

## Publications

Last updated: March 2021

Prof. Dr. Susanne A. Fritz

Senckenberg Biodiversity and Climate Research Centre (BiK-F)  
& Institut für Geowissenschaften, Goethe-Universität Frankfurt

41 peer-reviewed research articles published; 48 publications in total  
Google Scholar h index 27 (>7500 citations); Web of Science h index 23 (>4000 citations)  
Profiles: [GoogleScholar](#) - [Publons / ResearcherID](#) - [OrcID](#)

### Peer-reviewed research articles by year

2020

---

- \* A. Eyres, K. Böhning-Gaese, C. D. L. Orme, C. Rahbek, **S. A. Fritz** (2020) A tale of two seasons: the link between seasonal migration and climatic niches in passerine birds. *Ecology and Evolution* 10: 11983-11997. [doi: 10.1002/ece3.6729](https://doi.org/10.1002/ece3.6729) – Press releases: [English](#) / [German](#)
- Holt, B. G., F. G. Marx, **S. A. Fritz**, J.-P. Lessard, C. Rahbek (2020) Evolutionary diversification in the marine realm: a global case study with marine mammals. *Frontiers of Biogeography* 12: e45184. [doi: 10.21425/F5FBG45184](https://doi.org/10.21425/F5FBG45184) – [Video abstract](#)
- \* Leitão, P. J., C. J. Andrew, E. K. Engelhardt, C. H. Graham, C. Martinez-Almoyna, A. Mimet, S. Pinkert, B. Schröder, A. Voskamp, C. Hof, **S. A. Fritz** (2020) Macroecology as a hub between research disciplines: Opportunities, challenges and possible ways forward. *Journal of Biogeography* 47: 13-15. [doi: 10.1111/jbi.13751](https://doi.org/10.1111/jbi.13751)
- \* Phillips, A. G., T. Töpfer, K. Böhning-Gaese, **S. A. Fritz** (2020) Rates of ecomorphological trait evolution in passerine bird clades are independent of age. *Biological Journal of the Linnean Society* 129: 543–557. [doi: 10.1093/biolinnean/blz198](https://doi.org/10.1093/biolinnean/blz198)
- 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. [doi: 10.1016/j.tree.2019.12.010](https://doi.org/10.1016/j.tree.2019.12.010)
- \* Vollstädt, M. G. R., J. Albrecht, K. Böhning-Gaese, A. Hemp, K. M. Howell, L. Kettering, A. Neu, E. L. Neuschulz, M. Quitián, V. E. 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. [doi: 10.1002/ece3.7014](https://doi.org/10.1002/ece3.7014)
- Wüest, R. O., N. E. Zimmermann, D. Zurell, J. M. Alexander, **S. A. Fritz**, C. Hof, H. Kreft, S. Normand, J. S. Cabral, E. Szekely, W. Thuiller, M. Wikelski, D. N. Karger (2020) Macroecology in the age of Big Data – Where to go from here? *Journal of Biogeography* 47: 1-12. [doi: 10.1111/jbi.13633](https://doi.org/10.1111/jbi.13633)

2019

---

- Hanz, D. M., K. Böhning-Gaese, S. W. Ferger, **S. A. Fritz**, E. L. Neuschulz, M. Quitián, V. Santillán, T. Töpfer, 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. [doi: 10.1111/jbi.13489](https://doi.org/10.1111/jbi.13489)

- \* Huang<sup>‡</sup>, S., M. J. M. Meijers<sup>‡</sup>, A. Eyres, A. Mulch, **S. A. Fritz** (2019) Unravelling the history of biodiversity in mountain ranges through integrating geology and biogeography. *Journal of Biogeography* 46: 1777-1791. doi: [10.1111/jbi.13622](https://doi.org/10.1111/jbi.13622)
- Pontarp, M., L. Bunnefeld, J. Sarmiento Cabral, R. S. Etienne, **S. A. Fritz**, R. Gillespie, C. H. Graham, O. Hagen, F. Hartig, S. Huang, R. Jansson, O. Maliet, T. Münkemüller, L. Pellissier, T. F. Rangel, D. Storch, T. Wiegand, A. H. Hurlbert (2019) The latitudinal diversity gradient: novel understanding through mechanistic eco-evolutionary models. *Trends in Ecology and Evolution* 34: 211-223. doi: [10.1016/j.tree.2018.11.009](https://doi.org/10.1016/j.tree.2018.11.009)

---

 2018
 

---

- Antonelli, A., W. D. Kissling, S. G. A. Flantua, M. A. Bermúdez, A. Mulch, A. N. Muellner-Riehl, H. Kreft, H. P. Linder, C. Badgley, J. Fjeldså, **S. A. Fritz**, C. Rahbek, F. Herman, H. Hooghiemstra, C. Hoorn (2018) Geological and climatic influences on mountain biodiversity. *Nature Geoscience* 11: 718-725. doi: [10.1038/s41561-018-0236-z](https://doi.org/10.1038/s41561-018-0236-z) – Press releases: [English](#) / [German](#)
- \* Phillips, A. G., T. Töpfer, K. Böhning-Gaese, **S. A. Fritz** (2018) Evidence for distinct evolutionary optima in the morphology of migratory and resident birds. *Journal of Avian Biology* 49: e01807. doi: [10.1111/jav.01807](https://doi.org/10.1111/jav.01807)
- \* Phillips, A. G., T. Töpfer, C. Rahbek, K. Böhning-Gaese, **S. A. Fritz** (2018). Effects of phylogeny and geography on ecomorphological traits in passerine bird clades. *Journal of Biogeography* 45: 2337-2347. doi: [10.1111/jbi.13383](https://doi.org/10.1111/jbi.13383)
- Pearse, W. D., A. M. Barbosa, **S. A. Fritz**, S. A. Keith, L. J. Harmon, J. Harte, D. Silvestro, X. Xiao, T. J. Davies (2018). Building up biogeography: pattern to process. *Journal of Biogeography* 45: 1223-1230. doi: [10.1111/jbi.13242](https://doi.org/10.1111/jbi.13242)
- Tucker, M. A., K. Böhning-Gaese, W. F. Fagan, J. M. Fryxell, B. Van Moorter, S. C. Alberts, A. H. Ali, A. M. Allen, N. Attias, T. Avgar, H. Bartlam-Brooks, B. Bayarbaatar, J. L. Belant, A. Bertassoni, D. Beyer, L. Bidner, F. M. van Beest, S. Blake, N. Blaum, C. Bracis, D. Brown, P. J. N. de Bruyn, F. Cagnacci, J. M. Calabrese, C. Camilo-Alves, S. Chamaillé-Jammes, A. Chiaradia, S. C. Davidson, T. Dennis, S. DeStefano, D. Diefenbach, I. Douglas-Hamilton, J. Fennessy, C. Fichtel, W. Fiedler, C. Fischer, I. Fischhoff, C. H. Fleming, A. T. Ford, **S. A. Fritz**, B. Gehr, J. R. Goheen, E. Gurarie, M. Hebblewhite, M. Heurich, A. J. M. Hewison, C. Hof, E. Hurme, L. A. Isbell, R. Janssen, F. Jeltsch, P. Kaczensky, A. Kane, P. M. Kappeler, M. Kauffman, R. Kays, D. Kimuyu, F. Koch, B. Kranstauber, S. LaPoint, P. Leimgruber, J. D. C. Linnell, P. López-López, A. C. Markham, J. Mattisson, E. P. Medici, U. Mellone, E. Merrill, G. de Miranda Mourão, R. G. Morato, N. Morellet, T. A. Morrison, S. L. Díaz-Muñoz, A. Mysterud, D. Nandintsetseg, R. Nathan, A. Niamir, J. Odden, R. B. O'Hara, L. G. R. Oliveira-Santos, K. A. Olson, B. D. Patterson, R. Cunha de Paula, L. Pedrotti, B. Reineking, M. Rimmler, T. L. Rogers, C. M. Rolandsen, C. S. Rosenberry, D. I. Rubenstein, K. Safi, S. Saïd, N. Sapir, H. Sawyer, N. M. Schmidt, N. Selva, A. Sergiel, E. Shiilegdamba, J. P. Silva, N. Singh, E. J. Solberg, O. Spiegel, O. Strand, S. Sundaresan, W. Ullmann, U. Voigt, J. Wall, D. Wattles, M. Wikelski, C. C. Wilmers, J. W. Wilson, G. Wittemyer, F. Zięba, T. Zwijacz-Kozica, T. Mueller (2018). Moving in the Anthropocene: Global reductions in terrestrial mammalian movements. *Science* 359: 466-469. doi: [10.1126/science.aam9712](https://doi.org/10.1126/science.aam9712) – Press release: [English](#) / [German](#)

2017

- \* Eyres, A., K. Böhning-Gaese, **S. A. Fritz** (2017). Quantification of climatic niches in birds: adding the temporal dimension. *Journal of Avian Biology* 48: 1517-1531. [doi: 10.1111/jav.01308](https://doi.org/10.1111/jav.01308)
- \* Huang, S., J. T. Eronen, C. M. Janis, J. J. Saarinen, D. Silvestro, **S. A. Fritz** (2017). Mammal body size evolution in North America and Europe over 20 Myr: similar trends generated by different processes. *Proceedings of the Royal Society B: Biological Sciences* 284: 20162361. [doi: 10.1098/rspb.2016.2361](https://doi.org/10.1098/rspb.2016.2361) – Press release: [English](#) / [German](#)
- Tucker, C. M., M. W. Cadotte, S. B. Carvalho, T. J. Davies, S. Ferrier, **S. A. Fritz**, R. Grenyer, M. R. Helmus, L. S. Jin, A. O. Mooers, S. Pavoine, O. Purschke, D. W. Redding, D. F. Rosauer, M. Winter, F. Mazel (2017). Unifying phylogenetic metrics for conservation, community ecology and macroecology. *Biological Reviews* 92: 698-715. [doi: 10.1111/brv.12252](https://doi.org/10.1111/brv.12252)

2016

- \* **Fritz, S. A.**, J. T. Eronen, J. Schnitzler, C. Hof, C. M. Janis, A. Mulch, K. Böhning-Gaese, C. H. Graham (2016). Twenty-million-year relationship between mammalian diversity and primary productivity. *Proceedings of the National Academy of Sciences of the United States of America* 113: 10908-10913. [doi: 10.1073/pnas.1602145113](https://doi.org/10.1073/pnas.1602145113) – Press release: [English](#) / [German](#)
- Meyer, C., W. Jetz, R. P. Guralnick, **S. A. Fritz**, H. Kreft (2016). Range geometry and socio-economics dominate species-level biases in occurrence information. *Global Ecology and Biogeography* 25: 1181-1193. [doi: 10.1111/geb.12483](https://doi.org/10.1111/geb.12483)

2008 – 2015

- Beck, J., L. Ballesteros-Mejia, C. M. Buchmann, J. Dengler, **S. A. Fritz**, B. Gruber, C. Hof, F. Jansen, S. Knapp, H. Kreft, A.-K. Schneider, M. Winter, C. F. Dormann (2012) What's on the horizon for macroecology? *Ecography* 35: 673-683. [doi: 10.1111/j.1600-0587.2012.07364.x](https://doi.org/10.1111/j.1600-0587.2012.07364.x)
- Davies, J. T., **S. A. Fritz**, R. Grenyer, C. D. L. Orme, J. Bielby, O. R. P. Bininda-Emonds, M. Cardillo, K. E. Jones, J. L. Gittleman, G. M. Mace, A. Purvis (2008) Phylogenetic trees and the future of mammalian biodiversity. *Proceedings of the National Academy of Sciences of the United States of America* 105: 11556-11563. [doi: 10.1073/pnas.0801917105](https://doi.org/10.1073/pnas.0801917105)
- Dehling, D. M., **S. A. Fritz**, T. Töpfer, M. Päckert, P. Estler, K. Böhning-Gaese, M. Schleuning (2014) Functional and phylogenetic diversity and assemblage structure of frugivorous birds along an elevational gradient in the tropical Andes. *Ecography* 37: 1047-1055. [doi: 10.1111/ecog.00623](https://doi.org/10.1111/ecog.00623)
- Fisher, D. O., C. N. Johnson, M. J. Lawes, **S. A. Fritz**, H. McCallum, S. P. Blomberg, J. VanDerWal, B. Abbott, A. Frank, S. Legge, M. Letnic, C. R. Thomas, A. Fisher, I. J. Gordon, A. Kutt (2014) The current decline of tropical marsupials in Australia: is history repeating? *Global Ecology and Biogeography* 23: 181-190. [doi: 10.1111/geb.12088](https://doi.org/10.1111/geb.12088) – Press release: [English](#)
- \* **Fritz, S. A.**, O. R. P. Bininda-Emonds, A. Purvis (2009) Geographical variation in predictors of mammalian extinction risk: big is bad, but only in the tropics. *Ecology Letters* 12: 538-549. [doi: 10.1111/j.1461-0248.2009.01307.x](https://doi.org/10.1111/j.1461-0248.2009.01307.x) recommended by the Faculty of 1000 Biology

- \* **Fritz†, S. A.**, K. A. Jønsson†, J. Fjeldså, C. Rahbek (2012) Diversification and biogeographic patterns in island radiations of passerine birds. *Evolution* 66: 179-190. [doi: 10.1111/j.1558-5646.2011.01430.x](https://doi.org/10.1111/j.1558-5646.2011.01430.x) – Press release [no longer available online]
- \* **Fritz, S. A.**, A. Purvis (2010) Phylogenetic diversity does not capture body size variation at risk in the world's mammals. *Proceedings of the Royal Society B: Biological Sciences* 277: 2435-2441. [doi: 10.1098/rspb.2010.0030](https://doi.org/10.1098/rspb.2010.0030)
- \* **Fritz, S. A.**, A. Purvis (2010) Selectivity in mammalian extinction risk and threat types: a new measure of phylogenetic signal strength in binary traits. *Conservation Biology* 24: 1042-1051. [doi: 10.1111/j.1523-1739.2010.01455.x](https://doi.org/10.1111/j.1523-1739.2010.01455.x)
- \* **Fritz, S. A.**, C. Rahbek (2012) Global patterns of amphibian phylogenetic diversity. *Journal of Biogeography* 39: 1373-1382. [doi: 10.1111/j.1365-2699.2012.02757.x](https://doi.org/10.1111/j.1365-2699.2012.02757.x)
- \* **Fritz†, S. A.**, J. Schnitzler†, J. T. Eronen†, C. Hof†, K. Böhning-Gaese†, C. H. Graham† (2013) Diversity in time and space: wanted dead and alive. *Trends in Ecology and Evolution* 28: 509-516. [doi: 10.1016/j.tree.2013.05.004](https://doi.org/10.1016/j.tree.2013.05.004) – Press release: [German](#) [English version no longer available online]
- Holt†, B. G., J.-P. Lessard†, M. K. Borregaard, **S. A. Fritz**, M. B. Araújo, D. Dimitrov, P.-H. Fabre, C. H. Graham, G. R. Graves, K. A. Jønsson, D. Nogués-Bravo, Z. Wang, R. J. Whittaker, J. Fjeldså, C. Rahbek (2013) An update of Wallace's zoogeographic regions of the world. *Science* 339: 74-78. [doi: 10.1126/science.1228282](https://doi.org/10.1126/science.1228282) – Press release: [German](#) [English version no longer available online]
- Jones, K. E., J. Bielby, M. Cardillo, **S. A. Fritz**, J. O'Dell, C. D. L. Orme, K. Safi, W. Sechrest, E. H. Boakes, C. Carbone, C. Connolly, M. J. Cutts, J. K. Foster, R. Grenyer, M. Habib, C. A. Plaster, S. A. Price, E. A. Rigby, J. Rist, A. Teacher, O. R. P. Bininda-Emonds, J. L. Gittleman, G. M. Mace, A. Purvis (2009) PanTHERIA: A species-level database of life-history, ecology and geography of extant and recently extinct mammals. *Ecology* 90: 2648. [doi: 10.1890/08-1494.1](https://doi.org/10.1890/08-1494.1)
- Jønsson, K. A., P.-H. Fabre, **S. A. Fritz**, R. S. Etienne, R. E. Ricklefs, T. B. Jørgensen, J. Fjeldså, C. Rahbek, P. G. P. Ericson, F. Woog, E. Pasquet, M. Irestedt (2012) Ecological and evolutionary determinants for the adaptive radiation of the Madagascan vangas. *Proceedings of the National Academy of Sciences of the United States of America* 109: 6620-6625. [doi: 10.1073/pnas.1115835109](https://doi.org/10.1073/pnas.1115835109) – Press release [no longer available online]
- Khaliq, I., **S. A. Fritz**, R. Prinzing, M. Pfenninger, K. Böhning-Gaese, C. Hof (2015). Global variation in thermal physiology of birds and mammals: evidence for phylogenetic niche conservatism only in the tropics. *Journal of Biogeography* 42: 2187-2196. [doi: 10.1111/jbi.12573](https://doi.org/10.1111/jbi.12573)
- Lawes, M. J., D. O. Fisher, C. N. Johnson, S. P. Blomberg, A. S. K. Frank, **S. A. Fritz**, H. McCallum, J. VanDerWal, B. N. Abbott, S. Legge, M. Letnic, C. R. Thomas, N. Thurgate, A. Fisher, I. J. Gordon, A. Kutt (2015) Correlates of recent declines of rodents in northern and southern Australia: habitat structure is critical. *PLoS One* 10: e0130626. [doi: 10.1371/journal.pone.0130626](https://doi.org/10.1371/journal.pone.0130626)
- Olalla-Tárraga†, M. Á., L. McInnes†, L. M. Bini, J. A. F. Diniz-Filho, **S. A. Fritz**, B. A. Hawkins, J. Hortal, C. D. L. Orme, C. Rahbek, M. Á. Rodríguez, A. Purvis (2011) Climatic niche conservatism and the evolutionary dynamics in species range boundaries: global congruence across mammals and amphibians. *Journal of Biogeography* 38: 2237-2247. [doi: 10.1111/j.1365-2699.2011.02570.x](https://doi.org/10.1111/j.1365-2699.2011.02570.x)

- Pecher, C., **S. A. Fritz**, L. Marini, D. Fontaneto, M. Pautasso (2010) Scale-dependence of the correlation between human population and the species richness of stream macro-invertebrates. *Basic and Applied Ecology* 11: 272-280. [doi: 10.1016/j.baae.2009.09.005](https://doi.org/10.1016/j.baae.2009.09.005)
- Purvis, A., **S. A. Fritz**, J. Rodríguez, P. H. Harvey, R. Grenyer (2011) The shape of mammalian phylogeny: patterns, processes and scales. *Philosophical Transactions of the Royal Society B: Biological Sciences* 366: 2462-2477. [doi: 10.1098/rstb.2011.0025](https://doi.org/10.1098/rstb.2011.0025)
- Schleuning, M., L. Ingmann, R. Strauß, **S. A. Fritz**, B. Dalsgaard, D. M. Dehling, M. Plein, F. Saavedra, B. Sandel, J.-C. Svenning, K. Böhning-Gaese, C. F. Dormann (2014) Ecological, historical and evolutionary determinants of modularity in weighted seed-dispersal networks. *Ecology Letters* 17: 454-463. [doi: 10.1111/ele.12245](https://doi.org/10.1111/ele.12245)
- Turvey, S. T., **S. A. Fritz** (2011) The ghosts of mammals past: biological and geographical patterns of global mammalian extinction across the Holocene. *Philosophical Transactions of the Royal Society B: Biological Sciences* 366: 2564-2576. [doi: 10.1098/rstb.2011.0020](https://doi.org/10.1098/rstb.2011.0020)
- Weigelt, P., W. D. Kissling, Y. Kisel, **S. A. Fritz**, D. N. Karger, M. Kessler, S. Lehtonen, J.-C. Svenning, H. Kreft (2015). Global patterns and drivers of phylogenetic structure in island floras. *Scientific Reports* 5: 12213. [doi: 10.1038/srep12213](https://doi.org/10.1038/srep12213)

#### Other scientific publications with peer review

---

- Fisher, D. O., C. N. Johnson, M. J. Lawes, **S. A. Fritz**, H. McCallum, S. P. Blomberg, J. VanDerWal, B. Abbott, A. Frank, S. Legge, M. Letnic, C. R. Thomas, A. Fisher, I. J. Gordon, A. Kutt (2015) Response to commentary by Woinarski (Critical-weight-range marsupials in northern Australia are declining: a commentary on Fisher et al. (2014) 'The current decline of tropical marsupials in Australia: is history repeating?'). *Global Ecology and Biogeography* 24: 123-125. [doi: 10.1111/geb.12252](https://doi.org/10.1111/geb.12252)
- Hof, C., **S. A. Fritz**, R. Prinzing, M. Pfenninger, K. Böhning-Gaese, I. Khaliq (2017) Phylogenetic signals in thermal traits remain stronger in the tropics if we can believe published physiological data. A reply to McKechnie et al., "Data quality problems undermine analyses of endotherm upper critical temperatures". *Journal of Biogeography* 44: 2427-2431. [doi: 10.1111/jbi.13068](https://doi.org/10.1111/jbi.13068)
- Holt<sup>‡</sup>, B. G., J.-P. Lessard<sup>‡</sup>, M. K. Borregaard, **S. A. Fritz**, M. B. Araújo, D. Dimitrov, P.-H. Fabre, C. H. Graham, G. R. Graves, K. A. Jønsson, D. Nogués-Bravo, Z. Wang, R. J. Whittaker, J. Fjeldså, C. Rahbek (2013) Response to comment on "An update of Wallace's zoogeographic regions of the world". *Science* 341: 343. [doi: 10.1126/science.1237541](https://doi.org/10.1126/science.1237541)

#### Scientific publications without peer review

---

- Mazel, F., C. M. Tucker, M. W. Cadotte, S. B. Carvalho, T. J. Davies, **S. A. Fritz**, R. Grenyer, M. R. Helmus, A. O. Mooers, S. Pavoine, O. Purschke, D. F. Rosauer, M. Winter (2016) The forest, the trees, and the phylo-diversity jungle. *bioRxiv* July 15, 2016. [doi: 10.1101/063461](https://doi.org/10.1101/063461)
- Orme, D., R. Freckleton, G. Thomas, T. Petzoldt, **S. Fritz**, N. Isaac, W. Pearse (2012) caper: comparative analyses of phylogenetics and evolution in R. *R package version 0.5*. <http://CRAN.R-project.org/package=caper>

\* first or last author S.A. Fritz

‡ equal author contributions



### Other publications

---

- \* **Fritz, S. A.**, S. Huang (2018) Die Vielfalt von Säugetieren erforschen – tot und lebendig | Studying the diversity of mammals – dead and alive. pp. 42-47 in *Senckenberg 2015-2017, Jahresbericht | Annual Report*, Senckenberg Gesellschaft für Naturforschung, Frankfurt (Main), Deutschland | Germany. [Link to article](#)
- \* **Fritz, S.**, J. Krohmer, K. Böhning-Gaese (2018) Alexander von Humboldt hätte sich gefreut – Internationale Senckenberg-Konferenz 2017: Geobiodiversität als integrativer Forschungsansatz. *Natur Forschung Museum* 148 (01-03 2018): 26-27. [Link to journal website](#) [article not available online]