

# Hugh Pritchard

## List of Publications by Year in descending order

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97  
papers

3,984  
citations

109321

35  
h-index

138484

58  
g-index

99  
all docs

99  
docs citations

99  
times ranked

3137  
citing authors

#	ARTICLE	IF	CITATIONS
1	The science and economics of ex situ plant conservation. Trends in Plant Science, 2009, 14, 614-621.	8.8	371
2	Glutathione half-cell reduction potential: A universal stress marker and modulator of programmed cell death?. Free Radical Biology and Medicine, 2006, 40, 2155-2165.	2.9	281
3	Traits of recalcitrant seeds in a semi-deciduous tropical forest in Panama: some ecological implications. Functional Ecology, 2005, 19, 874-885.	3.6	136
4	Unlocking plant resources to support food security and promote sustainable agriculture. Plants People Planet, 2020, 2, 421-445.	3.3	130
5	Prediction of Desiccation Sensitivity in Seeds of Woody Species: A Probabilistic Model Based on Two Seed Traits and 104 Species. Annals of Botany, 2006, 97, 667-674.	2.9	124
6	Ecological correlates of seed desiccation tolerance in tropical African dryland trees. American Journal of Botany, 2004, 91, 863-870.	1.7	122
7	Developmental heat sum influences recalcitrant seed traits in Aesculus hippocastanum across Europe. New Phytologist, 2004, 162, 157-166.	7.3	118
8	Water Potential and Embryonic Axis Viability in Recalcitrant Seeds of Quercus rubra. Annals of Botany, 1991, 67, 43-49.	2.9	112
9	Systematic and evolutionary aspects of desiccation tolerance in seeds.. , 2002, , 239-259.		92
10	Ex Situ Conservation of Orchids in a Warming World. Botanical Review, The, 2010, 76, 193-203.	3.9	88
11	Evidence for the absence of enzymatic reactions in the glassy state. A case study of xanthophyll cycle pigments in the desiccation-tolerant moss <i>Syntrichia ruralis</i> . Journal of Experimental Botany, 2013, 64, 3033-3043.	4.8	86
12	Innovative approaches to the preservation of forest trees. Forest Ecology and Management, 2014, 333, 88-98.	3.2	80
13	Native Seed Supply and the Restoration Species Pool. Conservation Letters, 2018, 11, e12381.	5.7	74
14	Seeds of future past: climate change and the thermal memory of plant reproductive traits. Biological Reviews, 2019, 94, 439-456.	10.4	74
15	An oxidative burst of superoxide in embryonic axes of recalcitrant sweet chestnut seeds as induced by excision and desiccation. Physiologia Plantarum, 2008, 133, 131-139.	5.2	73
16	Inter-nucleosomal DNA fragmentation and loss of RNA integrity during seed ageing. Plant Growth Regulation, 2011, 63, 63-72.	3.4	72
17	Spatial and temporal nature of reactive oxygen species production and programmed cell death in elm ( <i>Ulmus pumila</i> L.) seeds during controlled deterioration. Plant, Cell and Environment, 2012, 35, 2045-2059.	5.7	71
18	Thermal thresholds as predictors of seed dormancy release and germination timing: altitude-related risks from climate warming for the wild grapevine <i>Vitis vinifera</i> subsp. <i>sylvestris</i> . Annals of Botany, 2012, 110, 1651-1660.	2.9	68

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19	Frozen beauty: The cryobiotechnology of orchid diversity. <i>Biotechnology Advances</i> , 2016, 34, 380-403.	11.7	67
20	Reactive oxygen species-provoked mitochondria-dependent cell death during ageing of elm ( <i>Ulmus</i> ) Tj ETQq0.0 0 rgBT/Overlock	9.7	66
21	Noninvasive diagnosis of seed viability using infrared thermography. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 3912-3917.	7.1	65
22	Seed life span and food security. <i>New Phytologist</i> , 2019, 224, 557-562.	7.3	64
23	Dry architecture: towards the understanding of the variation of longevity in desiccation-tolerant germplasm. <i>Seed Science Research</i> , 2020, 30, 142-155.	1.7	64
24	Volatile fingerprints of seeds of four species indicate the involvement of alcoholic fermentation, lipid peroxidation, and Maillard reactions in seed deterioration during ageing and desiccation stress. <i>Journal of Experimental Botany</i> , 2012, 63, 6519-6530.	4.8	63
25	Cryobiotechnologies: Tools for expanding long-term ex situ conservation to all plant species. <i>Biological Conservation</i> , 2020, 250, 108736.	4.1	62
26	Effects of Desiccation and Cryopreservation on the In Vitro Viability of Embryos of the Recalcitrant Seed Species <i>Araucaria hunsteini</i> K. Schum. <i>Journal of Experimental Botany</i> , 1986, 37, 1388-1397.	4.8	55
27	Germination of <i>Aesculus hippocastanum</i> seeds following cold-induced dormancy loss can be described in relation to a temperature-dependent reduction in base temperature ( $T_b$ ) and thermal time. <i>New Phytologist</i> , 2004, 161, 415-425.	7.3	55
28	Quantal Response of Fruit and Seed Germination Rate in <i>Quercus robur</i> L. and <i>Castanea sativa</i> Mill, to Constant Temperatures and Photon Dose. <i>Journal of Experimental Botany</i> , 1990, 41, 1549-1557.	4.8	51
29	Reactive oxygen species induced by cold stratification promote germination of <i>Hedysarum scoparium</i> seeds. <i>Plant Physiology and Biochemistry</i> , 2016, 109, 406-415.	5.8	50
30	Rainfall, not soil temperature, will limit the seed germination of dry forest species with climate change. <i>Oecologia</i> , 2020, 192, 529-541.	2.0	48
31	Changes in the mitochondrial protein profile due to ROS eruption during ageing of elm ( <i>Ulmus pumila</i> ) Tj ETQq1 1 0.784314 rgBT/Overlock	5.8	45
32	Thermal buffering capacity of the germination phenotype across the environmental envelope of the Cactaceae. <i>Global Change Biology</i> , 2017, 23, 5309-5317.	9.5	44
33	Thermal niche for in situ seed germination by Mediterranean mountain streams: model prediction and validation for <i>Rhamnus persicifolia</i> seeds. <i>Annals of Botany</i> , 2013, 112, 1887-1897.	2.9	42
34	Plant species with extremely small populations (PSESP) in China: A seed and spore biology perspective. <i>Plant Diversity</i> , 2016, 38, 209-220.	3.7	42
35	Simulating the germination response to diurnally alternating temperatures under climate change scenarios: comparative studies on <i>Carex diandra</i> seeds. <i>Annals of Botany</i> , 2015, 115, 201-209.	2.9	38
36	Mathematically combined half-cell reduction potentials of low-molecular-weight thiols as markers of seed ageing. <i>Free Radical Research</i> , 2011, 45, 1093-1102.	3.3	37

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37	Changes in <i>Trifolium arvense</i> Seed Quality Following Alternating Temperature Treatment using Liquid Nitrogen. <i>Annals of Botany</i> , 1988, 62, 1-11.	2.9	35
38	Rates of Water Loss and Uptake in Recalcitrant Fruits of <i>Quercus</i> Species Are Determined by Pericarp Anatomy. <i>PLoS ONE</i> , 2012, 7, e47368.	2.5	35
39	Biophysical Characteristics of Successful Oilseed Embryo Cryoprotection and Cryopreservation Using Vacuum Infiltration Vitrification: An Innovation in Plant Cell Preservation. <i>PLoS ONE</i> , 2014, 9, e96169.	2.5	34
40	Lack of adequate seed supply is a major bottleneck for effective ecosystem restoration in Chile: friendly amendment to Bannister et al. (2018). <i>Restoration Ecology</i> , 2020, 28, 277-281.	2.9	33
41	Soil thermal buffer and regeneration niche may favour calcareous fen resilience to climate change. <i>Folia Geobotanica</i> , 2015, 50, 293-301.	0.9	32
42	Interchangeable effects of gibberellic acid and temperature on embryo growth, seed germination and epicotyl emergence in <i>Ribes multiflorum</i> ssp. <i>sandalioticum</i> (Grossulariaceae). <i>Plant Biology</i> , 2012, 14, 77-87.	3.8	31
43	The seed germination niche limits the distribution of some plant species in calcareous or siliceous alpine bedrocks. <i>Alpine Botany</i> , 2018, 128, 83-95.	2.4	30
44	Longevity of Preserved Germplasm: The Temperature Dependency of Aging Reactions in Glassy Matrices of Dried Fern Spores. <i>Plant and Cell Physiology</i> , 2019, 60, 376-392.	3.1	26
45	Cardinal temperatures and thermal time in <i>Polaskia</i> Backeb (Cactaceae) species: Effect of projected soil temperature increase and nurse interaction on germination timing. <i>Journal of Arid Environments</i> , 2015, 115, 73-80.	2.4	25
46	Cryopreservation of Seeds. , 1995, 38, 133-144.		24
47	Alternating temperature combined with darkness resets base temperature for germination ( $T_b$ ) in photoblastic seeds of <i>Lippia</i> and <i>Aloysia</i> (Verbenaceae). <i>Plant Biology</i> , 2017, 19, 41-45.	3.8	24
48	Wheat seed ageing viewed through the cellular redox environment and changes in pH. <i>Free Radical Research</i> , 2019, 53, 641-654.	3.3	23
49	Maximising the use of native seeds in restoration projects. <i>Plant Biology</i> , 2019, 21, 377-379.	3.8	23
50	Quantification of seed oil from species with varying oil content using supercritical fluid extraction. <i>Phytochemical Analysis</i> , 2008, 19, 493-498.	2.4	22
51	Desiccation tolerance, longevity and seed-siring ability of entomophilous pollen from UK native orchid species. <i>Annals of Botany</i> , 2014, 114, 561-569.	2.9	21
52	Lipid Thermal Fingerprints of Long-term Stored Seeds of Brassicaceae. <i>Plants</i> , 2019, 8, 414.	3.5	20
53	Influence of freezable/non-freezable water and sucrose on the viability of <i>Theobroma cacao</i> somatic embryos following desiccation and freezing. <i>Plant Cell Reports</i> , 2009, 28, 883-889.	5.6	19
54	Sequential temperature control of multi-phasic dormancy release and germination of <i>Paeonia corsica</i> seeds. <i>Journal of Plant Ecology</i> , 2016, 9, 464-473.	2.3	19

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55	Modulating role of ROS in re-establishing desiccation tolerance in germinating seeds of <i>Caragana korshinskii</i> Kom.. <i>Journal of Experimental Botany</i> , 2017, 68, 3585-3601.	4.8	19
56	Dissecting seed dormancy and germination in <i>Aquilegia barbaricina</i> , through thermal kinetics of embryo growth. <i>Plant Biology</i> , 2017, 19, 983-993.	3.8	18
57	Comparative in vitro seed germination and seedling development in tropical and temperate epiphytic and temperate terrestrial orchids. <i>Plant Cell, Tissue and Organ Culture</i> , 2020, 143, 619-633.	2.3	17
58	Habitat-linked temperature requirements for fruit germination in <i>Quercus</i> species: A comparative study of <i>Quercus</i> subgenus <i>Cyclobalanopsis</i> (Asian evergreen oaks) and <i>Quercus</i> subgenus <i>Quercus</i> . <i>South African Journal of Botany</i> , 2015, 100, 108-113.	2.5	16
59	Thermal analysis and cryopreservation of seeds of Australian wild <i>Citrus</i> species (rutaceae): <i>Citrus australasica</i> , <i>C. inodora</i> and <i>C. garrawayi</i> . <i>Cryo-Letters</i> , 2009, 30, 268-79.	0.3	16
60	The fluxes of H <sub>2</sub> O <sub>2</sub> and O <sub>2</sub> can be used to evaluate seed germination and vigor of <i>Caragana korshinskii</i> . <i>Planta</i> , 2014, 239, 1363-1373.	3.2	15
61	On the origin of giant seeds: the macroevolution of the double coconut ( <i>Lodoicea maldivica</i> ) and its relatives (Borasseae, Arecaceae). <i>New Phytologist</i> , 2020, 228, 1134-1148.	7.3	15
62	Dry seeds and environmental extremes: consequences for seed lifespan and germination. <i>Functional Plant Biology</i> , 2016, 43, 656.	2.1	13
63	Ecological longevity of <i>Polaskia chende</i> (Cactaceae) seeds in the soil seed bank, seedling emergence and survival. <i>Plant Biology</i> , 2017, 19, 973-982.	3.8	13
64	The rise of plant cryobiotechnology and demise of plant cryopreservation?. <i>Cryobiology</i> , 2018, 85, 160-161.	0.7	13
65	Dry heat exposure increases hydrogen peroxide levels and breaks physiological seed coat-imposed dormancy in <i>Mesembryanthemum crystallinum</i> (Aizoaceae) seeds. <i>Environmental and Experimental Botany</i> , 2018, 155, 272-280.	4.2	13
66	Comparative Seed Morphology of Tropical and Temperate Orchid Species with Different Growth Habits. <i>Plants</i> , 2020, 9, 161.	3.5	13
67	Assessing seed desiccation responses of native trees in the Caribbean. <i>New Forests</i> , 2020, 51, 705-721.	1.7	12
68	Post desiccation germination of mature seeds of tea ( <i>Camellia sinensis</i> L.) can be enhanced by pro-oxidant treatment, but partial desiccation tolerance does not ensure survival at ~20°C. <i>Plant Science</i> , 2012, 184, 36-44.	3.6	11
69	Dependency of seed dormancy types on embryo traits and environmental conditions in <i>Ribes</i> species. <i>Plant Biology</i> , 2014, 16, 740-747.	3.8	11
70	Comparison of seed and seedling functional traits in native <i>Helianthus</i> species and the crop <i>H. Annuus</i> (sunflower). <i>Plant Biology</i> , 2019, 21, 533-543.	3.8	11
71	The Cryobiotechnology of Oaks: An Integration of Approaches for the Long-Term Ex Situ Conservation of <i>Quercus</i> Species. <i>Forests</i> , 2020, 11, 1281.	2.1	11
72	Seed ecology of the geophyte <i>Conopodium majus</i> (Apiaceae), indicator species of ancient woodland understories and oligotrophic meadows. <i>Plant Biology</i> , 2019, 21, 487-497.	3.8	10

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73	Orchid seed stores for sustainable use: a model for future seed-banking activities. <i>Lankesteriana</i> , 2015, 11, .	0.2	10
74	Seed viability and fatty acid profiles of five orchid species before and after ageing. <i>Plant Biology</i> , 2022, 24, 168-175.	3.8	10
75	Seeds as natural capital. <i>Trends in Plant Science</i> , 2022, 27, 139-146.	8.8	9
76	Seed Survival at Low Temperatures: A Potential Selecting Factor Influencing Community Level Changes in High Altitudes under Climate Change. <i>Critical Reviews in Plant Sciences</i> , 2020, 39, 479-492.	5.7	8
77	Lipid Remodeling Confers Osmotic Stress Tolerance to Embryogenic Cells during Cryopreservation. <i>International Journal of Molecular Sciences</i> , 2021, 22, 2174.	4.1	8
78	Regeneration in recalcitrant-seeded species and risks from climate change. , 2022, , 259-273.		8
79	Development of a reliable GC-MS method for fatty acid profiling using direct transesterification of minimal quantities of microscopic orchid seeds. <i>Seed Science Research</i> , 2016, 26, 84-91.	1.7	7
80	Comparative Biology of Cycad Pollen, Seed and Tissue - A Plant Conservation Perspective. <i>Botanical Review</i> , The, 2018, 84, 295-314.	3.9	7
81	Differential Interpretation of Mountain Temperatures by Endospermic Seeds of Three Endemic Species Impacts the Timing of In Situ Germination. <i>Plants</i> , 2020, 9, 1382.	3.5	7
82	Gaseous environment modulates volatile emission and viability loss during seed artificial ageing. <i>Planta</i> , 2021, 253, 106.	3.2	7
83	Global DNA methylation and cellular 5-methylcytosine and H4 acetylated patterns in primary and secondary dormant seeds of <i>Capsella bursa-pastoris</i> (L.) Medik. (shepherd's purse). <i>Protoplasma</i> , 2022, 259, 595-614.	2.1	6
84	Aspects of Orchid Conservation: Seed and Pollen Storage and their Value in Re-introduction Projects. <i>Universal Journal of Plant Science</i> , 2015, 3, 72-76.	0.3	6
85	Integration of genetic and seed fitness data to the conservation of isolated subpopulations of the Mediterranean plant <i>Malcolmia littorea</i> . <i>Plant Biology</i> , 2018, 20, 203-213.	3.8	5
86	Priority Science for the Preservation of Priority Crops. <i>Indian Journal of Plant Genetic Resources</i> , 2016, 29, 292.	0.1	5
87	Long-term, large scale banking of citrus species embryos: comparisons between cryopreservation and other seed banking temperatures. <i>Cryo-Letters</i> , 2012, 33, 453-64.	0.3	5
88	Orchid Seed and Pollen: A Toolkit for Long-Term Storage, Viability Assessment and Conservation. <i>Springer Protocols</i> , 2018, , 71-98.	0.3	4
89	<i>Pseudophoenix ekmanii</i> (Arecaceae) seeds at suboptimal temperature show reduced imbibition rates and enhanced expression of genes related to germination inhibition. <i>Plant Biology</i> , 2020, 22, 1041-1051.	3.8	4
90	Comparative analyses of extreme dry seed thermotolerance in five Cactaceae species. <i>Environmental and Experimental Botany</i> , 2021, 188, 104514.	4.2	4

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91	Conservation Biology for Seven Palm Species from Diverse Genera. <i>Aliso</i> , 2006, 22, 278-284.	0.2	4
92	Enhancing Food Security through Seed Banking and Use of Wild Plants: Case Studies from the Royal Botanic Gardens, Kew. , 2019, , 32-38.		2
93	Climate change and plant regeneration from seeds in Mediterranean regions of the Northern Hemisphere. , 2022, , 101-114.		2
94	Cryobiotechnological approaches for the preservation of oak ( <i>Quercus Sp</i> ) embryonic axes.. <i>Cryobiology</i> , 2018, 85, 140.	0.7	1
95	Storage of orchid pollinia with varying lipid thermal fingerprints. <i>Protoplasma</i> , 2020, 257, 1401-1413.	2.1	1
96	Physiological seed dormancy of <i>Ruschia imbricata</i> and <i>Ruschia uitenhagensis</i> (Aizoaceae) is broken by dry heat and unaffected by seasonality. <i>South African Journal of Botany</i> , 2022, 147, 457-466.	2.5	1
97	Seed longevity and cryobiotechnology in the orchid genus <i>cattleya</i> .. <i>Cryo-Letters</i> , 2021, 42, 353-365.	0.3	0