Stephen Bruce Powles

List of Publications by Year
in descending order

113 papers	9,410 citations	53751 45 h-index	40954 93 g-index
113 all docs	113 docs citations	113 times ranked	4651 citing authors

#	Article	IF	Citations
1	Targetâ€site resistance to trifluralin is more prevalent in annual ryegrass populations from Western Australia. Pest Management Science, 2022, 78, 1206-1212.	1.7	4
2	A dinitroaniline herbicide resistance mutation can be nearly lethal to plants. Pest Management Science, 2022, 78, 1547-1554.	1.7	2
3	A naturally evolved mutation (Ser59Gly) in glutamine synthetase confers glufosinate resistance in plants. Journal of Experimental Botany, 2022, 73, 2251-2262.	2.4	18
4	Exploring quinclorac resistance mechanisms in Echinochloa crusâ€pavonis from China. Pest Management Science, 2021, 77, 194-201.	1.7	13
5	Diversity of Î±â€tubulin transcripts in Lolium rigidum. Pest Management Science, 2021, 77, 970-977.	1.7	4
6	Cytochrome P450 CYP81A10v7 in Lolium rigidum confers metabolic resistance to herbicides across at least five modes of action. Plant Journal, 2021, 105, 79-92.	2.8	93
7	Contrasting plant ecological benefits endowed by naturally occurring EPSPS resistance mutations under glyphosate selection. Evolutionary Applications, 2021, 14, 1635-1645.	1.5	4
8	Dinitroaniline Herbicide Resistance and Mechanisms in Weeds. Frontiers in Plant Science, 2021, 12, 634018.	1.7	17
9	An ABCC-type transporter endowing glyphosate resistance in plants. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	85
10	Plasma membrane receptor-like kinases and transporters are associated with 2,4-D resistance in wild radish. Annals of Botany, 2020, 125, 821-832.	1.4	9
11	Rotations and mixtures of soilâ€applied herbicides delay resistance. Pest Management Science, 2020, 76, 487-496.	1.7	65
12	A Valâ€202â€Phe Î±â€tubulin mutation and enhanced metabolism confer dinitroaniline resistance in a single Lolium rigidum population. Pest Management Science, 2020, 76, 645-652.	1.7	20
13	Evolution of resistance to HPPDâ€inhibiting herbicides in a wild radish population via enhanced herbicide metabolism. Pest Management Science, 2020, 76, 1929-1937.	1.7	43
14	Nonâ€targetâ€site resistance to PDSâ€inhibiting herbicides in a wild radish (<scp>Raphanus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 2	1.7	12
15	Loss of trifluralin metabolic resistance in Lolium rigidum plants exposed to prosulfocarb recurrent selection. Pest Management Science, 2020, 76, 3926-3934.	1.7	4
16	Metribuzin resistance via enhanced metabolism in a multiple herbicide resistant <scp>Lolium rigidum</scp> population. Pest Management Science, 2020, 76, 3785-3791.	1.7	20
17	Cinmethylin controls multiple herbicideâ€resistant Lolium rigidum and its wheat selectivity is P450â€based. Pest Management Science, 2020, 76, 2601-2608.	1.7	28
18	Mechanistic basis for synergism of 2,4-D amine and metribuzin in Avena sterilis. Journal of Pesticide Sciences, 2020, 45, 216-222.	0.8	6

#	Article	IF	Citations
19	A novel psbA mutation (Phe274â€“Val) confers resistance to PSII herbicides in wild radish (<scp>Raphanus raphanistrum</scp>). Pest Management Science, 2019, 75, 144-151.	1.7	27
20	No auxinic herbicideâ€“resistance cost in wild radish (Raphanus raphanistrum). Weed Science, 2019, 67, 539-545.	0.8	3
21	Genetic inheritance of dinitroaniline resistance in an annual ryegrass population. Plant Science, 2019, 283, 189-194.	1.7	14
22	Do plants pay a fitness cost to be resistant to glyphosate?. New Phytologist, 2019, 223, 532-547.	3.5	55
23	Aldo-keto Reductase Metabolizes Glyphosate and Confers Glyphosate Resistance in Echinochloa colona. Plant Physiology, 2019, 181, 1519-1534.	2.3	97
24	Metribuzin Resistance in a Wild Radish (Raphanus raphanistrum) Population via Both psbA Gene Mutation and Enhanced Metabolism. Journal of Agricultural and Food Chemistry, 2019, 67, 1353-1359.	2.4	22
25	Pyroxasulfone resistance in Lolium rigidum is metabolism-based. Pesticide Biochemistry and Physiology, 2018, 148, 74-80.	1.6	45
26	iHSD Mill Efficacy on the Seeds of Australian Cropping System Weeds. Weed Technology, 2018, 32, 103-108.	0.4	20
27	Dinitroaniline herbicide resistance in a multipleâ€resistant <scp>Lolium rigidum</scp> population. Pest Management Science, 2018, 74, 925-932.	1.7	31
28	Modeling the Impact of Harvest Weed Seed Control on Herbicide-Resistance Evolution. Weed Science, 2018, 66, 395-403.	0.8	19
29	Novel Î±-Tubulin Mutations Conferring Resistance to Dinitroaniline Herbicides in Lolium rigidum. Frontiers in Plant Science, 2018, 9, 97.	1.7	46
30	Enhanced Trifluralin Metabolism Can Confer Resistance in Lolium rigidum. Journal of Agricultural and Food Chemistry, 2018, 66, 7589-7596.	2.4	18
31	Glyphosate Resistance in Tridax procumbens via a Novel EPSPS Thr-102-Ser Substitution. Journal of Agricultural and Food Chemistry, 2018, 66, 7880-7888.	2.4	40
32	Influence of Crop Competition and Harvest Weed Seed Control on Rigid Ryegrass (Lolium) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 222	0.8	25
33	2,4-D and dicamba resistance mechanisms in wild radish: subtle, complex and population specific?. Annals of Botany, 2018, 122, 627-640.	1.4	22
34	Characterisation of glufosinate resistance mechanisms in Eleusine indica. Pest Management Science, 2017, 73, 1091-1100.	1.7	24
35	Inheritance of 2,4-D resistance traits in multiple herbicide- resistant Raphanus raphanistrum populations. Plant Science, 2017, 257, 1-8.	1.7	20
36	Recurrent Sublethal-Dose Selection for Reduced Susceptibility of Palmer Amaranth (Amaranthus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.8	57

#	Article	IF	Citations
37	Why was resistance to shorterâ€acting preâ€emergence herbicides slower to evolve?. Pest Management Science, 2017, 73, 844-851.	1.7	29
38	Harvest Weed Seed Control Systems are Similarly Effective on Rigid Ryegrass. Weed Technology, 2017, 31, 178-183.	0.4	31
39	High Levels of Adoption Indicate That Harvest Weed Seed Control Is Now an Established Weed Control Practice in Australian Cropping. Weed Technology, 2017, 31, 341-347.	0.4	61
40	PAM: Decision Support for Long-Term Palmer Amaranth (Amaranthus palmeri) Control. Weed Technology, 2017, 31, 915-927.	0.4	17
41	A double EPSPS gene mutation endowing glyphosate resistance shows a remarkably high resistance cost. Plant, Cell and Environment, 2017, 40, 3031-3042.	2.8	53
42	Can herbicide safeners allow selective control of weedy rice infesting rice crops?. Pest Management Science, 2017, 73, 71-77.	1.7	18
43	Phorate can reverse P450 metabolism-based herbicide resistance inLolium rigidum. Pest Management Science, 2017, 73, 410-417.	1.7	57
44	Widespread occurrence of both metabolic and target-site herbicide resistance mechanisms inLolium rigidumpopulations. Pest Management Science, 2016, 72, 255-263.	1.7	77
45	Crossâ€resistance to prosulfocarb + Sâ€metolachlor and pyroxasulfone selected by either herbicide in Lolium rigidum. Pest Management Science, 2016, 72, 1664-1672.	1.7	29
46	Response to low-dose herbicide selection in self-pollinatedAvena fatua. Pest Management Science, 2016, 72, 603-608.	1.7	29
47	Identification of Triazine-ResistantVulpia bromoides. Weed Technology, 2016, 30, 456-463.	0.4	8
48	Exploring the Potential for a Regulatory Change to Encourage Diversity in Herbicide Use. Weed Science, 2016, 64, 649-654.	0.8	31
49	Glyphosate resistance in Echinochloa colona: phenotypic characterisation and quantification of selection intensity. Pest Management Science, 2016, 72, 67-73.	1.7	15
50	Integrating Herbicide Programs with Harvest Weed Seed Control and Other Fall Management Practices for the Control of Glyphosate-Resistant Palmer Amaranth (Amaranthus palmeri). Weed Science, 2016, 64, 540-550.	0.8	49
51	Recurrent selection with reduced 2,4â€Ð amine doses results in the rapid evolution of 2,4â€Ð herbicide resistance in wild radish (Raphanus raphanistrum L.). Pest Management Science, 2016, 72, 2091-2098.	1.7	28
52	Target-site EPSPS Pro-106 mutations: sufficient to endow glyphosate resistance in polyploidEchinochloa colona?. Pest Management Science, 2016, 72, 264-271.	1.7	35
53	2,4-D resistance in wild radish: reduced herbicide translocation via inhibition of cellular transport. Journal of Experimental Botany, 2016, 67, 3223-3235.	2.4	92
54	Intensive cropping systems select for greater seed dormancy and increased herbicide resistance levels in Lolium rigidum (annual ryegrass). Pest Management Science, 2015, 71, 966-971.	1.7	28

#	Article	IF	Citations
55	A potential role for endogenous microflora in dormancy release, cytokinin metabolism and the response to fluridone in Lolium rigidum seeds. Annals of Botany, 2015, 115, 293-301.	1.4	62
56	Effect of herbicide resistance endowing Ile-1781-Leu and Asp-2078-GlyACCasegene mutations on ACCase kinetics and growth traits inLolium rigidum. Journal of Experimental Botany, 2015, 66, 4711-4718.	2.4	46
57	Evolution of a Double Amino Acid Substitution in the 5-Enolpyruvylshikimate-3-Phosphate Synthase in Eleusine indica Conferring High-Level Glyphosate Resistance. Plant Physiology, 2015, 167, 1440-1447.	2.3	197
58	RIM: Anatomy of a Weed Management Decision Support System for Adaptation and Wider Application. Weed Science, 2015, 63, 676-689.	0.8	17
59	Upgrading the RIM Model for Improved Support of Integrated Weed Management Extension Efforts in Cropping Systems. Weed Technology, 2014, 28, 703-720.	0.4	19
60	Global Herbicide Resistance Challenge. Pest Management Science, 2014, 70, 1305-1305.	1.7	26
61	No fitness cost of glyphosate resistance endowed by massive EPSPS gene amplification in Amaranthus palmeri. Planta, 2014, 239, 793-801.	1.6	97
62	Metabolism-Based Herbicide Resistance and Cross-Resistance in Crop Weeds: A Threat to Herbicide Sustainability and Global Crop Production. Plant Physiology, 2014, 166, 1106-1118.	2.3	366
63	<scp>RNA</scp>â€Seq transcriptome analysis to identify genes involved in metabolismâ€based diclofop resistance in Lolium rigidum. Plant Journal, 2014, 78, 865-876.	2.8	185
64	High Seed Retention at Maturity of Annual Weeds Infesting Crop Fields Highlights the Potential for Harvest Weed Seed Control. Weed Technology, 2014, 28, 486-493.	0.4	88
65	Inheritance of evolved resistance to a novel herbicide (pyroxasulfone). Plant Science, 2014, 217-218, 127-134.	1.7	36
66	Herbicideâ€resistant weeds: from research and knowledge to future needs. Evolutionary Applications, 2013, 6, 1218-1221.	1.5	108
67	Herbicide Resistance Endowed by Enhanced Rates of Herbicide Metabolism in Wild Oat (Avenaspp.). Weed Science, 2013, 61, 55-62.	0.8	35
68	Targeting Weed Seeds In-Crop: A New Weed Control Paradigm for Global Agriculture. Weed Technology, 2013, 27, 431-436.	0.4	205
69	Identification of Genetic Elements Associated with EPSPS Gene Amplification. PLoS ONE, 2013, 8, e65819.	1.1	44
70	ACCase-Inhibiting Herbicide-ResistantAvenaspp. Populations from the Western Australian Grain Belt. Weed Technology, 2012, 26, 130-136.	0.4	23
71	Synergistic Effects of Atrazine and Mesotrione on Susceptible and Resistant Wild Radish (Raphanus) Tj ETQq1 1 0.784314 rgBT /Over Technology, 2012, 26, 341-347.	0.4	37
72	Evolved Resistance to Glyphosate in Junglerice (Echinochloa colona) from the Tropical Ord River Region in Australia. Weed Technology, 2012, 26, 480-484.	0.4	36

#	Article	IF	Citations
73	An Herbicide-Susceptible Rigid Ryegrass (Lolium rigidum) Population Made Even More Susceptible. Weed Science, 2012, 60, 101-105.	0.8	12
74	Harrington Seed Destructor: A New Nonchemical Weed Control Tool for Global Grain Crops. Crop Science, 2012, 52, 1343-1347.	0.8	111
75	Understanding Lolium rigidum Seeds: The Key to Managing a Problem Weed?. Agronomy, 2012, 2, 222-239.	1.3	30
76	Glyphosate resistance in perennial Sorghum halepense (Johnsongrass), endowed by reduced glyphosate translocation and leaf uptake. Pest Management Science, 2012, 68, 430-436.	1.7	96
77	Rapid Evolution of Herbicide Resistance by Low Herbicide Dosages. Weed Science, 2011, 59, 210-217.	0.8	136
78	Reduced sensitivity to paraquat evolves under selection with low glyphosate doses in Lolium rigidum. Agronomy for Sustainable Development, 2011, 31, 525-531.	2.2	21
79	The Potential for Pyroxasulfone to Selectively Control Resistant and Susceptible Rigid Ryegrass (Lolium rigidum) Biotypes in Australian Grain Crop Production Systems. Weed Technology, 2011, 25, 30-37.	0.4	54
80	Evolution in Action: Plants Resistant to Herbicides. Annual Review of Plant Biology, 2010, 61, 317-347.	8.6	1,301
81	Gene amplification delivers glyphosate-resistant weed evolution. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 955-956.	3.3	53
82	Glyphosate-Resistant Rigid Ryegrass (Lolium rigidum) Populations in the Western Australian Grain Belt. Weed Technology, 2010, 24, 44-49.	0.4	26
83	AHAS herbicide resistance endowing mutations: effect on AHAS functionality and plant growth. Journal of Experimental Botany, 2010, 61, 3925-3934.	2.4	186
84	A Survey in the Southern Grain Belt of Western Australia Did Not Find Conyza Spp. Resistant to Glyphosate. Weed Technology, 2009, 23, 492-494.	0.4	9
85	Distinct non-target site mechanisms endow resistance to glyphosate, ACCase and ALS-inhibiting herbicides in multiple herbicide-resistant Lolium rigidum. Planta, 2009, 230, 713-723.	1.6	139
86	Evidence for an ecological cost of enhanced herbicide metabolism inLolium rigidum. Journal of Ecology, 2009, 97, 772-780.	1.9	58
87	Fitness costs associated with evolved herbicide resistance alleles in plants. New Phytologist, 2009, 184, 751-767.	3.5	295
88	Herbicide Resistance in Rigid Ryegrass (Lolium rigidum)Has Not Led to Higher Weed Densities in Western Australian Cropping Fields. Weed Science, 2009, 57, 61-65.	0.8	23
89	Glyphosate: a onceâ€inâ€aâ€century herbicide. Pest Management Science, 2008, 64, 319-325.	1.7	1,253
90	Evolved glyphosateâ€resistant weeds around the world: lessons to be learnt. Pest Management Science, 2008, 64, 360-365.	1.7	373

#	Article	IF	Citations
91	Mutations of the ALS gene endowing resistance to ALSâ€inhibiting herbicides in Lolium rigidum populations. Pest Management Science, 2008, 64, 1229-1236.	1.7	134
92	Green and blue light photoreceptors are involved in maintenance of dormancy in imbibed annual ryegrass (Lolium rigidum) seeds. New Phytologist, 2008, 180, 81-89.	3.5	38
93	Evolution of Glyphosate-Resistant Johnsongrass (Sorghum halepense) in Glyphosate-Resistant Soybean. Weed Science, 2007, 55, 566-571.	0.8	71
94	Physiological and Molecular Characterization of Atrazine Resistance in a Wild Radish (Raphanus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.4	10
95	Chlamydomonas reinhardtii as a model system for pro-active herbicide resistance evolution research. Biological Journal of the Linnean Society, 2007, 91, 257-266.	0.7	36
96	Herbicide resistance and the adoption of integrated weed management by Western Australian grain growers. Agricultural Economics (United Kingdom), 2007, 36, 123-130.	2.0	46
97	Evolved Glyphosate Resistance in Plants: Biochemical and Genetic Basis of Resistance. Weed Technology, 2006, 20, 282-289.	0.4	202
98	Glyphosate, paraquat and ACCase multiple herbicide resistance evolved in a Lolium rigidum biotype. Planta, 2006, 225, 499-513.	1.6	183
99	Resistance to ACCase-inhibiting herbicides in sprangletop (Leptochloa chinensis). Weed Science, 2005, 53, 290-295.	0.8	24
100	Potential for Preseason Herbicide Application to Prevent Weed Emergence in the Subsequent Growing Season. 1. Identification and Evaluation of Possible Herbicides. Weed Technology, 2004, 18, 228-235.	0.4	4
101	Multiple-herbicide resistance across four modes of action in wild radish (Raphanus raphanistrum). Weed Science, 2004, 52, 8-13.	0.8	98
102	Multiple herbicide resistance in a glyphosate-resistant rigid ryegrass (Lolium rigidum) population. Weed Science, 2004, 52, 920-928.	0.8	55
103	Paraquat resistance in a population of Lolium rigidum. Functional Plant Biology, 2004, 31, 247.	1.1	38
104	My view. Weed Science, 2003, 51, 471-471.	0.8	10
105	Effect of malathion on resistance to soil-applied herbicides in a population of rigid ryegrass (Lolium rigidum). Weed Science, 1999, 47, 258-261.	0.8	40
106	Resistance to glyphosate inLolium rigidum. Pest Management Science, 1999, 55, 489-491.	0.6	37
107	Molecular basis of resistance to acetolactate synthase-inhibiting herbicides inSisymbrium orientaleandBrassica tournefortii. Pest Management Science, 1999, 55, 507-516.	0.6	104
108	Multiple Resistance to Dissimilar Herbicide Chemistries in a Biotype ofLolium rigidumDue to Enhanced Activity of Several Herbicide Degrading Enzymes. Pesticide Biochemistry and Physiology, 1996, 54, 123-134.	1.6	195

#	Article	IF	Citations
109	Dintroaniline Herbicide Resistance in Rigid Ryegrass (Lolium rigidum). Weed Science, 1995, 43, 55-62.	0.8	64
110	Herbicide multiple-resistance in a Lolium rigidum biotype is endowed by multiple mechanisms: isolation of a subset with resistant acetyl-CoA carboxylase. Physiologia Plantarum, 1994, 91, 488-494.	2.6	110
111	Resistance to Acetolactate Synthase-Inhibiting Herbicides in Annual Ryegrass (Lolium rigidum) Involves at Least Two Mechanisms. Plant Physiology, 1992, 100, 1909-1913.	2.3	148
112	Cross-Resistance to Herbicides in Annual Ryegrass (Lolium rigidum). Plant Physiology, 1991, 97, 1026-1034.	2.3	78
113	Cross-Resistance to Herbicides in Annual Ryegrass (Lolium rigidum). Plant Physiology, 1991, 95, 1036-1043.	2.3	163