-1.28	-0.27
Dispersal	-0.44	-0.80	-0.08
Predation	0.10	-0.31	0.53
Recruitment	-0.26	-0.65	0.12
Herbivory	0.20	-0.35	0.73
Seed size	-0.28	-0.65	0.05
Absolute latitude	0.01	0.07	0.11
Longitude	-0.00	-0.00	0.00
Spatial autocovariate	0.09	0.07	0.11

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Supplementary Dataset - Data and list of studies included in the meta-analysis **"**Pollination and seed dispersal are the most threatened processes of plant regeneration"

Effect sizes and control variables used in the meta-analysis on the effect of human forest disturbance on plant regeneration processes. Predicted seed size for each plant species was obtained by linear regression using the species for which we had information for both seed size and seed mass. If no source publication or database for measures of seed size / seed mass is given, data were obtained from the original publication, * = seed size has been predicted based on seed mass, + = both measures of seed size and seed mass were available. Longitude and latitude are given in decimal degrees. Full references of original publications and sources of seed size / seed mass source are listed below.

Original publication	Species	Process	Effect size Hedge's d	Sampling variance	Predicted seed size (cm)		Source publication / database for seed size /seed mass	Lati-tude	Longi-tude
Aguilar and Galetto 2004	*Cestrum parqui*	pollination	-6.74	4.02	0.26	*	Funes et al. 2009	-31.26	-64.28
Aguirre and Dirzo 2008	*Astrocaryum mexicanum*	pollination	1.18	1.05	2.43	*	TRY	19.54	-96.93
Aizen and Feinsinger 1994	*Acacia aroma*	pollination	-0.72	1.44	0.6			-26.83	-65.33
Aizen and Feinsinger 1994	*Acacia atramentaria*	pollination	0.61	1.38	0.69	*	Funes et al. 2009	-26.83	-65.33
Aizen and Feinsinger 1994	*Acacia furcatispina*	pollination	0.56	1.36	0.65	*	Funes et al. 2009	-26.83	-65.33
Aizen and Feinsinger 1994	*Caesalpinia gilliesii*	pollination	-0.41	1.31	1		Encyclopedia of Life	-26.83	-65.33
Aizen and Feinsinger 1994	*Cercidium praecox subsp. glaucum*	pollination	-0.82	1.35	0.48	*	TRY	-26.83	-65.33
Aizen and Feinsinger 1994	*Opuntia quimilo*	pollination	-1.96	2.65	0.45		Reyes-Agüero et al. 2006	-26.83	-65.33
Aizen and Feinsinger 1994	*Prosopis nigra*	pollination	-0.97	1.4	0.75	*	TRY	-26.83	-65.33
Aizen and Feinsinger 1994	*Senna aphylla*	pollination	-1.22	1.79	0.32	*	Funes et al. 2009	-26.83	-65.33
Albrecht et al. 2012	*Sorbus aucuparia*	dispersal	-0.16	0.33	0.22	*	TRY	50.8	8.73
Albrecht et al. 2012	*Sorbus aucuparia*	dispersal	-2.34	0.66	0.22	*	TRY	50.8	8.73
Aliaga-Rossel and Fragoso 2014	*Astrocaryum gratum*	predation	-5.05	3.47	10.00		Aliaga-Rossel 2011	-13.33	-68.17
Alvarez-Aquino et al. 2004	*Carpinus caroliniana*	recruitment	-1.94	1.48	0.48	*	TRY	19.34	-96.99
Alvarez-Aquino et al. 2004	*Fagus grandifolia subsp. Mexicana*	recruitment	-2.97	2.56	1.01	*	Greene & Johnson 1994	19.34	-96.99

Alvarez-Aquino et al. 2004	*Symplocos coccinea*	recruitment	-0.96	0.86	1.36	*	Saldaña-Acosta et al. 2008	19.34	-96.99
Andreazzi et al. 2012	*Attalea humilis*	dispersal	-1.73	0.34	4.42			-23.15	-45.03
Andreazzi et al. 2012	*Attalea humilis*	pollination	1.37	0.3	4.42			-23.15	-45.03
Andreazzi et al. 2012	*Attalea humilis*	predation	-1.09	0.28	4.42			-23.15	-45.03
Andreazzi et al. 2012	*Attalea humilis*	predation	0.07	0.23	4.42			-23.15	-45.03
Andreazzi et al. 2012	*Attalea humilis*	predation	-1.37	0.3	4.42			-23.15	-45.03
Anzures-Dadda et al. 2011	*Brosimum alicastrum*	recruitment	0.56	1.31	1.7	*	TRY	17.78	-93.22
Anzures-Dadda et al. 2011	*Cordia alliodora*	recruitment	0.54	1.29	0.42	*	TRY	17.78	-93.22
Anzures-Dadda et al. 2011	*Dialium guianense*	recruitment	-1.85	4.41	1.01	*	TRY	17.78	-93.22
Anzures-Dadda et al. 2011	*Manilkara zapota*	recruitment	-0.46	1.21	1.99	+	TRY, OFarrill et al. 2011	17.78	-93.22
Anzures-Dadda et al. 2011	*Nectandra ambigens*	recruitment	0.14	1.02	1.96	*	TRY	17.78	-93.22
Anzures-Dadda et al. 2011	*Quararibea funebris*	recruitment	-0.14	1.02	1.57	*	TRY	17.78	-93.22
Anzures-Dadda et al. 2011	*Spondias mombin*	recruitment	0.81	1.66	2.21	*	TRY	17.78	-93.22
Asbjornsen et al. 2004	*Dodonaea viscosa*	recruitment	-0.23	0.68	0.31	+	Burrows et al. 1995	17	-96
Asbjornsen et al. 2004	*Pinus pseudostrobus var. apulcensis*	recruitment	0.15	0.67	0.47	*	TRY	17	-96
Asbjornsen et al. 2004	*Rhus virens*	recruitment	-0.01	0.67	0.49	*	TRY	17	-96
Ashworth et al. 2015	*Acacia caven*	recruitment	-2.22	1.72	0.76	*	TRY	-29.75	-64.00
Ashworth and Marti 2011	*Acacia caven*	pollination	0.08	0.67	0.72	*	TRY	-29.75	-64
Athayde and Morellato 2014	*Anadenanthera peregrina*	pollination	-3.48	0.06	1		Encyclopedia of Life	-22.18	-47.87
Athayde and Morellato 2014	*Anadenanthera peregrina*	recruitment	-0.4	0.1	1		Encyclopedia of Life	-22.18	-47.87
Avalos et al. 2013	*Euterpe precatoria*	recruitment	-0.6	1.36	1.1		Homeier et al. 2002	10.32	-83.87
Avalos et al. 2013	*Euterpe precatoria*	recruitment	-0.05	1	1.1		Homeier et al. 2002	10.32	-83.87
Babweteera & Brown 2009	*Celtis zenkeri*	dispersal	-1.17	0.96	1			0.92	31.69
Babweteera & Brown 2009	*Chrysophyllum albidum*	dispersal	-1.42	1.1	2.4	+	Oyelade et al. 2005	0.92	31.69
Babweteera & Brown 2009	*Cordia millenii*	dispersal	-2.07	1.58	4			0.92	31.69
Babweteera & Brown 2009	*Ricinodendron heudelotii*	dispersal	-0.81	0.81	1.88	*	TRY	0.92	31.69
Babweteera 2009	*Cordia millenii*	dispersal	-0.7	0.77	4			0.92	31.69
Bagchi et al. 2011	*Parashorea malaanonan*	predation	0	0.2	1.98	*	TRY	4.97	118.8
Barbeta et al. 2011	*Fagus sylvatica*	recruitment	-3.12	0.26	0.9	*	TRY	41.79	2.41
Barrera Zambrano et al. 2008	*Apeiba glabra*	dispersal	-1.79	0.53	0.25			-3.41	-70.16

Barrera Zambrano et al. 2008	*Apeiba glabra*	dispersal	-0.29	0.34	0.25			-3.41	-70.16
Barrera Zambrano et al. 2008	*Hymenaea oblongifolia*	dispersal	0.79	0.37	1.95			-3.41	-70.16
Barrera Zambrano et al. 2008	*Hymenaea oblongifolia*	dispersal	-0.14	0.02	1.95			-3.41	-70.16
Beckman and Muller-Landau 2007	*Cordia bicolor*	dispersal	-0.61	0.36	0.77	*		9.12	-79.77
Beckman and Muller-Landau 2007	*Cordia bicolor*	predation	1.28	0.43	0.77	*		9.12	-79.77
Beckman and Muller-Landau 2007	*Oenocarpus mapora*	dispersal	-3.92	1.42	1.93	*		9.12	-79.77
Beckman and Muller-Landau 2007	*Oenocarpus mapora*	predation	-4.59	1.82	1.93	*		9.12	-79.77
Boissier et al. 2014	*Virola michelii*	dispersal	-1.81	0.17	2.00		Forget and Cuijpers 2008	4.08	-52.67
Boissier et al. 2014	*Virola sp.*	dispersal	-1.16	0.12	2.80			4.08	-52.67
Bose et al. 2014	*Populus tremuloides*	recruitment	3.27	2.96	0.10	+		49.43	-79.31
Bose et al. 2014	*Betula papyrifera*	recruitment	3.20	2.87	0.45	+	Encyclopedia of Life	49.43	-79.31
Bose et al. 2014	*Abies balsamea*	recruitment	-0.36	0.69	1.20	+	Encyclopedia of Life, St-Denis et al. 2013	49.43	-79.31
Bose et al. 2014	*Acer spicatum*	recruitment	-4.95	5.92	2.50		Encyclopedia of Life	49.43	-79.31
Braun and Gottsberger 2012	*Anaxagorea dolichocarpa*	pollination	-0.09	0.67	1.6		Encyclopedia of Life	-7.79	-34.99
Braun and Gottsberger 2012	*Anaxagorea dolichocarpa*	pollination	-0.24	0.68	1.6		Encyclopedia of Life	-7.79	-34.99
Braun et al. 2012	*Paypayrola blanchetiana*	pollination	-2.36	1.86	0.9		Encyclopedia of Life	-7.76	-34.99
Broadhust and Young 2006	*Acacia dealbata*	pollination	-0.5	0.12	0.36	*	TRY	-35.48	149.01
Brodie et al. 2009	*Choerospondias axillaris*	dispersal	-3.29	1.76	2.03	*	TRY	17.12	100.1
Brum et al. 2008	*Oenocarpus bacaba*	recruitment	-2.35	0.37	2.5			-2.5	-60
Brum et al. 2008	*Oenocarpus bacaba*	recruitment	0.82	0.21	2.5			-2.5	-60
Bruna 2002	*Heliconia acuminata*	recruitment	-3.53	2.47	0.7			-2.5	-60
Bruna 2002	*Heliconia acuminata*	recruitment	-5.27	4.78	0.7			-2.5	-60
Camison et al. 2015	*Quercus pyrenaica*	recruitment	1.02	0.97	3.10	+	Encyclopedia of Life, Quero et al. 2007	40.56	-5.95
Campana Camargo et al. 2002	*Buchenavia grandis*	recruitment	1.84	0.89	2.19	*	TRY	-2.55	-60

Campana Camargo et al. 2002	*Buchenavia grandis*	recruitment	0.26	0.51	2.19	*	TRY	-2.55	-60
Campana Camargo et al. 2002	*Cariniana micrantha*	recruitment	-1.69	0.83	0.89	*		-2.55	-60
Campana Camargo et al. 2002	*Cariniana micrantha*	recruitment	-0.77	0.57	0.89	*		-2.55	-60
Campana Camargo et al. 2002	*Caryocar villosum*	recruitment	2.82	1.43	2.96	*		-2.55	-60
Campana Camargo et al. 2002	*Caryocar villosum*	recruitment	8.49	8.89	2.96	*		-2.55	-60
Campana Camargo et al. 2002	*Cochlospermum orinocense*	recruitment	0.48	0.53	0.5	*		-2.55	-60
Campana Camargo et al. 2002	*Cochlospermum orinocense*	recruitment	-0.46	0.52	0.5	*		-2.55	-60
Campana Camargo et al. 2002	*Dinizia excelsa*	recruitment	-0.86	0.59	0.94	*		-2.55	-60
Campana Camargo et al. 2002	*Jacaranda copaia*	recruitment	0.59	0.54	0.29	*	TRY	-2.55	-60
Campana Camargo et al. 2002	*Ochroma pyramidale*	recruitment	0.19	0.5	0.35	*	TRY	-2.55	-60
Campana Camargo et al. 2002	*Parkia multijuga*	recruitment	-2.15	1.04	3.14	*		-2.55	-60
Campana Camargo et al. 2002	*Parkia multijuga*	recruitment	-5.48	4	3.14	*		-2.55	-60
Campana Camargo et al. 2002	*Parkia pendula*	recruitment	-1.24	0.68	0.69	*	TRY	-2.55	-60
Campana Camargo et al. 2002	*Simarouba amara*	recruitment	0.36	0.52	0.85	*	TRY	-2.55	-60
Campana Camargo et al. 2002	*Triplaris weigeltiana*	recruitment	0.76	0.57	0.75	*		-2.55	-60
Campana Camargo et al.	*Triplaris weigeltiana*	recruitment	-0.39	0.52	0.75	*		-2.55	-60

2002									
Chacoff et al. 2004	*Acacia aroma*	pollination	0.23	0.51	0.6		Markl et al. 2012	-26.19	-62.1
Chapman et al. 2003	*Diospyros abyssinica*	predation	-1.08	0.09	0.75		Markl et al. 2012	0.45	30.43
Chinchilla 2009	*Billia rosea*	predation	-1.45	0.46	6			10.3	-84.8
Chinchilla 2009	*Ocotea valeriana*	predation	-2.18	0.62	6.5			10.3	-84.8
Chinchilla 2009	*Ocotea whitei*	predation	-1.84	0.54	4	+	TRY	10.3	-84.8
Chinchilla 2009	*Panopsis costaricensis*	predation	-2.46	0.7	5			10.3	-84.8
Christianini and Oliviera 2013	*Erythroxylum pelleterianum*	predation	0.56	0.24	0.55	*	Christianini et al 2007	-22.2	-47.85
Christianini and Oliviera 2013	*Erythroxylum pelleterianum*	recruitment	-0.14	0.23	0.55	*	Christianini et al 2007	-22.2	-47.85
Cordeiro and Howe 2003	*Leptonychia usambarensis*	dispersal	-0.98	0.18	0.14	+	TRY	-4	38
Cordeiro and Howe 2003	*Leptonychia usambarensis*	dispersal	-0.91	0.18	0.14	+	TRY	-4	38
Cordeiro and Howe 2003	*Leptonychia usambarensis*	dispersal	-0.61	0.17	0.14	+	TRY	-4	38
Cordeiro et al. 2009	*Leptonychia usambarensis*	predation	-0.53	0.53	0.14	+	TRY	-4	38
Cordeiro et al. 2009	*Leptonychia usambarensis*	recruitment	0.28	0.51	0.14	+	TRY	-4	38
Cramer et al. 2007a	*Bocageopsis multiflora*	dispersal	0.38	0.52	0.5	+	TRY, Markl et al. 2012	-2.5	-60
Cramer et al. 2007a	*Bocageopsis multiflora*	dispersal	-0.24	0.51	0.5	+	TRY, Markl et al. 2013	-2.5	-60
Cramer et al. 2007a	*Duckeodendron cestroides*	dispersal	-2.79	0.9	5.9			-2.5	-60
Cramer et al. 2007a	*Duckeodendron cestroides*	dispersal	-1.98	0.64	5.9			-2.5	-60
Cramer et al. 2007a	*Duckeodendron cestroides*	recruitment	0.09	0.37	5.9			-2.5	-60
Cramer et al. 2007a	*Duckeodendron cestroides*	recruitment	-1.28	0.48	5.9			-2.5	-60
Cramer et al. 2007b	*Duckeodendron cestroides*	dispersal	-0.42	0.38	5.9			-2.5	-60
Cramer et al. 2007b	*Duckeodendron cestroides*	dispersal	-0.66	0.4	5.9			-2.5	-60
Cunningham 2000	*Acacia brachybotrya*	pollination	-0.77	0.57	0.45	*	TRY	-33.51	146.17
Cunningham 2000	*Eremophila glabra*	pollination	-1.54	0.77	0.7	*	TRY	-33.52	146.18
Cunningham 2000	*Senna artemisioides*	pollination	0.79	0.57	0.4	*	TRY	-33.53	146.19
daSilva et al. 2011	*Syagrus romanzoffiana*	predation	-1.03	0.23	2.5	+	TRY	-28.2	-48.5
daSilva et al. 2011	*Syagrus romanzoffiana*	recruitment	-0.22	0.2	2.5	+	TRY	-28.2	-48.5
Dausmann et al. 2008	*Strychnos madagascariensis*	recruitment	0.66	1.43	1.9	*		-20.07	44.67
del-Val et al. 2007	*Aextoxicon punctatum*	recruitment	0	0.5	1.11	*	TRY	-30.67	-71.5

Donatti et al. 2009	*Astrocaryum aculeatissimum*	dispersal	-1.22	0.41	4.27	+	Galetti et al 2010	-24	-46.39
Donatti et al. 2009	*Astrocaryum aculeatissimum*	predation	-1.85	0.46	4.27	+	Galetti et al 2010	-24	-46.39
Donatti et al. 2009	*Astrocaryum aculeatissimum*	recruitment	-1.74	0.47	4.27	+	Galetti et al 2010	-24	-46.39
Donoso et al. 2003	*Nothofagus glauca*	predation	4.47	0.24	1.8	+	TRY	-36.58	-72.5
Donoso et al. 2003	*Nothofagus glauca*	predation	4.75	0.44	1.8	+	TRY	-36.58	-72.5
Donoso et al. 2003	*Nothofagus obliqua*	predation	3.41	0.17	0.6	+	TRY	-36.58	-72.5
Donoso et al. 2003	*Nothofagus obliqua*	predation	1.42	0.16	0.6	+	TRY	-36.58	-72.5
Dunley et al. 2009	*Byrsonima sericea*	pollination	2.82	2.37	0.5		Encyclopedia of Life	-22.94	-42.05
Dunley et al. 2009	*Byrsonima sericea*	pollination	0.51	0.72	0.5		Encyclopedia of Life	-22.94	-42.05
Fadini et al. 2009	*Euterpe edulis*	dispersal	-0.5	0.14	1.5	*	Galetti et al 2010	-23.56	-45.29
Fadini et al. 2009	*Euterpe edulis*	dispersal	0.01	0.13	1.5	*	Galetti et al 2010	-23.56	-45.29
Fadini et al. 2009	*Euterpe edulis*	predation	5.12	0.59	1.5	*	Galetti et al 2010	-23.56	-45.29
Farwig et al 2008	*Prunus africana*	predation	0.11	0.45	0.81	+	TRY	0.29	34.79
Farwig et al. 2006	*Prunus africana*	dispersal	0.77	0.16	0.81	+	TRY	0.29	34.79
Farwig et al. 2006	*Prunus africana*	dispersal	0.38	0.15	0.81	+	TRY	0.29	34.79
Figueroa-Esquivel et al. 2009	*Dendropanax arboreus*	dispersal	0.11	0.4	0.45	+	TRY, Graham et al. 2002	18.6	-95.06
Figueroa-Esquivel et al. 2009	*Dendropanax arboreus*	dispersal	-0.89	0.12	0.45	+	TRY, Graham et al. 2002	18.6	-95.06
Fleury and Galetti 2006	*Syagrus romanzoffiana*	predation	1.14	0.95	2.50	+	TRY, daSilva et al. 2011	-22.66	-48.18
Fleury and Galetti 2006	*Syagrus romanzoffiana*	predation	-0.03	0.67	2.50	+	TRY, daSilva et al. 2011	-22.66	-48.18
Fleury and Galetti 2004	*Euterpe edulis*	predation	-0.21	0.68	1.5	*	Galetti et al 2010	-22.41	-48.95
Fleury and Galetti 2004	*Syagrus romanzoffiana*	predation	1.36	1.06	2.5	+	TRY, daSilva et al. 2011	-22.41	-48.95
Forget and Cuijpers 2008	*Virola kwatae*	predation	0.61	0.54	2.8	+		5.02	-55.57
Forget and Cuijpers 2008	*Virola kwatae*	predation	0.87	0.59	2.8	+		5.02	-55.57
Forget and Jansen 2007	*Carapa surinamensis*	dispersal	-0.38	0.46	3.75			-5.35	-54.45
Forget and Jansen 2007	*Carapa surinamensis*	predation	-0.65	0.49	3.75			-5.35	-54.45
Forget and Jansen 2007	*Carapa surinamensis*	predation	-0.45	0.47	3.75			-5.35	-54.45
Forget et al. 2001	*Carapa procera*	recruitment	-0.1	0.1	4	+		5.27	-52.92
Forget et al. 2001	*Manilkara bidentata*	recruitment	-1.44	0.13	2.25			5.27	-52.92
Forget et al. 2001	*Pradosia cochlearia*	recruitment	0.04	0.1	3	+		5.27	-52.92
Franceschinelli et al. 2015	*Cabralea canjerana*	pollination	0.95	0.86	2.80	*		-22.71	-45.93
Franceschinelli et al. 2015	*Cabralea canjerana*	pollination	-0.82	0.81	2.80	*		-22.71	-45.93

Galetti et al. 2015	*Euterpe edulis*	predation	-0.04	0.58	1.54	+	Galetti et al 2010	-25.18	-47.98
Galetti at al. 2006	*Astrocaryum aculeatissimum*	dispersal	-5.02	6.17	4.27	+	Galetti et al 2010	-23.15	-45.03
Galetti at al. 2006	*Astrocaryum aculeatissimum*	predation	5.1	26.96	4.27	+	Galetti et al 2010	-23.15	-45.03
Galetti at al. 2006	*Astrocaryum aculeatissimum*	predation	-1.05	2.09	4.27	+	Galetti et al 2010	-23.15	-45.03
Galetti at al. 2006	*Astrocaryum aculeatissimum*	predation	-4.31	7.6	4.27	+	Galetti et al 2010	-23.15	-45.03
Galetti at al. 2006	*Astrocaryum aculeatissimum*	recruitment	0.5	0.72	4.27	+	Galetti et al 2010	-23.15	-45.03
Galetti at al. 2006	*Astrocaryum aculeatissimum*	recruitment	-0.51	0.72	4.27	+	Galetti et al 2010	-23.15	-45.03
Gallegos et al. 2014	*Clusia trochiformis*	predation	-0.37	0.34	0.39	+	Personal comm.	-16.4	-67.52
Gallegos et al. 2014	*Clusia trochiformis*	predation	0.54	0.35	0.39	+	Personal comm.	-16.4	-67.52
Gallegos et al. 2015	*Clusia lechleri*	recruitment	-0.04	0.2	0.41	+	Personal comm.	-16.41	-67.53
Gallegos et al. 2015	*Clusia lechleri*	recruitment	0.42	0.21	0.41	+	Personal comm.	-16.41	-67.53
Gallegos et al. 2015	*Clusia sphaerocarpa*	recruitment	0.35	0.2	0.64	+	Personal comm.	-16.41	-67.53
Gallegos et al. 2015	*Clusia sphaerocarpa*	recruitment	-0.72	0.22	0.64	+	Personal comm.	-16.41	-67.53
Gallegos et al. 2015	*Clusia sphaerocarpa*	recruitment	-0.38	0.2	0.64	+	Personal comm.	-16.41	-67.53
Gallegos et al. 2015	*Clusia trochiformis*	recruitment	0.34	0.2	0.39	+	Personal comm.	-16.41	-67.53
Gallegos et al. 2015	*Clusia trochiformis*	recruitment	0.31	0.2	0.39	+	Personal comm.	-16.41	-67.53
Gallegos et al. 2015	*Clusia trochiformis*	recruitment	0.33	0.2	0.39	+	Personal comm.	-16.41	-67.53
Gallegos Ayala 2014	*Hedyosmum angustifolium*	recruitment	-0.53	0.21	0.31	+	Personal comm.	-16.41	-67.53
Gallegos Ayala 2014	*Hedyosmum racemosum*	recruitment	0.44	0.21	0.3	+	Personal comm.	-16.41	-67.53
Gallegos Ayala 2014	*Miconia boliviensis*	recruitment	-0.12	0.2	0.09	+	Personal comm.	-16.41	-67.53
Gallegos Ayala 2014	*Myrcia paivae*	recruitment	-0.22	0.2	0.55	+	Personal comm.	-16.41	-67.53
Gallegos Ayala 2014	*Myrsine coriacea*	recruitment	0.22	0.2	0.26	+	Personal comm.	-16.41	-67.53
Gallegos Ayala 2014	*Palicourea buchtienii*	recruitment	-0.36	0.2	0.29	+	Personal comm.	-16.41	-67.53
Gallegos Ayala 2014	*Psychotria bangii*	recruitment	0.29	0.2	0.35	+	Personal comm.	-16.41	-67.53
Ghazoul and McLeish 2001	*Anacardium excelsum*	pollination	-0.72	0.49	2.24	*	TRY	10.45	-85.1
Ghazoul and McLeish 2001	*Anacardium excelsum*	pollination	-1.77	0.42	2.24	*	TRY	10.45	-85.1
Ghazoul and McLeish 2001	*Pentacme siamensis*	pollination	-1.23	0.28	2		Marod et al. 2002	15.6	99.33
Ghazoul et al. 1998	*Pentacme siamensis*	pollination	-1.19	0.27	2		Marod et al. 2002	15.6	99.33
Ghazoul et al. 1998	*Pentacme siamensis*	predation	-0.71	0.1	2		Marod et al. 2002	15.6	99.33
Ghazoul et al. 1998	*Pentacme siamensis*	predation	-0.17	0.1	2		Marod et al. 2002	15.6	99.33
Gonzalez-Di Pierro et al.	*Ampelocera hottlei*	recruitment	-0.69	0.77	1.2	+	TRY	16.1	-90.88

2011									
Gonzalez-Varo 2010	*Myrtus communis*	dispersal	-0.29	0.46	0.36	*		36.91	-6.25
Gonzalez-Varo et al. 2012	*Myrtus communis*	pollination	0.61	0.54	0.36	*		36.91	-6.25
Gonzalez-Varo et al. 2012	*Myrtus communis*	predation	-0.49	0.53	0.36	*		36.91	-6.25
Gonzalez-Varo et al. 2012	*Myrtus communis*	recruitment	-0.77	0.57	0.36	*		36.91	-6.25
Gonzalez-Varo et al. 2012	*Myrtus communis*	recruitment	-1.44	0.65	0.36	*		36.91	-6.25
Graham et al. 2002	*Bursera simaruba*	dispersal	0.37	0.22	0.75	+	TRY	19.54	-96.93
Graham et al. 2002	*Bursera simaruba*	dispersal	-0.02	0.22	0.75	+	TRY	19.54	-96.93
Graham et al. 2002	*Dendropanax arboreus*	dispersal	0.06	0.36	0.45	+	TRY	19.54	-96.93
Graham et al. 2002	*Dendropanax arboreus*	dispersal	0.72	0.39	0.45	+	TRY	19.54	-96.93
Guariguata et al. 2000	*Carapa nicaraguensis*	dispersal	-1.39	0.17	4.5			16.1	-90.88
Guariguata et al. 2000	*Lecythis ampla*	dispersal	-1.08	0.16	5.25			16.1	-90.88
Guariguata et al. 2000	*Minquartia guianensis*	dispersal	-0.05	0.13	2.2			16.1	-90.88
Guariguata et al. 2000	*Otoba novogranatensis*	dispersal	0.42	0.14	2.36			16.1	-90.88
Guariguata et al. 2000	*Virola koschnyi*	dispersal	2.24	0.23	2			16.1	-90.88
Guariguata et al. 2000	*Welfia regia*	dispersal	0.34	0.14	2.28	+	Beckmann & Muller-Landau 2007	16.1	-90.88
Guariguata et al. 2002	*Carapa guianensis*	dispersal	0	0.13	4.5	+	TRY	16.1	-90.88
Guariguata et al. 2002	*Dipteryx panamensis*	dispersal	2.43	0.25	7	+	Beckmann & Mueller-Landau 2007	16.1	-90.88
Guariguata et al. 2002	*Dipteryx panamensis*	dispersal	0.5	0.14	7	+	Beckmann & Mueller-Landau 2007	16.1	-90.88
Guariguata et al. 2002	*Dipteryx panamensis*	predation	7.12	1.1	7	+	Beckmann & Mueller-Landau 2007	16.1	-90.88
Guerrero and Bustamente 2009	*Aristolochia chilensis*	recruitment	1	0.08	0.3	*	TRY	-35.97	-72.7
Guerrero and Bustamente 2009	*Aristolochia chilensis*	recruitment	1.95	0.26	0.3	*	TRY	-35.97	-72.7
Guerrero and Bustamente 2009	*Aristolochia chilensis*	recruitment	1.62	0.23	0.3	*	TRY	-35.97	-72.7
Guerrero and Bustamente	*Cryptocarya alba*	recruitment	-0.04	0.07	1.51	*	TRY	-35.97	-72.7

2009									
Guerrero and Bustamente 2009	*Cryptocarya alba*	recruitment	-1.15	0.2	1.51	*	TRY	-35.97	-72.7
Guerrero and Bustamente 2009	*Cryptocarya alba*	recruitment	-1.65	0.23	1.51	*	TRY	-35.97	-72.7
Guerrero and Bustamente 2009	*Nothofagus glauca*	recruitment	-0.24	0.07	1.8	+	TRY, Donoso et al. 2003	-35.97	-72.7
Guerrero and Bustamente 2009	*Nothofagus glauca*	recruitment	0.39	0.17	1.8	+	TRY, Donoso et al. 2003	-35.97	-72.7
Guerrero and Bustamente 2009	*Nothofagus obliqua*	recruitment	0.94	0.08	0.6	+	TRY, Donoso et al. 2003	-35.97	-72.7
Guerrero and Bustamente 2009	*Nothofagus obliqua*	recruitment	0.35	0.17	0.6	+	TRY, Donoso et al. 2003	-35.97	-72.7
Guerrero and Bustamente 2009	*Nothofagus obliqua*	recruitment	0.69	0.18	0.6	+	TRY, Donoso et al. 2003	-35.97	-72.7
Guiterrez-Granados et al. 2011	*Swietenia macrophylla*	predation	0.41	0.7	1.32	*	TRY	19.5	-88.17
Guiterrez-Granados et al. 2011	*Swietenia macrophylla*	predation	-0.72	0.78	1.32	*	TRY	19.5	-88.17
Guiterrez-Granados et al. 2011	*Swietenia macrophylla*	predation	0.05	0.67	1.32	*	TRY	19.5	-88.17
Guiterrez-Granados et al. 2011	*Swietenia macrophylla*	recruitment	0.62	0.75	1.32	*	TRY	19.5	-88.17
Guiterrez-Granados et al. 2011	*Swietenia macrophylla*	recruitment	0.75	0.79	1.32	*	TRY	19.5	-88.17
Gutierrez-Granados and Dirzo 2010	*Manilkara zapota*	dispersal	-1.27	0.16	1.99	+	TRY, OFarrill et al. 2011	19.5	-88.17
Gutierrez-Granados and Dirzo 2010	*Manilkara zapota*	recruitment	1.81	0.15	1.99	+	TRY, OFarrill et al. 2011	19.5	-88.17
Hanson et al. 2006	*Dipteryx panamensis*	predation	-0.61	0.26	7	+	Beckmann & Muller-Landau 2007, Guariguata	10.15	-83.99

							et al. 2002		
Hanson et al. 2006	*Dipteryx panamensis*	recruitment	0.48	0.07	7	+	Beckmann & Muller-Landau 2007, Guariguata et al. 2002	10.15	-83.99
Herrerias-Diego et al. 2006	*Ceiba aesculifolia*	pollination	0.37	0.05	0.8	+	TRY, Markl et al. 2012	19.5	-105.05
Hoebee et al. 2007	*Sorbus torminalis*	pollination	-1.18	0.07	0.59	*	TRY	47.54	8.645
Holbrook and Loiselle 2009	*Virola flexuosa*	dispersal	-4.89	1.65	1.5			0.65	-76.28
Holbrook and Loiselle 2009	*Virola flexuosa*	dispersal	-0.2	0.36	1.5			0.65	-76.28
Holl and Lulow 1997	*Ardisia revoluta*	predation	0.54	0.35	0.51	+		8.95	-82.83
Holl and Lulow 1997	*Ardisia revoluta*	predation	1.83	0.54	0.51	+		8.95	-82.83
Holl and Lulow 1997	*Calophyllum brasiliense*	predation	-1.19	0.42	1.92	+		8.95	-82.83
Holl and Lulow 1997	*Chamaedorea allenii*	predation	-0.76	0.37	0.77	+		8.95	-82.83
Holl and Lulow 1997	*Chamaedorea allenii*	predation	-0.59	0.35	0.77	+		8.95	-82.83
Holl and Lulow 1997	*Cinnamomum triplinerve*	predation	1.06	0.4	1.57	+		8.95	-82.83
Holl and Lulow 1997	*Cinnamomum triplinerve*	predation	-1.36	0.44	1.57	+		8.95	-82.83
Holl and Lulow 1997	*Heliconia tortuosa*	predation	-2.49	0.71	0.93	+		8.95	-82.83
Holl and Lulow 1997	*Heliconia tortuosa*	predation	-0.44	0.34	0.93	+		8.95	-82.83
Holl and Lulow 1997	*Hieronyma oblonga*	predation	-1.25	0.43	0.59	+		8.95	-82.83
Holl and Lulow 1997	*Hieronyma oblonga*	predation	6.09	2.57	0.59	+		8.95	-82.83
Holl and Lulow 1997	*Ocotea floribunda*	predation	-0.33	0.34	1.68	+		8.95	-82.83
Holl and Lulow 1997	*Pseudolmedia spuria*	predation	0.98	0.39	1.63	+		8.95	-82.83
Holl and Lulow 1997	*Sideroxylon portoricense*	predation	-1.9	0.55	1.55	+		8.95	-82.83
Iob and Vieira 2008	*Araucaria angustifolia*	predation	-0.34	0.1	3.06	*	TRY	-29.49	-50.21
Ismail et al. 2014	*Dysoxylum malabaricum*	recruitment	-1.66	0.82	2.19	*	TRY	12.91	75.59
Ismail et al. 2014	*Dysoxylum malabaricum*	recruitment	-0.28	0.51	2.19	*	TRY	12.91	75.59
Jorge and Howe 2009	*Astrocaryum aculeatum*	dispersal	0.96	0.08	3.6	+	TRY, Markl et al. 2012	-2.44	-60.04
Jorge and Howe 2009	*Astrocaryum aculeatum*	dispersal	0.53	0.12	3.6	+	TRY, Markl et al. 2012	-2.44	-60.04
Jorge and Howe 2009	*Astrocaryum aculeatum*	predation	0.96	0.08	3.6	+	TRY, Markl et al. 2012	-2.44	-60.04
Khan et al. 2005	*Elaeocarpus serratus*	dispersal	-4.4	1.94	1.7	+		27.14	95.5
Khan et al. 2005	*Elaeocarpus serratus*	dispersal	0.18	0.4	1.7	+		27.14	95.5
Khan et al. 2005	*Elaeocarpus serratus*	pollination	-1.49	0.58	1.7	+		27.14	95.5

Khan et al. 2005	*Elaeocarpus serratus*	predation	13.74	15.42	1.7	+		27.14	95.5
Kirika et al. 2008	*Ficus thonningii*	dispersal	-0.82	0.18	0.12	+	TRY	0.25	34.86
Kirika et al. 2008	*Ficus thonningii*	dispersal	-0.51	0.17	0.12	+	TRY	0.25	34.86
Lefevre and Rodd 2009	*Psychotria mapourioides*	dispersal	-0.12	0.17	0.25			11.28	-60.62
Lefevre and Rodd 2009	*Psychotria muscosa*	dispersal	-0.41	0.17	0.3			11.28	-60.62
Lehouck et al. 2009 a	*Xymalos monospora*	dispersal	2.06	0.27	0.96	+	TRY	-3.33	38.25
Lehouck et al. 2009 a	*Xymalos monospora*	dispersal	0.61	0.18	0.96	+	TRY	-3.33	38.25
Lehouck et al. 2009 b	*Xymalos monospora*	recruitment	-0.3	0.51	0.96	+	TRY	-3.33	38.25
Leite et al. 2013	*Miconia albicans*	predation	-1.88	0.31	0.33	*	Christianini et al 2007	-22.83	-47.11
Lopes and Buzato 2007	*Psychotria suterella*	pollination	2.04	0.98	0.4	*		-23.73	-47.05
Mendes et al. 2015	*Syagrus romanzoffiana*	predation	0.26	0.86	2.50	+	TRY, daSilva et al. 2011	-22.66	-48.18
Menke et al. 2012	*Antiaris toxicaria*	dispersal	1.01	0.89	1.25	+	TRY	0.29	34.79
Menke et al. 2012	*Antiaris toxicaria*	dispersal	0.52	0.72	1.25	+	TRY	0.29	34.79
Menke et al. 2012	*Bridelia micrantha*	dispersal	0.66	0.76	0.86	+	TRY	0.29	34.79
Menke et al. 2012	*Bridelia micrantha*	dispersal	0.26	0.68	0.86	+	TRY	0.29	34.79
Menke et al. 2012	*Ficus lutea*	dispersal	-0.53	0.73	0.15			0.29	34.79
Menke et al. 2012	*Ficus lutea*	dispersal	0.82	0.81	0.15			0.29	34.79
Menke et al. 2012	*Ficus thonningii*	dispersal	2.79	2.34	0.12	+	TRY	0.29	34.79
Menke et al. 2012	*Ficus thonningii*	dispersal	1.16	0.95	0.12	+	TRY	0.29	34.79
Menke et al. 2012	*Harungana madagascariensis*	dispersal	2.78	2.32	0.28	+	TRY	0.29	34.79
Menke et al. 2012	*Harungana madagascariensis*	dispersal	1.35	1.06	0.28	+	TRY	0.29	34.79
Menke et al. 2012	*Polyscias fulva*	dispersal	0.54	0.73	0.36			0.29	34.79
Menke et al. 2012	*Polyscias fulva*	dispersal	-0.34	0.69	0.36			0.29	34.79
Menke et al. 2012	*Prunus africana*	dispersal	1.27	1.01	0.81	+	TRY	0.29	34.79
Menke et al. 2012	*Prunus africana*	dispersal	-0.04	0.67	0.81	+	TRY	0.29	34.79
Menke et al. 2012	*Trilepisium madagascariense*	dispersal	-0.5	0.72	1.57	+	TRY	0.29	34.79
Naniwadekaret al. 2015	*Phoebe sp.*	dispersal	-0.64	0.40	2.78			27.38	96.25
Naniwadekaret al. 2015	*Beilschmiedia assamica*	dispersal	-1.41	0.49	3.43			27.38	96.25
Naniwadekaret al. 2015	*Dysoxylum sp.*	dispersal	-0.78	0.41	2.83			27.38	96.25
Naniwadekaret al. 2015	*Canarium strictum*	dispersal	-0.57	0.39	3.38			27.38	96.25
Naniwadekaret al. 2015	*Alseodaphne petiolaris*	dispersal	-0.83	0.42	3.56			27.38	96.25

Naniwadekaret al. 2015	*Phoebe sp.*	recruitment	-4.09	1.39	2.78			27.38	96.25
Naniwadekaret al. 2015	*Beilschmiedia assamica*	recruitment	-12.57	9.93	3.43			27.38	96.25
Naniwadekaret al. 2015	*Dysoxylum sp.*	recruitment	-5.87	2.45	2.83			27.38	96.25
Naniwadekaret al. 2015	*Phoebe sp.*	recruitment	5.78	2.39	2.78			27.38	96.25
Naniwadekaret al. 2015	*Beilschmiedia assamica*	recruitment	-13.86	11.99	3.43			27.38	96.25
Naniwadekaret al. 2015	*Dysoxylum sp.*	recruitment	-1.91	0.59	2.83			27.38	96.25
Neuschulz et al. 2011	*Celtis africana*	dispersal	0.77	0.37	0.24	+	TRY, Markl et al. 2012	-30.47	30.44
Neuschulz et al. 2011	*Celtis africana*	dispersal	0.42	0.34	0.24	+	TRY, Markl et al. 2012	-30.47	30.44
Neuschulz et al. 2013	*Celtis africana*	pollination	0.37	0.34	0.24	+	TRY, Markl et al. 2012	-30.47	30.44
Neuschulz et al. 2013	*Celtis africana*	pollination	-0.66	0.4	0.24	+	TRY, Markl et al. 2012	-30.47	30.44
Nystrand and Granstroem 2000	*Pinus sylvestris*	predation	-0.66	0.15	0.36	*	TRY	63.98	19.78
O'Connell et al. 2006	*Picea glauca*	pollination	-1.23	0.07	0.22	*		46.33	-80.17
Quesada et al. 2003	*Ceiba aesculifolia*	pollination	-2.49	0.21	0.8	+	TRY, Markl et al. 2012	19.5	-105.05
Quesada et al. 2004	*Ceiba aesculifolia*	pollination	-0.34	0.16	0.8	+	TRY, Markl et al. 2012	12.89	-91.64
Quintana-Ascencio et al. 2004	*Abies guatemalensis*	recruitment	1.03	2.06	3		Andersen et al. 2006	16.73	-92.63
Quintana-Ascencio et al. 2004	*Myrsine juergensenii*	recruitment	1.19	2.42	1.02	*	Saldaña-Acosta et al. 2008	16.73	-92.63
Quintana-Ascencio et al. 2004	*Pinus ayacahuite*	recruitment	4.97	25.72	0.66	*	TRY	16.73	-92.63
Quintana-Ascencio et al. 2004	*Pinus pseudostrobus*	recruitment	1.93	4.73	0.47	*	TRY	16.73	-92.63
Quintana-Ascencio et al. 2004	*Ternstroemia lineata*	recruitment	0.42	1.18	1.48	*	Saldaña-Acosta et al. 2008	16.73	-92.63
Ramos and Santos 2006	*Psychotria tenuinervis*	pollination	-0.19	0.4	4.19	*	Ramos et al. 2007	-22.83	-42.47
Ramos and Santos 2006	*Psychotria tenuinervis*	pollination	-0.03	0.4	4.19	*	Ramos et al. 2007	-22.83	-42.47
Ratiarison and Forget 2005	*Tetragastris altissima*	dispersal	-0.45	0.47	1.6	+	TRY	4.85	-53.07
Ratiarison and Forget 2005	*Tetragastris altissima*	dispersal	-1.12	0.57	1.6	+	TRY	4.85	-53.07
Rivett et al. 2016	*Chlorocardium rodiei*	recruitment	0.47	0.10	6.31	*		4.67	-58.68
Rivett et al. 2016	*Eperua falcata*	recruitment	2.92	0.22	3.36	*		4.67	-58.68

Rivett et al. 2016	*Dicorynia guianensis*	recruitment	-0.67	0.11	1.82	*		4.67	-58.68
Rivett et al. 2016	*Goupia glabra*	recruitment	10.40	1.59	0.18	*		4.67	-58.68
Rodriguez-Oseguera et al. 2013	*Stenocereus quevedonis*	pollination	-4.3	0.41	0.2			19.07	-102.36
Roldan and Simonetti 2000	*Astrocaryum murumuru*	dispersal	-5.53	0.52	3.75	+	TRY	-14.67	-66.34
Roldan and Simonetti 2000	*Astrocaryum murumuru*	predation	-1.18	0.12	3.75	+	TRY	-14.67	-66.34
Saavedra 2015	*Clusia sp.*	recruitment	0.3	0.08	0.48	+	Personal comm.	-16.41	-67.53
Saavedra 2015	*Clusia sp.*	recruitment	0.76	0.09	0.48	+	Personal comm.	-16.41	-67.53
Santos and Telleria 1994	*Juniperus thurifera*	dispersal	-0.65	0.6	0.48	+	TRY	42.08	-3.75
Santos and Telleria 1994	*Juniperus thurifera*	predation	1.16	0.73	0.48	*	TRY	42.08	-3.75
Santos and Telleria 1994	*Juniperus thurifera*	recruitment	-0.8	0.68	0.48	+	TRY	42.08	-3.75
Santos and Telleria 1997	*Quercus ilex*	predation	0.59	0.45	2.96	+	TRY, Markl et al. 2012	42.02	-3.76
Santos and Telleria 1997	*Quercus ilex*	recruitment	0.91	0.48	2.96	+	TRY, Markl et al. 2012	42.02	-3.76
Santos and Telleria 1997	*Quercus ilex*	recruitment	-2.17	0.69	2.96	+	TRY, Markl et al. 2012	42.02	-3.76
Serio-Silva and Rico-Gray 2002	*Ficus americana*	dispersal	1.59	0.25	0.15			18.35	-95.06
Serio-Silva and Rico-Gray 2002	*Ficus aurea*	dispersal	0.44	0.23	0.15			18.35	-95.06
Sethi and Howe 2009	*Chisocheton cumingianus subsp. balansae*	dispersal	-0.45	0.1	3.1	+	TRY	27.09	92.86
Sethi and Howe 2009	*Chisocheton cumingianus subsp. balansae*	recruitment	-1.52	0.13	3.1	+	TRY	27.09	92.86
Sethi and Howe 2009	*Chisocheton cumingianus subsp. balansae*	recruitment	-1.03	0.11	3.1	+	TRY	27.09	92.86
Sethi and Howe 2009	*Dysoxylum gotadhora*	dispersal	-0.2	0.1	2.2	+	TRY	27.09	92.86
Sethi and Howe 2009	*Dysoxylum gotadhora*	recruitment	-1.41	0.13	2.2	+	TRY	27.09	92.86
Sethi and Howe 2009	*Dysoxylum gotadhora*	recruitment	-0.81	0.11	2.2	+	TRY	27.09	92.86
Sethi and Howe 2009	*Polyalthia simiarum*	dispersal	0.06	0.1	2.18	*	TRY	27.09	92.86
Sethi and Howe 2009	*Polyalthia simiarum*	recruitment	-1.88	0.15	2.18	*	TRY	27.09	92.86
Sethi and Howe 2009	*Polyalthia simiarum*	recruitment	-1.3	0.12	2.18	*	TRY	27.09	92.86
Shen et al. 2012	*Corylus heterophylla*	predation	-0.17	0.1	1.58	+		47.06	129.01

Shen et al. 2012	*Corylus mandshurica*	predation	0.03	0.1	1.43	+		47.06	129.01
Shen et al. 2012	*Juglans mandshurica*	predation	0.03	0.1	4.19	+		47.06	129.01
Shen et al. 2012	*Pinus koraiensis*	predation	-0.1	0.1	1.6	+		47.06	129.01
Shen et al. 2012	*Quercus mongolica*	predation	-0.34	0.1	2.52	+		47.06	129.01
Sica et al. 2014	*Syagrus romanzoffiana*	recruitment	-1.60	0.60	2.50	+	TRY, daSilva et al. 2011	-25.67	-54.40
Smith-Ramirez and Armesto 2003	*Embothrium coccineum*	pollination	0.72	0.18	0.4	*	TRY	-41.83	-73.58
Smith-Ramirez and Armesto 2003	*Embothrium coccineum*	pollination	-2.23	0.25	0.4	*	TRY	-41.83	-73.58
Sork et al. 1987	*Gustavia superba*	recruitment	0.9	0.05	2.93	*	TRY	9.12	-79.85
Suarez-Gonzalez and Good 2014	*Prunus virginiana*	pollination	-2.87	1.05	0.73	*	TRY	50.27	-96.9
Sugiyama and Peterson 2013	*Tapirira mexicana*	recruitment	-0.74	0.87	1.5	+	TRY	8.78	-82.97
Sugiyama and Peterson 2013	*Tapirira mexicana*	recruitment	-1.65	1.33	1.5	+	TRY	8.78	-82.97
Takeuchi at al. 2013	*Shorea laxa*	predation	-9.98	3.33	4.25	*	Tageuchi & Kashizuka 2007	4.03	113.83
Tokumoto et al. 2013	*Dillenia suffruticosa*	pollination	-1.46	0.2	0.33	*	TRY	4.25	113.98
Torella et al. 2015	*Aspidosperma quebracho-blanco*	recruitment	-0.52	0.15	6.00			-27.08	-61.00
Torella et al. 2015	*Caesalpinia paraguariensis*	recruitment	-0.96	0.16	1.00			-27.08	-61.00
Torella et al. 2015	*Prosopis kuntzei*	recruitment	-0.11	0.14	1.30			-27.08	-61.00
Torella et al. 2015	*Schinopsis lorentzii*	recruitment	-0.85	0.16	0.70			-27.08	-61.00
Torella et al. 2015	*Ziziphus mistol*	recruitment	-0.13	0.14	0.70			-27.08	-61.00
Torella et al. 2015	*Cordia americana*	recruitment	0.97	0.16	0.60			-27.08	-61.00
Torella et al. 2015	*Schinopsis balansae*	recruitment	-0.62	0.15	0.60			-27.08	-61.00
Traveset et al. 2003	*Rhamnus ludovici-salvatoris*	predation	0.59	0.09	0.25	*		39.82	2.88
Valdivia and Simonetti 2007	*Aristotelia chilensis*	dispersal	-1.45	0.16	0.2	+	TRY	-35.98	-72.68
Valdivia and Simonetti 2007	*Aristotelia chilensis*	recruitment	0.31	0.1	0.2	+	TRY	-35.98	-72.68
Valdivia et al. 2006	*Lapageria rosea*	pollination	-0.43	0.05	0.48	*	Henríquez 2004	-35.98	-72.68
Wang et al. 2005	*Ficus racemosa*	pollination	-0.18	0.45	0.15	*		21.68	101.42
Wang et al. 2007	*Antrocaryon klaineanum*	dispersal	-7.3	3.55	2.3			3.36	12.84
Wolowski and Freitas 2011	*Senna multijuga*	pollination	-0.58	0.36	0.32	*	TRY	-22.42	-44.57

Wolowski and Freitas 2011	*Senna multijuga*	pollination	-0.17	0.34	0.32	*	TRY	-22.42	-44.57
Wright and Duber 2001	*Attalea butyracea*	dispersal	-1.2	0.7	4	+	Wright et al. 2000	9.12	-79.71
Wright and Duber 2001	*Attalea butyracea*	predation	3.21	1.74	4	+	Wright et al. 2000	9.12	-79.71
Wright and Duber 2001	*Attalea butyracea*	predation	-5.08	3.54	4	+	Wright et al. 2000	9.12	-79.71
Wright and Duber 2001	*Attalea butyracea*	predation	-1.24	0.71	4	+	Wright et al. 2000	9.12	-79.71
Wright et al. 2000	*Astrocaryum standleyanum*	dispersal	-1.07	0.49	3	+	TRY	9.12	-79.71
Wright et al. 2000	*Astrocaryum standleyanum*	predation	0.91	0.29	3	+	TRY	9.12	-79.71
Wright et al. 2000	*Astrocaryum standleyanum*	predation	-1.49	0.33	3	+	TRY	9.12	-79.71
Wright et al. 2000	*Astrocaryum standleyanum*	recruitment	1.03	0.38	3	+	TRY	9.12	-79.71
Wright et al. 2000	*Attalea butyracea*	dispersal	-0.46	0.42	4	+	Wright et al. 2000	9.12	-79.71
Wright et al. 2000	*Attalea butyracea*	predation	0.58	0.28	4	+	Wright et al. 2000	9.12	-79.71
Wright et al. 2000	*Attalea butyracea*	predation	-2.19	0.41	4	+	Wright et al. 2000	9.12	-79.71
Wright et al. 2000	*Attalea butyracea*	recruitment	0.5	0.34	4	+	Wright et al. 2000	9.12	-79.71
Zambrano et al. 2015	*Poulsenia armata*	predation	-0.93	0.60	0.90	+	TRY	18.5	-95.07
Zambrano et al. 2015	*Poulsenia armata*	predation	-3.37	1.82	0.90	+	TRY	18.5	-95.07
Zambrano et al. 2014	*Poulsenia armata*	recruitment	-1.31	0.23	0.9	+	TRY	18.5	-95.07
Zambrano and Salguero-Gomez 2014	*Poulsenia armata*	recruitment	-0.22	0.51	0.90	+	TRY	18.5	-95.07

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