

# Forest Isbell

## List of Publications by Year in descending order

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Version: 2024-02-01

103  
papers

15,935  
citations

26610

56  
h-index

32815

100  
g-index

120  
all docs

120  
docs citations

120  
times ranked

16215  
citing authors

| #  | ARTICLE                                                                                                                                                                                               | IF   | CITATIONS |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 1  | Biodiversity and Ecosystem Functioning. Annual Review of Ecology, Evolution, and Systematics, 2014, 45, 471-493.                                                                                      | 3.8  | 1,311     |
| 2  | High plant diversity is needed to maintain ecosystem services. Nature, 2011, 477, 199-202.                                                                                                            | 13.7 | 1,195     |
| 3  | Biodiversity increases the resistance of ecosystem productivity to climate extremes. Nature, 2015, 526, 574-577.                                                                                      | 13.7 | 1,032     |
| 4  | Impacts of Biodiversity Loss Escalate Through Time as Redundancy Fades. Science, 2012, 336, 589-592.                                                                                                  | 6.0  | 672       |
| 5  | Investigating the relationship between biodiversity and ecosystem multifunctionality: challenges and solutions. Methods in Ecology and Evolution, 2014, 5, 111-124.                                   | 2.2  | 533       |
| 6  | Anthropogenic environmental changes affect ecosystem stability via biodiversity. Science, 2015, 348, 336-340.                                                                                         | 6.0  | 516       |
| 7  | Biodiversity enhances ecosystem multifunctionality across trophic levels and habitats. Nature Communications, 2015, 6, 6936.                                                                          | 5.8  | 515       |
| 8  | Nutrient enrichment, biodiversity loss, and consequent declines in ecosystem productivity. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 11911-11916.   | 3.3  | 511       |
| 9  | Linking the influence and dependence of people on biodiversity across scales. Nature, 2017, 546, 65-72.                                                                                               | 13.7 | 474       |
| 10 | Biodiversity impacts ecosystem productivity as much as resources, disturbance, or herbivory. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 10394-10397. | 3.3  | 400       |
| 11 | Biodiversity, productivity and the temporal stability of productivity: patterns and processes. Ecology Letters, 2009, 12, 443-451.                                                                    | 3.0  | 393       |
| 12 | The geography of biodiversity change in marine and terrestrial assemblages. Science, 2019, 366, 339-345.                                                                                              | 6.0  | 385       |
| 13 | $\beta^2$ -Diversity, Community Assembly, and Ecosystem Functioning. Trends in Ecology and Evolution, 2018, 33, 549-564.                                                                              | 4.2  | 374       |
| 14 | Benefits of increasing plant diversity in sustainable agroecosystems. Journal of Ecology, 2017, 105, 871-879.                                                                                         | 1.9  | 360       |
| 15 | Multiple facets of biodiversity drive the diversity-stability relationship. Nature Ecology and Evolution, 2018, 2, 1579-1587.                                                                         | 3.4  | 296       |
| 16 | Linking Biodiversity and Ecosystem Services: Current Uncertainties and the Necessary Next Steps. BioScience, 2014, 64, 49-57.                                                                         | 2.2  | 285       |
| 17 | Scaling-up biodiversity-ecosystem functioning research. Ecology Letters, 2020, 23, 757-776.                                                                                                           | 3.0  | 270       |
| 18 | Predicting ecosystem stability from community composition and biodiversity. Ecology Letters, 2013, 16, 617-625.                                                                                       | 3.0  | 251       |

| #  | ARTICLE                                                                                                                                                                                                                    | IF  | CITATIONS |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 19 | The Future of Complementarity: Disentangling Causes from Consequences. Trends in Ecology and Evolution, 2019, 34, 167-180.                                                                                                 | 4.2 | 246       |
| 20 | Set ambitious goals for biodiversity and sustainability. Science, 2020, 370, 411-413.                                                                                                                                      | 6.0 | 225       |
| 21 | Estimating local biodiversity change: a critique of papers claiming no net loss of local diversity. Ecology, 2016, 97, 1949-1960.                                                                                          | 1.5 | 224       |
| 22 | Diversifying livestock promotes multidiversity and multifunctionality in managed grasslands. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 6187-6192.                        | 3.3 | 219       |
| 23 | Local loss and spatial homogenization of plant diversity reduce ecosystem multifunctionality. Nature Ecology and Evolution, 2018, 2, 50-56.                                                                                | 3.4 | 172       |
| 24 | Spatial convergent cross mapping to detect causal relationships from short time series. Ecology, 2015, 96, 1174-1181.                                                                                                      | 1.5 | 170       |
| 25 | Plant diversity effects on grassland productivity are robust to both nutrient enrichment and drought. Philosophical Transactions of the Royal Society B: Biological Sciences, 2016, 371, 20150277.                         | 1.8 | 169       |
| 26 | Species richness change across spatial scales. Oikos, 2019, 128, 1079-1091.                                                                                                                                                | 1.2 | 160       |
| 27 | When Do Ecosystem Services Depend on Rare Species?. Trends in Ecology and Evolution, 2019, 34, 746-758.                                                                                                                    | 4.2 | 159       |
| 28 | Quantifying effects of biodiversity on ecosystem functioning across times and places. Ecology Letters, 2018, 21, 763-778.                                                                                                  | 3.0 | 157       |
| 29 | Low biodiversity state persists two decades after cessation of nutrient enrichment. Ecology Letters, 2013, 16, 454-460.                                                                                                    | 3.0 | 151       |
| 30 | The biodiversity-dependent ecosystem service debt. Ecology Letters, 2015, 18, 119-134.                                                                                                                                     | 3.0 | 146       |
| 31 | Global change effects on plant communities are magnified by time and the number of global change factors imposed. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 17867-17873. | 3.3 | 141       |
| 32 | Mapping human pressures on biodiversity across the planet uncovers anthropogenic threat complexes. People and Nature, 2020, 2, 380-394.                                                                                    | 1.7 | 139       |
| 33 | Asynchrony among local communities stabilises ecosystem function of metacommunities. Ecology Letters, 2017, 20, 1534-1545.                                                                                                 | 3.0 | 136       |
| 34 | Rapid plant species loss at high rates and at low frequency of N addition in temperate steppe. Global Change Biology, 2014, 20, 3520-3529.                                                                                 | 4.2 | 132       |
| 35 | Low multifunctional redundancy of soil fungal diversity at multiple scales. Ecology Letters, 2016, 19, 249-259.                                                                                                            | 3.0 | 128       |
| 36 | Species richness, but not phylogenetic diversity, influences community biomass production and temporal stability in a re-examination of 16 grassland biodiversity studies. Functional Ecology, 2015, 29, 615-626.          | 1.7 | 124       |

| #  | ARTICLE                                                                                                                                                                                                                 | IF  | CITATIONS |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 37 | The social costs of nitrogen. <i>Science Advances</i> , 2016, 2, e1600219.                                                                                                                                              | 4.7 | 118       |
| 38 | Biodiversity as insurance: from concept to measurement and application. <i>Biological Reviews</i> , 2021, 96, 2333-2354.                                                                                                | 4.7 | 101       |
| 39 | Deficits of biodiversity and productivity linger a century after agricultural abandonment. <i>Nature Ecology and Evolution</i> , 2019, 3, 1533-1538.                                                                    | 3.4 | 98        |
| 40 | Understanding the value of plant diversity for ecosystem functioning through niche theory. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2016, 283, 20160536.                                        | 1.2 | 96        |
| 41 | Diversity-dependent temporal divergence of ecosystem functioning in experimental ecosystems. <i>Nature Ecology and Evolution</i> , 2017, 1, 1639-1642.                                                                  | 3.4 | 95        |
| 42 | A multitrophic perspective on biodiversityâ€ecosystem functioning research. <i>Advances in Ecological Research</i> , 2019, 61, 1-54.                                                                                    | 1.4 | 95        |
| 43 | Integrating community assembly and biodiversity to better understand ecosystem function: the Community Assembly and the Functioning of Ecosystems (<sc>CAFE</sc>) approach. <i>Ecology Letters</i> , 2018, 21, 167-180. | 3.0 | 94        |
| 44 | The results of biodiversityâ€ecosystem functioning experiments are realistic. <i>Nature Ecology and Evolution</i> , 2020, 4, 1485-1494.                                                                                 | 3.4 | 93        |
| 45 | Exacerbated nitrogen limitation ends transient stimulation of grassland productivity by increased precipitation. <i>Ecological Monographs</i> , 2017, 87, 457-469.                                                      | 2.4 | 87        |
| 46 | The strength of the biodiversityâ€ecosystem function relationship depends on spatial scale. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2018, 285, 20180038.                                       | 1.2 | 82        |
| 47 | Biodiversity maintenance mechanisms differ between native and novel exoticâ€dominated communities. <i>Ecology Letters</i> , 2009, 12, 432-442.                                                                          | 3.0 | 81        |
| 48 | Plant functional traits improve diversityâ€based predictions of temporal stability of grassland productivity. <i>Oikos</i> , 2013, 122, 1275-1282.                                                                      | 1.2 | 79        |
| 49 | A comprehensive approach to analyzing community dynamics using rank abundance curves. <i>Ecosphere</i> , 2019, 10, e02881.                                                                                              | 1.0 | 79        |
| 50 | Biodiversityâ€productivity relationships are key to nature-based climate solutions. <i>Nature Climate Change</i> , 2021, 11, 543-550.                                                                                   | 8.1 | 77        |
| 51 | General destabilizing effects of eutrophication on grassland productivity at multiple spatial scales. <i>Nature Communications</i> , 2020, 11, 5375.                                                                    | 5.8 | 75        |
| 52 | Biotic homogenization destabilizes ecosystem functioning by decreasing spatial asynchrony. <i>Ecology</i> , 2021, 102, e03332.                                                                                          | 1.5 | 74        |
| 53 | Disentangling relationships between plant diversity and decomposition processes under forest restoration. <i>Journal of Applied Ecology</i> , 2017, 54, 80-90.                                                          | 1.9 | 71        |
| 54 | An attainable global vision for conservation and human wellâ€being. <i>Frontiers in Ecology and the Environment</i> , 2018, 16, 563-570.                                                                                | 1.9 | 71        |

| #  | ARTICLE                                                                                                                                                                     | IF  | CITATIONS |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 55 | Biodiversity enhances the multitrophic control of arthropod herbivory. <i>Science Advances</i> , 2020, 6, .                                                                 | 4.7 | 68        |
| 56 | Decomposer diversity and identity influence plant diversity effects on ecosystem functioning. <i>Ecology</i> , 2012, 93, 2227-2240.                                         | 1.5 | 63        |
| 57 | Increasing effects of chronic nutrient enrichment on plant diversity loss and ecosystem productivity over time. <i>Ecology</i> , 2021, 102, e03218.                         | 1.5 | 62        |
| 58 | Disturbance type and species life history predict mammal responses to humans. <i>Global Change Biology</i> , 2021, 27, 3718-3731.                                           | 4.2 | 62        |
| 59 | BUGS in the Analysis of Biodiversity Experiments: Species Richness and Composition Are of Similar Importance for Grassland Productivity. <i>PLoS ONE</i> , 2011, 6, e17434. | 1.1 | 62        |
| 60 | Testing the effects of diversity on ecosystem multifunctionality using a multivariate model. <i>Ecology Letters</i> , 2015, 18, 1242-1251.                                  | 3.0 | 61        |
| 61 | Niche and fitness differences relate the maintenance of diversity to ecosystem function: comment. <i>Ecology</i> , 2012, 93, 1482-1487.                                     | 1.5 | 58        |
| 62 | The interactive effects of press/pulse intensity and duration on regime shifts at multiple scales. <i>Ecological Monographs</i> , 2017, 87, 198-218.                        | 2.4 | 58        |
| 63 | Nitrogen addition reduced ecosystem stability regardless of its impacts on plant diversity. <i>Journal of Ecology</i> , 2019, 107, 2427-2435.                               | 1.9 | 57        |
| 64 | Achieving global biodiversity goals by 2050 requires urgent and integrated actions. <i>One Earth</i> , 2022, 5, 597-603.                                                    | 3.6 | 57        |
| 65 | An improved model to predict the effects of changing biodiversity levels on ecosystem function. <i>Journal of Ecology</i> , 2013, 101, 344-355.                             | 1.9 | 56        |
| 66 | Plant diversity maintains multiple soil functions in future environments. <i>ELife</i> , 2018, 7, .                                                                         | 2.8 | 54        |
| 67 | A framework for quantifying the magnitude and variability of community responses to global change drivers. <i>Ecosphere</i> , 2015, 6, 1-14.                                | 1.0 | 51        |
| 68 | Climate warming promotes species diversity, but with greater taxonomic redundancy, in complex environments. <i>Science Advances</i> , 2017, 3, e1700866.                    | 4.7 | 50        |
| 69 | Expert perspectives on global biodiversity loss and its drivers and impacts on people. <i>Frontiers in Ecology and the Environment</i> , 2023, 21, 94-103.                  | 1.9 | 49        |
| 70 | Productivity depends more on the rate than the frequency of N addition in a temperate grassland. <i>Scientific Reports</i> , 2015, 5, 12558.                                | 1.6 | 47        |
| 71 | Increasing native, but not exotic, biodiversity increases aboveground productivity in ungrazed and intensely grazed grasslands. <i>Oecologia</i> , 2011, 165, 771-781.      | 0.9 | 46        |
| 72 | Species interaction mechanisms maintain grassland plant species diversity. <i>Ecology</i> , 2009, 90, 1821-1830.                                                            | 1.5 | 43        |

| #  | ARTICLE                                                                                                                                                                                                                   | IF   | CITATIONS |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 73 | Limited evidence for spatial resource partitioning across temperate grassland biodiversity experiments. <i>Ecology</i> , 2020, 101, e02905.                                                                               | 1.5  | 40        |
| 74 | Grassland biodiversity can pay. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 3876-3881.                                                                            | 3.3  | 38        |
| 75 | How complementarity and selection affect the relationship between ecosystem functioning and stability. <i>Ecology</i> , 2021, 102, e03347.                                                                                | 1.5  | 38        |
| 76 | Recovery as nitrogen declines. <i>Nature</i> , 2015, 528, 336-337.                                                                                                                                                        | 13.7 | 36        |
| 77 | A meta-analysis on decomposition quantifies afterlife effects of plant diversity as a global change driver. <i>Nature Communications</i> , 2020, 11, 4547.                                                                | 5.8  | 36        |
| 78 | Diversity-productivity relationships in two ecologically realistic rarity-extinction scenarios. <i>Oikos</i> , 2008, 117, 996-1005.                                                                                       | 1.2  | 35        |
| 79 | Multifunctionality does not imply that all functions are positively correlated. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, E5490.                                | 3.3  | 31        |
| 80 | Diversity-dependent soil acidification under nitrogen enrichment constrains biomass productivity. <i>Global Change Biology</i> , 2020, 26, 6594-6603.                                                                     | 4.2  | 31        |
| 81 | Determinants of community compositional change are equally affected by global change. <i>Ecology Letters</i> , 2021, 24, 1892-1904.                                                                                       | 3.0  | 27        |
| 82 | Ambient changes exceed treatment effects on plant species abundance in global change experiments. <i>Global Change Biology</i> , 2018, 24, 5668-5679.                                                                     | 4.2  | 25        |
| 83 | Rapid biodiversity declines in both ungrazed and intensely grazed exotic grasslands. <i>Plant Ecology</i> , 2011, 212, 1663-1674.                                                                                         | 0.7  | 22        |
| 84 | The Links Between Biodiversity and Ecosystem Services. , 2016, , 45-61.                                                                                                                                                   |      | 20        |
| 85 | Is community persistence related to diversity? A test with prairie species in a long-term experiment. <i>Basic and Applied Ecology</i> , 2013, 14, 199-207.                                                               | 1.2  | 18        |
| 86 | Agroecology: Agroecosystem diversification. <i>Nature Plants</i> , 2015, 1, 15041.                                                                                                                                        | 4.7  | 18        |
| 87 | Reversal of nitrogen-induced species diversity declines mediated by change in dominant grass and litter. <i>Oecologia</i> , 2018, 188, 921-929.                                                                           | 0.9  | 17        |
| 88 | Do not downplay biodiversity loss. <i>Nature</i> , 2022, 601, E27-E28.                                                                                                                                                    | 13.7 | 17        |
| 89 | Lost in trait space: species-poor communities are inflexible in properties that drive ecosystem functioning. <i>Advances in Ecological Research</i> , 2019, , 91-131.                                                     | 1.4  | 14        |
| 90 | Overgrazing, not haying, decreases grassland topsoil organic carbon by decreasing plant species richness along an aridity gradient in Northern China. <i>Agriculture, Ecosystems and Environment</i> , 2022, 332, 107935. | 2.5  | 14        |

| #   | ARTICLE                                                                                                                                                                                                                                     | IF  | CITATIONS |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 91  | Behaviorally-mediated trophic cascade attenuated by prey use of risky places at safe times. <i>Oecologia</i> , 2021, 195, 235-248.                                                                                                          | 0.9 | 12        |
| 92  | Increasing the uptake of ecological model results in policy decisions to improve biodiversity outcomes. <i>Environmental Modelling and Software</i> , 2022, 149, 105318.                                                                    | 1.9 | 11        |
| 93  | Gray Wolf (&i&gt;Canis lupus&/i&gt;) recolonization failure: a Minnesota case study. <i>Canadian Field-Naturalist</i> , 2019, 133, 60-65.                                                                                                   | 0.0 | 9         |
| 94  | Diversifying bioenergy crops increases yield and yield stability by reducing weed abundance. <i>Science Advances</i> , 2021, 7, eabg8531.                                                                                                   | 4.7 | 9         |
| 95  | Chronic fertilization and irrigation gradually and increasingly restructure grassland communities. <i>Ecosphere</i> , 2019, 10, e02625.                                                                                                     | 1.0 | 8         |
| 96  | Temporal variability in production is not consistently affected by global change drivers across herbaceous-dominated ecosystems. <i>Oecologia</i> , 2020, 194, 735-744.                                                                     | 0.9 | 8         |
| 97  | Grand challenges in biodiversityâ€ecosystem functioning research in the era of scienceâ€policy platforms require explicit consideration of feedbacks. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2021, 288, 20210783. | 1.2 | 8         |
| 98  | Bats join the ranks of oxpeckers and cleaner fish as partners in a pestâ€reducing mutualism. <i>Ethology</i> , 2019, 125, 170-175.                                                                                                          | 0.5 | 7         |
| 99  | Sustainability of Human Ecological Niche Construction. <i>Ecology and Society</i> , 2014, 19, .                                                                                                                                             | 1.0 | 6         |
| 100 | Consistent functional clusters explain the effects of biodiversity on ecosystem productivity in a longâ€term experiment. <i>Ecology</i> , 2021, 102, e03441.                                                                                | 1.5 | 6         |
| 101 | BI-Implementation: The causes and consequences of plant biodiversity across scales in a rapidly changing world. <i>Research Ideas and Outcomes</i> , 0, 7, .                                                                                | 1.0 | 5         |
| 102 | Human impacts on minimum subsets of species critical for maintaining ecosystem structure. <i>Basic and Applied Ecology</i> , 2013, 14, 623-629.                                                                                             | 1.2 | 3         |
| 103 | Prolonged impacts of past agriculture and ungulate overabundance on soil fungal communities in restored forests. <i>Environmental DNA</i> , 2021, 3, 930-939.                                                                               | 3.1 | 2         |