**Appendix S1**

Table S1. Principal components analysis. Loadings of the first and second principal components of seven structural characteristics measured at each experimental plot pair.

|  |  |  |
| --- | --- | --- |
| Structural characteristic | PCAF1 (56%) |  PCAF2 (27%) |
| Canopy cover | 0.705 | -0.599 |
| Litter depth | -0.040 | 0.017 |
| Bamboo density | -0.066 | -0.004 |
| Number of trees ≥ 30 cm perimeter  | 0.692 | -0.484 |
| Diversity of trees ≥ 30 cm perimeter | 0.006 | -0.003 |
| Number of *Euterpe edulis* ≥ 30 cm perimeter | -0.136 | 0.638 |

**Literature cited**

Akkawi, P., Villar, N., Mendes, C.P., Galetti, M., 2020. Dominance hierarchy on palm resource partitioning among Neotropical frugivorous mammals. J. Mammal. 101, 697–709. https://doi.org/10.1093/jmammal/gyaa052

Almeida-Neto, M., Campassi, F., Galetti, M., Jordano, P., Oliveira-Filho, A., 2008. Vertebrate dispersal syndromes along the Atlantic forest: broad-scale patterns and macroecological correlates. Glob. Ecol. Biogeogr. 17, 503–513.

Augustine, D.J., McNaughton, S.J., 1998. Ungulate effects on the functional species composition of plant communities: herbivore selectivity and plant tolerance. J. Wildl. Manage. 62, 1165. https://doi.org/10.2307/3801981

Bakker, E.S., Ritchie, M.E., Olff, H., Milchunas, D.G., Knops, J.M.H., 2006. Herbivore impact on grassland plant diversity depends on habitat productivity and herbivore size. Ecol. Lett. 9, 780–788. https://doi.org/10.1111/j.1461-0248.2006.00925.x

Barton, K., 2015. MuMIn: Multi-Model Inference.

Bates, D., Maechler, M., Bolker, B.M., Walker, S., 2015. Fitting Linear Mixed-Effects Models using lme4. J. Stat. Softw. 67, 1–48.

Beck, H., 2006. A review of peccary-palm interactions and their ecological ramifications across the Neotropics. J. Mammal. 87, 519–530. https://doi.org/10.1644/05-MAMM-A-174R1.1

Beck, H., 2005. Seed predation and dispersal by peccaries throughout the Neotropics and its consequences: a review and synthesis, in: Forget, P.M., Lambert, J.E., Hulme, P., Vander Wall, S.B. (Eds.), Seed Fate: Predation, Dispersal and Seedling Establishment. CABI Publishing, Wallingford, UK, pp. 77–115.

Bello, C., Galetti, M., Pizo, M.A., Magnago, L.F.S., Rocha, M.F., Lima, R.A.F., Peres, C.A., Ovaskainen, O., Jordano, P., 2015. Defaunation affects carbon storage in tropical forests. Sci. Adv. 1. https://doi.org/10.1126/sciadv.1501105

Bodmer, R.E., 1990. Fruit patch size and frugivory in the lowland tapir (Tapirus terrestris). J. Zool. 222, 121–128.

Borer, E.T., Seabloom, E.W., Gruner, D.S., Harpole, W.S., Hillebrand, H., Lind, E.M., Adler, P.B., Alberti, J., Anderson, T.M., Bakker, J.D., Biederman, L., Blumenthal, D., Brown, C.S., Brudvig, L.A., Buckley, Y.M., Cadotte, M., Chu, C., Cleland, E.E., Crawley, M.J., Daleo, P., Damschen, E.I., Davies, K.F., DeCrappeo, N.M., Du, G., Firn, J., Hautier, Y., Heckman, R.W., Hector, A., HilleRisLambers, J., Iribarne, O., Klein, J.A., Knops, J.M.H., La Pierre, K.J., Leakey, A.D.B., Li, W., MacDougall, A.S., McCulley, R.L., Melbourne, B.A., Mitchell, C.E., Moore, J.L., Mortensen, B., O’Halloran, L.R., Orrock, J.L., Pascual, J., Prober, S.M., Pyke, D.A., Risch, A.C., Schuetz, M., Smith, M.D., Stevens, C.J., Sullivan, L.L., Williams, R.J., Wragg, P.D., Wright, J.P., Yang, L.H., 2014. Herbivores and nutrients control grassland plant diversity via light limitation. Nature 508, 517–520.

Bovendorp, R.S., Brum, F.T., McCleery, R.A., Baiser, B., Loyola, R., Cianciaruso, M. V., Galetti, M., 2019. Defaunation and fragmentation erode small mammal diversity dimensions in tropical forests. Ecography (Cop.). 42, 23–35. https://doi.org/10.1111/ecog.03504

Brocardo, C.R., Zipparro, V.B., de Lima, R.A.F., Guevara, R., Galetti, M., 2013. No changes in seedling recruitment when terrestrial mammals are excluded in a partially defaunated Atlantic rainforest. Biol. Conserv. 163, 107–114.

Brodie, J.F., Helmy, O.E., Brockelman, W.Y., Maron, J.L., 2009. Functional differences within a guild of tropical mammalian frugivores. Ecology 90, 688–698. https://doi.org/10.1890/08-0111.1

Bueno, R.S., Guevara, R., Ribeiro, M.C., Culot, L., Bufalo, F.S., Galetti, M., 2013. Functional redundancy and complementarities of seed dispersal by the last Neotropical megafrugivores. PLoS One 8, e56252.

Burkepile, D.E., Hay, M.E., 2008. Herbivore species richness and feeding complementarity affect community structure and function on a coral reef. Proc. Natl. Acad. Sci. 105, 16201–16206. https://doi.org/10.1073/pnas.0801946105

Burnham, K.P., Anderson, D.R., 2002. Model selection and multi-model inference: a practical information-theoretic approach, 2nd ed. Springer-Verlag, New York.

Chao, A., Chiu, C.-H., Jost, L., 2014. Unifying species diversity, phylogenetic diversity, functional diversity, and related rimilarity and differentiation measures through Hill Numbers. Annu. Rev. Ecol. Evol. Syst. 45, 297–324. https://doi.org/10.1146/annurev-ecolsys-120213-091540

Clark, D.B., Clark, D.A., 1991. The impact of physical damage on canopy tree regeneration in tropical rain forest. J. Ecol. 79, 447–457. https://doi.org/10.2307/2260725

Comita, L.S., Queenborough, S.A., Murphy, S.J., Eck, J.L., Xu, K., Krishnadas, M., Beckman, N., Zhu, Y., 2014. Testing predictions of the Janzen–Connell hypothesis: a meta-analysis of experimental evidence for distance- and density-dependent seed and seedling survival. J. Ecol. 102, 845–856.

Connell, J.H., 1971. On the role of natural enemies in preventing competitive exclusion in some marine animals and rain forest trees, in: den Boer, P.J., Gradwell, G.R. (Eds.), Dynamics of Population. PUDOC, Wageningen, pp. 298–312.

Crête, M., 1999. The distribution of deer biomass in North America supports the hypothesis of exploitation ecosystems. Ecol. Lett. 2, 223–227. https://doi.org/10.1046/j.1461-0248.1999.00076.x

Daskin, J.H., Pringle, R.M., 2016. Does primary productivity modulate the indirect effects of large herbivores? A global meta-analysis. J. Anim. Ecol. n/a-n/a.

Dirzo, R., Young, H.S., Galetti, M., Ceballos, G., Isaac, N.J.B., Collen, B., 2014. Defaunation in the Anthropocene. Science (80-. ). 345, 401–406. https://doi.org/10.1126/science.1251817

Ellison, A.M., Bank, M.S., Clinton, B.D., Colburn, E.A., Elliott, K., Ford, C.R., Foster, D.R., Kloeppel, B.D., Knoepp, J.D., Lovett, G.M., Mohan, J., Orwig, D.A., Rodenhouse, N.L., Sobczak, W. V., Stinson, K.A., Stone, J.K., Swan, C.M., Thompson, J., Von Holle, B., Webster, J.R., 2005. Loss of foundation species: consequences for the structure and dynamics of forested ecosystems. Front. Ecol. Environ. https://doi.org/10.1890/1540-9295(2005)003[0479:LOFSCF]2.0.CO;2

Estes, James A, Terborgh, J., Brashares, J.S., Power, M.E., Berger, J., Bond, W.J., Carpenter, S.R., Essington, T.E., Holt, R.D., Jackson, J.B.C., Marquis, R.J., Oksanen, L., Oksanen, T., Paine, R.T., Pikitch, E.K., Ripple, W.J., Sandin, S.A., Scheffer, M., Schoener, T.W., Shurin, J.B., Sinclair, A.R.E., Soulé, M.E., Virtanen, R., Wardle, D.A., 2011. Trophic downgrading of planet Earth. Science (80-. ). 333, 301–306. https://doi.org/10.1126/science.1205106

Estes, James A., Terborgh, J., Brashares, J.S., Power, M.E., Berger, J., Bond, W.J., Carpenter, S.R., Essington, T.E., Holt, R.D., Jackson, J.B.C., Marquis, R.J., Oksanen, L., Oksanen, T., Paine, R.T., Pikitch, E.K., Ripple, W.J., Sandin, S.A., Scheffer, M., Schoener, T.W., Shurin, J.B., Sinclair, A.R.E., Soulé, M.E., Virtanen, R., Wardle, D.A., 2011. Trophic downgrading of planet earth. Science (80-. ). 333, 301–306. https://doi.org/10.1126/science.1205106

Fragoso, J.M.V., 1997. Tapir-generated seed shadows: scale-dependent patchiness in the Amazon Rain Forest. J. Ecol. 85, 519–529.

Fragoso, J.M.V., Silvius, K.M., Correa, J.A., 2003. Long-distance seed dispersal by tapirs increases seed survival and aggregates tropical trees. Ecology 84, 1998–2006. https://doi.org/10.1890/01-0621

Frank, D.A., Kuns, M.M., Guido, D.R., 2002. Consumer control of grassland plant production. Ecology 83, 602–606.

Frank, D.A., McNaughton, S.J., Tracy, B.F., 1998. The ecology of the Earth’s grazing ecosystems: profound functional similarities exist between the Serengeti and Yellowstone. Bioscience 48, 513–521. https://doi.org/10.2307/1313313

Galetti, M., Brocardo, C.R., Begotti, R.A., Hortenci, L., Rocha-Mendes, F., Bernardo, C.S.S., Bueno, R.S., Nobre, R., Bovendorp, R.S., Marques, R.M., Meirelles, F., Gobbo, S.K., Beca, G., Schmaedecke, G., Siqueira, T., 2017. Defaunation and biomass collapse of mammals in the largest Atlantic forest remnant. Anim. Conserv. 20, 270–281. https://doi.org/10.1111/acv.12311

Galetti, M., Dirzo, R., 2013. Ecological and evolutionary consequences of living in a defaunated world. Biol. Conserv. 163, 1–6.

Galetti, M., Fernandez, J.C., 1998. Palm heart harvesting in the Brazilian Atlantic forest: changes in industry structure and the illegal trade. J. Appl. Ecol. 35, 294–301.

Galetti, M., Guevara, R., Neves, C.L., Rodarte, R.R., Bovendorp, R.S., Moreira, M., Hopkins Iii, J.B., Yeakel, J.D., 2015. Defaunation affects the populations and diets of rodents in Neotropical rainforests. Biol. Conserv. 190, 2–7.

Galetti, M., Zipparro, V.B., Morellato, P.C., 1999. Fruiting phenology and frugivory on the Palm Euterpe edulis in a Lowland Atlantic Forest of Brazil. Ecotropica 5, 115–122.

García, D., Martínez, D., 2012. Species richness matters for the quality of ecosystem services: A test using seed dispersal by frugivorous birds. Proc. R. Soc. B Biol. Sci. 279, 3106–3113. https://doi.org/10.1098/rspb.2012.0175

Green, P.T., Juniper, P.A., 2004. Seed-seedling allometry in tropical rain forest trees: seed mass-related patterns of resource allocation and the “reserve effect.” J. Ecol. 92, 397–408. https://doi.org/10.1111/j.0022-0477.2004.00889.x

Harrison, R.D., Tan, S., Plotkin, J.B., Slik, F., Detto, M., Brenes, T., Itoh, A., Davies, S.J., 2013. Consequences of defaunation for a tropical tree community. Ecol. Lett. 16, 687–694.

Holling, C.S., 1965. The functional response of predators to prey density and its role in mimicry and population regulation. Mem. Entomol. Soc. Can. 45, 3–60.

Ichie, T., Ninomiya, I., Ogino, K., 2001. Utilization of seed reserves during germination and early seedling growth by Dryobalanops lanceolata (Dipterocarpaceae). J. Trop. Ecol. 17, 371–378.

Janzen, D.H., 1970. Herbivores and the number of tree species in tropical forests. Am. Nat. 104, 501–528.

Jordano, P., 2000. Fruits and frugivory, in: Fenner, M. (Ed.), Seeds: The Ecology of Regeneration in Plant Communities. CABI Publishers, Wallingford, UK, pp. 125–166. https://doi.org/10.1079/9780851994321.0125

Jorge, M.L.S.P., Galetti, M., Ribeiro, M.C., Ferraz, K.M.P.M.B., 2013. Mammal defaunation as surrogate of trophic cascades in a biodiversity hotspot. Biol. Conserv. 163, 49–57. https://doi.org/10.1016/j.biocon.2013.04.018

Keuroghlian, A., Eaton, D.P., 2009. Removal of palm fruits and ecosystem engineering in palm stands by white-lipped peccaries (Tayassu pecari) and other frugivores in an isolated Atlantic Forest fragment. Biodivers. Conserv. 18, 1733–1750. https://doi.org/10.1007/s10531-008-9554-6

Koerner, S.E., Smith, M.D., Burkepile, D.E., Hanan, N.P., Avolio, M.L., Collins, S.L., Knapp, A.K., Lemoine, N.P., Forrestel, E.J., Eby, S., Thompson, D.I., Aguado-Santacruz, G.A., Anderson, J.P., Anderson, T.M., Angassa, A., Bagchi, S., Bakker, E.S., Bastin, G., Baur, L.E., Beard, K.H., Beever, E.A., Bohlen, P.J., Boughton, E.H., Canestro, D., Cesa, A., Chaneton, E., Cheng, J., D’Antonio, C.M., Deleglise, C., Dembélé, F., Dorrough, J., Eldridge, D.J., Fernandez-Going, B., Fernández-Lugo, S., Fraser, L.H., Freedman, B., García-Salgado, G., Goheen, J.R., Guo, L., Husheer, S., Karembé, M., Knops, J.M.H., Kraaij, T., Kulmatiski, A., Kytöviita, M.M., Lezama, F., Loucougaray, G., Loydi, A., Milchunas, D.G., Milton, S.J., Morgan, J.W., Moxham, C., Nehring, K.C., Olff, H., Palmer, T.M., Rebollo, S., Riginos, C., Risch, A.C., Rueda, M., Sankaran, M., Sasaki, T., Schoenecker, K.A., Schultz, N.L., Schütz, M., Schwabe, A., Siebert, F., Smit, C., Stahlheber, K.A., Storm, C., Strong, D.J., Su, J., Tiruvaimozhi, Y. V., Tyler, C., Val, J., Vandegehuchte, M.L., Veblen, K.E., Vermeire, L.T., Ward, D., Wu, J., Young, T.P., Yu, Q., Zelikova, T.J., 2018. Change in dominance determines herbivore effects on plant biodiversity. Nat. Ecol. Evol. 2, 1925–1932. https://doi.org/10.1038/s41559-018-0696-y

Kurten, E.L., 2013. Cascading effects of contemporaneous defaunation on tropical forest communities. Biol. Conserv. 163, 22–32.

Kurten, Erin L., Carson, W.P., 2015. Do Ground-Dwelling Vertebrates Promote Diversity in a Neotropical Forest? Results from a Long-Term Exclosure Experiment. Bioscience 65, 862–870. https://doi.org/10.1093/biosci/biv110

Kurten, Erin L, Carson, W.P., 2015. Do ground-dwelling vertebrates promote diversity in a Neotropical forest? Results from a long-term exclosure experiment. Bioscience 65, 862–870. https://doi.org/10.1093/biosci/biv110

McLaren, B.E., Peterson, R.O., 1994. Wolves, moose, and ree rings on Isle Royale. Science (80-. ). 266, 1555–1558. https://doi.org/10.1126/science.266.5190.1555

McNaughton, S.J., 1985. Ecology of a grazing ecosystem: the Serengeti. Ecol. Monogr. 55, 259–294.

McNaughton, S.J., 1979. Grazing as an Optimization Process: Grass-Ungulate Relationships in the Serengeti. Am. Nat. 113.

McNaughton, S.J., Banyikwa, F.F., McNaughton, M.M., 1997. Promotion of the cycling of diet-enhancing nutrients by African grazers. Science (80-. ). 278, 1798–1800.

Mendes, R.S., Evangelista, L.R., Thomaz, S.M., Agostinho, A.A., Gomes, L.C., 2008. A unified index to measure ecological diversity and species rarity. Ecography (Cop.). 31, 450–456.

Mortensen, B., Danielson, B., Harpole, W.S., Alberti, J., Arnillas, C.A., Biederman, L., Borer, E.T., Cadotte, M.W., Dwyer, J.M., Hagenah, N., Hautier, Y., Peri, P.L., Seabloom, E.W., 2017. Herbivores safeguard plant diversity by reducing variability in dominance. J. Ecol. 106, 101–112.

O’Farrill, G., Galetti, M., Campos-Arceiz, A., 2013. Frugivory and seed dispersal by tapirs: an insight on their ecological role. Integr. Zool. 8, 4–17. https://doi.org/10.1111/j.1749-4877.2012.00316.x

Oksanen, J., Guillaume Blanchet, F., Kindt, R., Legendre, P., Minchin, P.R., O’Hara, R.B., Simpson, G.L., Solymos, P., Stevens, M.H.H., Wagner, H., 2017. vegan: Community Ecology Package. R Packag. version 2.4-3. https//CRAN.R-project.org/package=vegan.

Paine, C.E.T., Beck, H., Terborgh, J., 2016. How mammalian predation contributes to tropical tree community structure. Ecology 97, 3326–3336. https://doi.org/10.1002/ecy.1586

Pastor, J., Dewey, B., Naiman, R.J., McInnes, P.F., Cohen, Y., 1993. Moose browsing and soil fertility in the boreal horests of Isle Royale National Park. Ecology 74, 467–480.

Pinheiro, J.C., Bates, D., DebRoy, S., Sarkar, D., R Core Team, 2019. nlme: Linear and Nonlinear Mixed Effects Models. R Packag. version 3.1-142.

Pinheiro, J.C., Bates, D.M., 2002. Mixed effects models in S and S-Plus, Statistics and Computing. Springer-Verlag, New York.

Pires, M.M., Guimarães, P.R., Galetti, M., Jordano, P., 2018. Pleistocene megafaunal extinctions and the functional loss of long-distance seed-dispersal services. Ecography (Cop.). 41, 153–163.

Pringle, R.M., Young, T.P., Rubenstein, D.I., McCauley, D.J., 2007. Herbivore-initiated interaction cascades and their modulation by productivity in an African savanna. Proc. Natl. Acad. Sci. 104, 193–197. https://doi.org/10.1073/pnas.0609840104

R Core Team, 2020. R: a language and environment for statistical computing. R Found. Stat. Comput. http//www.R-project.org.

Reyna-Hurtado, R., Rojas-Flores, E., Tanner, G.W., 2009. Home range and habitat preferences of white-lipped peccaries ( Tayassu pecari ) in Calakmul, Campeche, Mexico. J. Mammal. 90, 1199–1209. https://doi.org/10.1644/08-MAMM-A-246.1

Ribeiro, M.C., Metzger, J.P., Martensen, A.C., Ponzoni, F.J., Hirota, M.M., 2009. The Brazilian Atlantic Forest: How much is left, and how is the remaining forest distributed? Implications for conservation. Biol. Conserv. 142, 1141–1153. https://doi.org/10.1016/j.biocon.2009.02.021

Ripple, W.J., Newsome, T.M., Wolf, C., Dirzo, R., Everatt, K.T., Galetti, M., Hayward, M.W., Kerley, G.I.H., Levi, T., Lindsey, P.A., Macdonald, D.W., Malhi, Y., Painter, L.E., Sandom, C.J., Terborgh, J., Van Valkenburgh, B., 2015. Collapse of the world’s largest herbivores. Sci. Adv. 1. https://doi.org/10.1126/sciadv.1400103

Ritchie, M.E., Tilman, D., Knops, J.M.H., 1998. Herbivore effects on plant and nitrogen dynamics in oak savanna. Ecology 79, 165–177.

Rocha-Mendes, F., Neves, C.L., Nobre, R. de A., Marques, R.M., Bianconi, G.V., Galetti, M., 2015. Non-volant mammals from Núcleo Santa Virgínia, Serra do Mar State Park, São Paulo, Brazil. Biota Neotrop. 15.

Roldán, A.I., Simonetti, J.A., 2001. Plant-mammal Interactions in tropical Bolivian forests with different hunting pressures. Conserv. Biol. 15, 617–623.

Rother, D.C., Pizo, M.A., Siqueira, T., Rodrigues, R.R., Jordano, P., 2015. Community-wide spatial and temporal discordances of seed-seedling shadows in a tropical rainforest. PLoS One 10, e0123346.

Santiago, L.S., Goldstein, G., Meinzer, F.C., Fisher, J.B., Machado, K., Woodruff, D., Jones, T., 2004. Leaf photosynthetic traits scale with hydraulic conductivity and wood density in Panamanian forest canopy trees. Oecologia 140, 543–550. https://doi.org/10.1007/s00442-004-1624-1

Schrama, M., Veen, G.F. (Ciska), Bakker, E.S. (Liesbeth), Ruifrok, J.L., Bakker, J.P., Olff, H., 2013. An integrated perspective to explain nitrogen mineralization in grazed ecosystems. Perspect. Plant Ecol. Evol. Syst. 15, 32–44. https://doi.org/10.1016/J.PPEES.2012.12.001

Silman, M.R., Terborgh, J.W., Kiltie, R.A., 2008. Population regulation of a dominant rain forest tree by a major seed predator. Ecology 84, 431–438.

Sinclair, A.R.E., 2003. Mammal population regulation, keystone processes and ecosystem dynamics. Philos. Trans. R. Soc. London Ser. B-Biological Sci. 358, 1729–1740.

Stoner, K.E., Vulinec, K., Wright, S.J., Peres, C.A., 2007. Hunting and plant community dynamics in tropical forests: a synthesis and future directions. Biotropica 39, 385–392.

Svenning, J.-C., 2002. Crown illumination limits the population growth rate of a neotropical understorey palm (Geonoma macrostachys, Arecaceae). Plant Ecol. 159, 185–199. https://doi.org/10.1023/a:1015520116260

Tang, H., Dubayah, R., 2017. Light-driven growth in Amazon evergreen forests explained by seasonal variations of vertical canopy structure. Proc. Natl. Acad. Sci. 114, 2640–2644. https://doi.org/10.1073/pnas.1616943114

Terborgh, J., 2012. Enemies maintain hyperdiverse tropical forests. Am. Nat. 179, 303–314. https://doi.org/10.1086/664183

Villar, N., Cornulier, T., Evans, D., Pakeman, R., Redpath, S., Lambin, X., 2014. Experimental evidence that livestock grazing intensity affects cyclic vole population regulation processes. Popul. Ecol. 56, 55–61. https://doi.org/10.1007/s10144-013-0398-x

Villar, N., Paz, C., Zipparro, V., Nazareth, S., Bulascoschi, L., Bakker, E.S., Galetti, M., 2021. Frugivory underpins the nitrogen cycle. Funct. Ecol. 35, 357–368. https://doi.org/10.1111/1365-2435.13707

Villar, N., Siqueira, T., Zipparro, V., Farah, F., Schmaedecke, G., Hortenci, L., Brocardo, C.R., Jordano, P., Galetti, M., 2020. The cryptic regulation of diversity by functionally complementary large tropical forest herbivores. J. Ecol. 108, 279–290. https://doi.org/10.1111/1365-2745.13257

Wright, S.J., Carel, P. van S., 1994. Light and the phenology of tropical trees. Am. Nat. 143, 192–199. https://doi.org/10.1086/285600

Young, H.S., McCauley, D.J., Dirzo, R., Goheen, J.R., Agwanda, B., Brook, C., Otárola-Castillo, E., Ferguson, A.W., Kinyua, S.N., McDonough, M.M., Palmer, T.M., Pringle, R.M., Young, T.P., Helgen, K.M., 2015. Context-dependent effects of large-wildlife declines on small-mammal communities in central Kenya. Ecol. Appl. 25, 348–360.

Young, Hillary S, McCauley, D.J., Helgen, K.M., Goheen, J.R., Otárola-Castillo, E., Palmer, T.M., Pringle, R.M., Young, T.P., Dirzo, R., 2013. Effects of mammalian herbivore declines on plant communities: observations and experiments in an African savanna. J. Ecol. 101, 1030–1041.

Young, Hillary S., McCauley, D.J., Helgen, K.M., Goheen, J.R., Otárola-Castillo, E., Palmer, T.M., Pringle, R.M., Young, T.P., Dirzo, R., 2013. Effects of mammalian herbivore declines on plant communities: observations and experiments in an African savanna. J. Ecol. 101, 1030–1041. https://doi.org/10.1111/1365-2745.12096

Zuur, A.F., Ieno, E.N., Walker, N., Saveliev, A.A., Smith, G.M., 2009. Mixed effects models and extensions in ecology with R, 1st Editio. ed, Statistics for biology and health. Springer, New York, NY.