

**List of publications**

Google Scholar h-index: 25, Web of Science h-index: 20 (Jan 2024)

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**Peer-reviewed journal articles:**

46. Acosta-Rojas, D. C., M. Barczyk, C. I. Espinosa, N. Farwig, J. Homeier, Y. Tiede, B. A. Tinoco, A. Velescu, W. Wilcke, **E. L. Neuschulz**, M. Schleuning (2023) Abiotic factors similarly shape the distribution of fruit, seed and leaf traits in tropical fleshy-fruited tree communities. *Acta Oecologica*, 121, 103953, <https://doi.org/10.1016/j.actao.2023.103953>
45. Barczyk, M., D. C. Acosta-Rojas, C. I. Espinosa, M. Schleuning, **E. L. Neuschulz** (2023) Biotic pressures and environmental heterogeneity shape beta-diversity of seedling communities in tropical montane forests. *Ecography*, 6, e06538, <https://doi.org/10.1111/ecog.06538>
44. Acosta-Rojas, D. C., M. Barczyk, C. I. Espinosa, B. A. Tinoco, **E. L. Neuschulz**, M. Schleuning (2023) Climate and microhabitat shape the prevalence of endozoochory in the seed rain of tropical montane forests. *Biotropica*, 55, 408-417
43. Martins, L.P., D.B. Stouffer, P.G. Blendinger, ..., **E. L. Neuschulz**, ... et al. (2022) Global and regional ecological boundaries explain abrupt spatial discontinuities in avian frugivory interactions. *Nature Communications*, 13: 6943
42. Merges, D., A. Schmidt, I. Schmitt, **E. L. Neuschulz**, F. Dal Grande, M. Bálint (2022) Metatranscriptomics reveals contrasting effects of elevation on the activity of bacteria and bacterial viruses in soil. *Molecular Ecology*, <https://doi.org/10.1111/mec.16756>
41. Sorensen, M. C., T. Mueller, I. Donoso, V. Graf, D. Merges, M. Vanoni, W. Fiedler, **E. L. Neuschulz** (2022) Scatter-hoarding birds disperse seeds to sites unfavorable for plant regeneration. *Movement Ecology*, 10:1-7
40. de Raad, J., M. Päckert, M. Irestedt, A. Janke, A. P. Kryukov, J. Martens, Y. A. Red'kin, Y. Sun, T. Töpfer, M. Schleuning, **E. L. Neuschulz**, M. A. Nilsson (2022) Speciation and population divergence in a mutualistic seed dispersing bird. *Communications Biology*, 5:1-10
39. Nowak, L., M. Schleuning, I. M. A. Bender, K. Böhning-Gaese, D. M. Dehling, S. A. Fritz, W. D. Kissling, T. Mueller, **E. L. Neuschulz**, A. L. Pigot, M. C. Sorensen, I. Donoso (2022) Avian seed dispersal may be insufficient for plants to track future temperature change on tropical mountains. *Global Ecology and Biogeography*, 31: 848-860
38. Marjakangas, E.-L., G. Muñoz, S. Turney, J. Albrecht, **E. L. Neuschulz**, M. Schleuning, J.-P. Lessard (2022) Trait-based inference of ecological network assembly: a conceptual framework and methodological toolbox. *Ecological Monographs*, 92: e1502
37. Tobias, J. A., C. Sheard, A. L. Pigot, ... **E. L. Neuschulz**, ... et al. (2022) AVONET: morphological, ecological and geographical data for all birds. *Ecology Letters*, 25: 581-597
36. Wallis, C. I. B., Y. C. Tiede, E. Beck, K. Böhning-Gaese, R. Brandl, D. A. Donoso, C. I. Espinosa, A. Fries, J. Homeier, D. Inclan, C. Leuschner, M. Maraun, K. Mikolajewski, **E. L. Neuschulz**, S. Scheu, M. Schleuning, J. P. Suárez, B. A. Tinoco, N. Farwig, J. Bendix (2021) Biodiversity and ecosystem functions depend

- on environmental conditions and resources rather than the geodiversity of a tropical biodiversity hotspot. *Scientific Reports*, 11:1-14
35. Dehling, D. M., I. M. A. Bender, P. G. Blendinger, K. Böhning-Gaese, M. C. Muñoz, **E. L. Neuschulz**, M. Quitián, F. Saavedra, V. Santillán, M. Schleuning, D. B. Stouffer (2021) Specialists and generalists fulfil important and complementary functional roles in ecological processes. *Functional Ecology*, 35:1810-1821
  34. Bendix, J., N. Aguire, E. Beck, A. Bräuning, R. Brandl, L. Breuer, K. Böhning-Gaese, M. Dantas de Paula, T. Hickler, J. Homeier, D. Inclan, C. Leuschner, **E. L. Neuschulz**, M. Schleuning, J. P. Suarez, K. Trachte, W. Wilcke, D. Windhorst, N. Farwig (2021) A research framework for projecting ecosystem change in highly diverse tropical mountain ecosystems. *Oecologia*, 195:589-600
  33. Vollstädt, M. G. R., J. Albrecht, K. Böhning-Gaese, A. Hemp, K. M. Howell, L. Kettering, A. Neu, **E. L. Neuschulz**, M. Quitián, V. Santillán, T. Töpfer, M. Schleuning, S. A. Fritz (2020) Direct and plant-mediated effects of climate on bird diversity in tropical mountains. *Ecology and Evolution*, 10:14196-14208
  32. Sorensen, M. C., I. Donoso, **E. L. Neuschulz**, M. Schleuning, T. Mueller (2020) Community-wide seed dispersal distances peak at low levels of specialisation in size-structured networks. *Oikos*, 129:1727-1738
  31. Merges, D., J. Albrecht, K. Böhning-Gaese, M. Schleuning, **E. L. Neuschulz** (2020) Environmental context determines the limiting demographic processes for plant recruitment across a species' elevational range. *Scientific Reports* 10, 10855
  30. Donoso, I., M. C. Sorensen, P. G. Blendinger, W. D. Kissling, **E. L. Neuschulz**, T. Mueller, M. Schleuning (2020) Downsizing of animal communities triggers stronger functional than structural decay in seed-dispersal networks. *Nature Communications*, 11, 1582
  29. Dehling, D. M., G. Peralta, I. M. A. Bender, P. G. Blendinger, K. Böhning-Gaese, M. C. Muñoz, **E. L. Neuschulz**, M. Quitián, F. Saavedra, V. Santillán, M. Schleuning, D. B. Stouffer (2020) Similar composition of functional roles in Andean seed-dispersal networks, despite high species and interaction turnover. *Ecology*, 101, e03028
  28. Schleuning, M., **E. L. Neuschulz**, J. Albrecht, I. M. A. Bender, D. E. Bowler, D. M. Dehling S. A. Fritz, C. Hof, T. Mueller, L. Nowak, M. C. Sorensen, K. Böhning-Gaese, W. D. Kissling (2020) Trait-based assessments of climate-change impacts on interacting species. *Trends in Ecology and Evolution*, 35:319-328
  27. Kattge, J., G. Bönisch, S. Díaz, ..., **E. L. Neuschulz**, ...et al. (2020) TRY plant trait database—enhanced coverage and open access. *Global Change Biology*, 26:119-188
  26. Santillán, V., M. Quitián, B. A. Tinoco, E. Zárate, M. Schleuning, K. Böhning-Gaese, **E. L. Neuschulz** (2020) Direct and indirect effects of elevation, climate and vegetation structure on bird communities on a tropical mountain. *Acta Oecologica*, 102, 103500
  25. Merges, D., M. Bálint, I. Schmitt, P. Manning, **E. L. Neuschulz** (2020) High throughput sequencing combined with null model tests reveals specific plant-fungi associations linked to seedling establishment and survival. *Journal of Ecology*, 108:574-585
  24. Engelhardt, E. K., **E. L. Neuschulz**, C. Hof (2020) Ignoring biotic interactions overestimates climate change effects: The potential response of the spotted nutcracker to changes in climate and resource plants. *Journal of Biogeography*, 47:143-154

23. Hanz, D. M., **E. L. Neuschulz**, K. Böhning-Gaese, M. Quitián, S. W. Ferger, S. A. Fritz, T. Töpfer, V. Santillán, M. Schleuning (2019) Functional and phylogenetic diversity of bird assemblages are filtered by different biotic factors on tropical mountains. *Journal of Biogeography*, 46:291-303
22. Quitián, M., V. Santillán, C. I. Espinosa, J. Homeier, K. Böhning-Gaese, M. Schleuning, **E. L. Neuschulz** (2019) Direct and indirect effects of plant and frugivore diversity on structural and functional components of fruit removal by birds. *Oecologia*, 189, 435-445
21. Santillán, V., M. Quitián, B. A. Tinoco, E. Zárate, M. Schleuning, K. Böhning-Gaese, **E. L. Neuschulz** (2019) Different responses of taxonomic and functional bird diversity to forest fragmentation across an elevational gradient. *Oecologia*, 189, 863-873
20. Quitián, M., V. Santillán, I. M. A. Bender, C. I. Espinosa, J. Homeier, K. Böhning-Gaese, M. Schleuning, **E. L. Neuschulz** (2019) Functional responses of avian frugivores to variation in fruit resources between natural and fragmented forests. *Functional Ecology*, 33:399-410
19. Dugger, P., ... **E. L. Neuschulz**, ...et al. (2019) Seed-dispersal networks are more specialized in the Neotropics than in the Afrotropics. *Global Ecology and Biogeography*, 28:248-261
18. Santillán, V., M. Quitián, B. A. Tinoco, E. Zárate, M. Schleuning, K. Böhning-Gaese, **E. L. Neuschulz** (2018) Spatio-temporal variation in bird assemblages is associated with fluctuations in temperature and precipitation along a tropical elevational gradient. *PLOS ONE*, <https://doi.org/10.1371/journal.pone.0196179>
17. Bender, I. M. A., W. D. Kissling, P. G. Blendinger, K. Böhning-Gaese, I. Hensen, I. Kühn, M. C. Munoz, **E. L. Neuschulz**, L. Nowak, M. Quitián, F. Saavedra, V. Santillán, T. Töpfer, T. Wiegand, D. M. Dehling, M. Schleuning (2018) Morphological trait matching shapes plant-frugivore networks across the Andes. *Ecography*, 41:1910-1919
16. Merges, D., M. Bálint, I. Schmitt, K. Böhning-Gaese, **E. L. Neuschulz** (2018) Spatial patterns of pathogenic and mutualistic fungi across the elevational range of a host plant. *Journal of Ecology*, 106:1545-1557  
Featured in the *Journal of Ecology* blog:  
<https://jecologyblog.wordpress.com/2018/03/13/fungi-made-it-first/>
15. Quitián, M., V. Santillán, C. I. Espinosa, J. Homeier, K. Böhning-Gaese, M. Schleuning, **E. L. Neuschulz** (2018) Elevation-dependent effects of forest fragmentation on plant-bird interaction networks in the tropical Andes. *Ecography*, 41:1497-1506  
Featured in the *Ecography* blog: <http://www.ecography.org/blog/plant-bird-interactions-respond-stronger-fragmentation-high-low-elevations>
14. **Neuschulz, E. L.**, D. Merges, K. Bollmann, F. Gugerli, K. Böhning-Gaese (2018) Biotic interactions and seed deposition rather than abiotic factors determine recruitment at elevational range limits of an alpine tree. *Journal of Ecology*, 106:948-959, doi: 10.1111/1365-2745.12818  
Featured among others in NZZ:  
<https://www.nzz.ch/wissenschaft/klima/klimawandel-in-den-alpen-fuer-die-arve-wird-es-eng-ld.1304067>
13. Munoz Neyra, M. C., H. M. Schaefer, K. Böhning-Gaese, **E. L. Neuschulz**, M. Schleuning (2017) Phylogenetic and functional diversity of fleshy-fruited plants are

- positively associated with seedling diversity in a tropical montane forest. *Frontiers in Ecology and Evolution* 5, 93, <https://doi.org/10.3389/fevo.2017.00093>
12. Saavedra, F., I. Hensen, A. Apaza Quevedo, **E. L. Neuschulz**, M. Schleuning (2017) Seed-deposition and recruitment patterns of *Clusia* species in a disturbed tropical montane forest in Bolivia. *Acta Oecologica* 85:85-92
  11. Hudson, L. N., Newbold, T., ... **E. L. Neuschulz**, ... A. Purvis (2017) The database of the PREDICTS (Projecting Responses of Ecological Diversity In Changing Terrestrial Systems) project. *Ecology and Evolution* 7: 145-188
  10. **Neuschulz, E. L.**, T. Mueller, M. Schleuning, K. Böhning-Gaese (2016) Pollination and seed dispersal are the most threatened processes of plant regeneration. *Scientific Reports* 6: 29839, doi:10.1038/srep29839  
Featured among others in ScienceDaily:  
<https://www.sciencedaily.com/releases/2016/07/160720094442.htm>
  9. Grass, I., R. Brandl, A. Botzat, **E. L. Neuschulz**, N. Farwig (2015) Contrasting taxonomic and phylogenetic diversity responses to forest modifications: comparisons of taxa and successive plant life stages in South African scarp forest. *PLOS ONE*, doi: 10.1371/journal.pone.0118722.
  8. **Neuschulz, E. L.**, T. Mueller, K. Bollmann, F. Gugerli, K. Böhning-Gaese (2015) Seed perishability determines the caching behavior of a food-hoarding bird. *Journal of Animal Ecology* 84:71-78  
Featured among others in Scientific American, Spektrum & Naturzyt:  
<https://www.scientificamerican.com/article/clever-bird-uses-nature-as-its-breadbox/>  
<http://www.spektrum.de/news/die-oekologie-des-sammelns/1319603>  
[http://www.bik-f.de/files/mitarbeiterseiten/ntz\\_dez\\_15\\_tannenhaeher-2.pdf](http://www.bik-f.de/files/mitarbeiterseiten/ntz_dez_15_tannenhaeher-2.pdf)
  7. Hudson, L. N., Newbold, T., ... **E. L. Neuschulz**, ... A. Purvis (2014) The PREDICTS database: a global database of how local terrestrial biodiversity responds to human impacts. *Ecology and Evolution* 4:4701-4735
  6. Mulwa R. K., **E. L. Neuschulz**, K. Böhning-Gaese, M. Schleuning (2013) Seasonal fluctuations of resource abundance and avian feeding guilds across habitat boundaries in tropical Africa. *Oikos* 122:524-532
  5. **Neuschulz E. L.**, M. Brown, N. Farwig (2013) Frequent bird movement activity across a highly fragmented landscape: the role of species traits and forest matrix. *Animal Conservation* 16:170-179
  4. **Neuschulz E. L.**, I. Grass, A. Botzat, S. D. Johnson, N. Farwig (2013) Persistence of flower visitors and pollination services of a generalist tree in modified forests. *Austral Ecology* 38:374-382
  3. Plein M., L. Längsfeld, **E. L. Neuschulz**, C. Schultheiß, L. Ingmann, T. Töpfer, K. Böhning-Gaese, M. Schleuning (2013) Constant properties of plant-frugivore networks despite fluctuations in fruit and bird communities in space and time. *Ecology* 94:1296-1306
  2. Albrecht J., **E. L. Neuschulz**, N. Farwig (2012) Impact of habitat structure and fruit abundance on avian seed dispersal and fruit predation. *Basic and Applied Ecology* 13: 347-354
  1. **Neuschulz E. L.**, A. Botzat, N. Farwig (2011) Effects of forest modification on bird community composition and seed removal in a heterogeneous landscape in South Africa. *Oikos* 120:1371-1379

**Public outreach publications, books, book chapters:**

5. Acosta-Rojas, D. C., M. Barczyk, C. I. Espinosa, J. Gusmán, J. Peña, **E. L. Neuschulz**, M. Schleuning, J. Homeier (2021) Field guide of animal-dispersed plants: fruits and seeds in and around Podocarpus National Park / Guía de campo de plantas dispersadas por animales: frutos y semillas en el Parque Nacional Podocarpus y sus cercanías, Publicacion No. 16, Serie de publicaciones del Instituto Nacional de Biodiversidad INABIO
4. **Neuschulz, E. L.**, M. Quitián, V. Santillán, M. Schleuning, K. Böhning-Gaese (2017) Development and validation of functional indicators for avian seed dispersal. In: Landscape restoration, sustainable use and cross-scale monitoring of biodiversity and ecosystem functions. E. Beck, T. Knoke, L. Breuer, D. Siddons, J. Bendix (eds.) University of Marburg, Germany.
3. Närmann, F., C. Küfmann, **E. L. Neuschulz** (2017) Präferenzen des Tannenhähers *Nucifraga caryocatactes* beim Anlegen von Samenverstecken. Ornithologischer Anzeiger 55, 89-98
2. **Neuschulz, E. L.** (2016) Plant-animal interactions in tropical mountain forest. In: Biodiversity Hotspot – Tropical mountain rainforest. F. X. Bogner, J. Bendix, E. Beck (eds.) Naturaleza y Cultura Internacional, Loja, Ecuador.
1. Schleuning, M., T. Müller, **E. L. Neuschulz** (2015) Tiere pflanzen den Wald von morgen. Senckenberg Jahresberichte 2013-2014