James F Reynolds

List of Publications by Year
in descending order

85 papers	9,957 citations	76196 40 h-index	79541 73 g-index
85 all docs	85 docs citations	85 times ranked	10139 citing authors

#	Article	IF	Citations
1	Global Desertification: Building a Science for Dryland Development. Science, 2007, 316, 847-851.	6.0	2,072
2	Impacts of shrub encroachment on ecosystem structure and functioning: towards a global synthesis. Ecology Letters, 2011, 14, 709-722.	3.0	864
3	Thermal adaptation of soil microbial respiration to elevated temperature. Ecology Letters, 2008, 11, 1316-1327.	3.0	690
4	Is the change of plant-plant interactions with abiotic stress predictable? A meta-analysis of field results in arid environments. Journal of Ecology, 2005, 93, 748-757.	1.9	623
5	Modifying the â€˜pulseâ€"reserveâ€™ paradigm for deserts of North America: precipitation pulses, soil water, and plant responses. Oecologia, 2004, 141, 194-210.	0.9	593
6	IMPACT OF DROUGHT ON DESERT SHRUBS: EFFECTS OF SEASONALITY AND DEGREE OF RESOURCE ISLAND DEVELOPMENT. Ecological Monographs, 1999, 69, 69-106.	2.4	412
7	Plant responses to precipitation in desert ecosystems: integrating functional types, pulses, thresholds, and delays. Oecologia, 2004, 141, 282-294.	0.9	390
8	A new contagion index to quantify spatial patterns of landscapes. Landscape Ecology, 1993, 8, 155-162.	1.9	358
9	A Simulation Experiment to Quantify Spatial Heterogeneity in Categorical Maps. Ecology, 1994, 75, 2446.	1.5	250
10	Coordination theory of leaf nitrogen distribution in a canopy. Oecologia, 1993, 93, 63-69.	0.9	197
11	Title is missing!. Plant Ecology, 2000, 150, 145-159.	0.7	188
12	The stress-gradient hypothesis does not fit all relationships between plant-plant interactions and abiotic stress: further insights from arid environments. Journal of Ecology, 2006, 94, 17-22.	1.9	172
13	VALIDITY OF EXTRAPOLATING FIELD CO2EXPERIMENTS TO PREDICT CARBON SEQUESTRATION IN NATURAL ECOSYSTEMS. Ecology, 1999, 80, 1568-1583.	1.5	163
14	The Effect of Neighbors on Root Distribution in a Creosotebush (Larrea Tridentata) Population. Ecology, 1994, 75, 1693-1702.	1.5	155
15	Size-biomass Relationships of Several Chihuahuan Desert Shrubs. American Midland Naturalist, 1975, 94, 451.	0.2	115
16	Allometric relations and growth in Pinus taeda: the effect of elevated CO2, and changing N availability. New Phytologist, 1996, 134, 85-93.	3.5	106
17	A comparative modeling study of soil water dynamics in a desert ecosystem. Water Resources Research, 1997, 33, 73-90.	1.7	91
18	The effect of elevated CO 2 and N availability on tissue concentrations and whole plant pools of carbon-based secondary compounds in loblolly pine (Pinus taeda). Oecologia, 1997, 113, 29-36.	0.9	90

#	Article	IF	Citations
19	Effects of elevated CO2 and nitrogen fertilization pretreatments on decomposition on tallgrass prairie leaf litter. Plant and Soil, 1994, 165, 115-127.	1.8	89
20	Modularity and genericness in plant and ecosystem models. Ecological Modelling, 1997, 94, 7-16.	1.2	87
21	RECONSTRUCTING PLANT ROOT AREA AND WATER UPTAKE PROFILES. Ecology, 2004, 85, 1967-1978.	1.5	87
22	A general model of litter decomposition in the northern Chihuahuan Desert. Ecological Modelling, 1991, 56, 197-219.	1.2	85
23	Predicting the response of plants to increasing carbon dioxide: A critique of plant growth models. Ecological Modelling, 1985, 29, 107-129.	1.2	81
24	AMOUNT OR PATTERN? GRASSLAND RESPONSES TO THE HETEROGENEITY AND AVAILABILITY OF TWO KEY RESOURCES. Ecology, 2007, 88, 501-511.	1.5	80
25	Responses of dryland soil respiration and soil carbon pool size to abrupt vs. gradual and individual vs. combined changes in soil temperature, precipitation, and atmospheric [CO₂]: a simulation analysis. Global Change Biology, 2009, 15, 2274-2294.	4.2	78
26	Historical shrub-grass transitions in the northern Chihuahuan Desert: modeling the effects of shifting rainfall seasonality and event size over a landscape gradient. Global Change Biology, 2003, 9, 1475-1493.	4.2	73
27	The Influence of Carbon Dioxide and Daily Photon-flux Density on Optimal Leaf Nitrogen Concentration and Root: Shoot Ratio. Annals of Botany, 1991, 68, 365-376.	1.4	71
28	A MODEL OF NITROGEN UPTAKE BYERIOPHORUM VAGINATUMROOTS IN THE FIELD: ECOLOGICAL IMPLICATIONS. Ecological Monographs, 1997, 67, 1-22.	2.4	70
29	A model of arctic tundra vegetation derived from topographic gradients. Landscape Ecology, 1998, 13, 187-201.	1.9	65
30	Mechanisms of surface litter mass loss in the northern Chihuahuan desert: a reinterpretation. Journal of Arid Environments, 1989, 16, 157-163.	1.2	63
31	Decomposition processes: modelling approaches and applications. Science of the Total Environment, 1996, 183, 137-149.	3.9	63
32	Modelling whole-plant allocation in relation to carbon and nitrogen supply: Coordination versus optimization: Opinion. Plant and Soil, 1996, 185, 65-74.	1.8	62
33	Nonlinear rootâ€derived carbon sequestration across a gradient of nitrogen and phosphorous deposition in experimental mesocosms. Global Change Biology, 2008, 14, 1113-1124.	4.2	58
34	Modeling the effects of elevated CO2 on plants: extrapolating leaf response to a canopy. Agricultural and Forest Meteorology, 1992, 61, 69-94.	1.9	57
35	Title is missing!. Plant and Soil, 1997, 190, 1-9.	1.8	55
36	A Model Allocating Growth Among Leaf Proteins, Shoot Structure, and Root Biomass to Produce Balanced Activity. Annals of Botany, 1991, 68, 417-425.	1.4	50

#	Article	IF	Citations
37	Desertification. , 2001, , 61-78.		49
38	Soil nutrient heterogeneity interacts with elevated CO 2 and nutrient availability to determine species and assemblage responses in a model grassland community. New Phytologist, 2005, 168, 637-650.	3.5	49
39	Do morphological changes mediate plant responses to water stress? A steadyâ€state experiment with two C 4 grasses. New Phytologist, 2002, 155, 79-88.	3.5	46
40	Spatial heterogeneity in soil nutrient supply modulates nutrient and biomass responses to multiple global change drivers in model grassland communities. Global Change Biology, 2006, 12, 2431-2441.	4.2	43
41	Ecohydrological feedbacks and linkages associated with land degradation: a case study from Mexico. Hydrological Processes, 2006, 20, 3395-3411.	1.1	41
42	Effects of plant size on photosynthesis and water relations in the desert shrub <i>Prosopis glandulosa</i> (Fabaceae). American Journal of Botany, 1996, 83, 99-105.	0.8	40
43	Relationships between a terrain-based hydrologic model and patch-scale vegetation patterns in an arctic tundra landscape. Landscape Ecology, 1993, 8, 229-237.	1.9	39
44	Soil heterogeneity and community composition jointly influence grassland biomass. Journal of Vegetation Science, 2006, 17, 261-270.	1.1	39
45	Soil aeration in relation to soil physical properties, nitrogen availability, and root characteristics within an arctic watershed. Plant and Soil, 1996, 178, 37-48.	1.8	37
46	Effects of Climate Change on Decomposition in Arctic Tussock Tundra: A Modeling Synthesis. Arctic and Alpine Research, 1993, 25, 403.	1.3	34
47	Biomass responses to elevated CO2, soil heterogeneity and diversity: an experimental assessment with grassland assemblages. Oecologia, 2007, 151, 512-520.	0.9	34
48	A novel approach to assess livestock management effects on biodiversity of drylands. Ecological Indicators, 2015, 50, 69-78.	2.6	33
49	Estimation of leaf area of soybeans grown under elevated carbon dioxide levels. Field Crops Research, 1986, 13, 193-203.	2.3	31
50	Title is missing!. Climatic Change, 2001, 51, 541-557.	1.7	31
51	Simulating the dynamics of primary productivity of a Sonoran ecosystem: Model parameterization and validation. Ecological Modelling, 2005, 189, 1-24.	1.2	31
52	The contribution of abiotic processes to buried litter decomposition in the northern Chihuahuan desert. Oecologia, 1989, 79, 133-135.	0.9	30
53	Scaling Ecophysiology from the Plant to the Ecosystem: A Conceptual Framework. , 1993, , 127-140.		30
54	Small-scale spatial heterogeneity in the vertical distribution of soil nutrients has limited effects on the growth and development of Prosopis glandulosa seedlings. Plant Ecology, 2006, 183, 65-75.	0.7	29

#	Article	IF	Citations
55	Growth and allocation of the arctic sedges Eriohorum angustifolium and E. vaginatum: effects of variable soil oxygen and nutrient availability. Oecologia, 1995, 104, 330-339.	0.9	27
56	EFFECTS OF COMPENSATORY GROWTH ON POPULATIONPROCESSES: A SIMULATION STUDY. Ecology, 1997, 78, 2378-2384.	1.5	26
57	GePSi: A generic plant simulator based on object-oriented principles. Ecological Modelling, 1997, 94, 53-66.	1.2	26
58	Effects of elevated CO2 and nitrogen fertilization pretreatments on decomposition on tallgrass prairie leaf litter. , 1994, , 115-127.		25
59	Long-Term Response of an Arctic Sedge to Climate Change: A Simulation Study. , 1992, 2, 323-340.		24
60	Effects of plant size on photosynthesis and water relations in the desert shrub Prosopis glandulosa (Fabaceae). , 1996, 83, 99.		24
61	A SIMPLE MODEL FOR PREDICTING SOIL TEMPERATURES IN DESERT ECOSYSTEMS1. Soil Science, 1992, 153, 280-287.	0.9	23
62	Hydrological and ecological responses of ecosystems to extreme precipitation regimes: A test of empirical-based hypotheses with an ecosystem model. Perspectives in Plant Ecology, Evolution and Systematics, 2016, 22, 36-46.	1.1	23
63	Nutrient Availability and Atmospheric CO2 Partial Pressure Modulate the Effects of Nutrient Heterogeneity on the Size Structure of Populations in Grassland Species. Annals of Botany, 2006, 98, 227-235.	1.4	22
64	Modeling the Response of Arctic Plants to Changing Climate. , 1992, , 413-438.		20
65	Decreased mass specific respiration under experimental warming is robust to the microbial biomass method employed. Ecology Letters, 2009, 12, E15.	3.0	19
66	Contingency in ecosystem but not plant community response to multiple global change factors. New Phytologist, 2012, 196, 462-471.	3.5	18
67	Diurnal patterns of CO2 and H2 O exchange of the Arctic sedges Eriophorum angustifolium and E. vaginatum (Cyperaceae). American Journal of Botany, 1998, 85, 592-599.	0.8	17
68	Individual vs. population plastic responses to elevated CO2, nutrient availability, and heterogeneity: a microcosm experiment with co-occurring species. Plant and Soil, 2007, 296, 53-64.	1.8	17
69	Progress, Limitations, and Challenges in Modeling the Effects of Elevated CO2 on Plants and Ecosystems. , 1996, , 347-380.		17
70	PATTERNS OF STRATIFIED SOIL WATER LOSS IN A CHIHUAHUAN DESERT COMMUNITY. Soil Science, 1989, 148, 244-249.	0.9	16
71	Introduction: modularity in plant models. Ecological Modelling, 1997, 94, 1-6.	1.2	16
72	Validation of a primary production model of the desert shrub Larrea tridentata using soil-moisture augmentation experiments. Oecologia, 1981, 51, 357-363.	0.9	15

#	ARTICLE	IF	CITATIONS
73	THE RATIONALE FOR ADOPTING A MODULAR GENERIC STRUCTURE FOR CROP SIMULATORS. Acta Horticulturae, 1989, , 391-400.	0.1	14
74	Earthworms modify plant biomass and nitrogen capture under conditions of soil nutrient heterogeneity and elevated atmospheric CO 2 concentrations. Soil Biology and Biochemistry, 2014, 78, 182-188.	4.2	13
75	Extracellular Acid Phosphatase Activities in Eriophorum vaginatum Tussocks: A Modeling Synthesis. Arctic and Alpine Research, 1993, 25, 50.	1.3	12
76	Changing humanâ€“ecological relationships and drivers using the Quesungual agroforestry system in western Honduras. Renewable Agriculture and Food Systems, 2010, 25, 219-227.	0.8	12
77	Changes in evapotranspiration and phenology as consequences of shrub removal in dry forests of central Argentina. Ecohydrology, 2015, 8, 1304-1311.	1.1	10
78	Soil heterogeneity and community composition jointly influence grassland biomass. , 2006, 17, 261.		10
79	Growth, nitrogen uptake, and metabolism in two semiarid shrubs grown at ambient and elevated atmospheric CO₂ concentrations: effects of nitrogen supply and source. American Journal of Botany, 2004, 91, 565-572.	0.8	9
80	EFFECTS OF ELEVATED CARBON DIOXIDE ON ESTIMATION OF LEAF AREA AND LEAF DRY WEIGHT OF SOYBEAN. American Journal of Botany, 1988, 75, 1771-1774.	0.8	8
81	Desertification. , 2013, , 479-494.		7
82	UNDERSTANDING GLOBAL DESERTIFICATION: BIOPHYSICAL AND SOCIOECONOMIC DIMENSIONS OF HYDROLOGY. , 2006, , 315-332.		7
83	A Modular Structure for Plant Growth Simulation Models. , 1989, , 123-134.		6
84	SCALING TERRESTRIAL BIOGEOCHEMICAL PROCESSES CONTRASTING INTACT AND MODEL EXPERIMENTAL SYSTEMS. , 2006, , 109-130.		3
85	Gas exchange and carbon metabolism in two <i>Prosopis</i> species (Fabaceae) from semiarid habitats: effects of elevated CO₂, N supply, and N source. American Journal of Botany, 2006, 93, 716-723.	0.8	2