Pascal-Antoine Christin

List of Publications by Citations

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81 papers	5,264 citations	40 h-index	72 g-index
87 ext. papers	6,569 ext. citations	7.6 avg, IF	5.92 L-index

#	Paper	IF	Citations
81	The origins of C4 grasslands: integrating evolutionary and ecosystem science. *Science*, **2010**, 328, 587-91	33.3	698
80	The C(4) plant lineages of planet Earth. *Journal of Experimental Botany*, **2011**, 62, 3155-69	7	390
79	New grass phylogeny resolves deep evolutionary relationships and discovers C4 origins. *New Phytologist*, **2012**, 193, 304-12	9.8	334
78	Contemporaneous and recent radiations of the world's major succulent plant lineages. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 8379-84	11.5	314
77	Oligocene CO2 decline promoted C4 photosynthesis in grasses. *Current Biology*, **2008**, 18, 37-43	6.3	268
76	Anatomical enablers and the evolution of C4 photosynthesis in grasses. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 1381-6	11.5	173
75	C4 Photosynthesis evolved in grasses via parallel adaptive genetic changes. *Current Biology*, **2007**, 17, 1241-7	6.3	159
74	Causes and evolutionary significance of genetic convergence. *Trends in Genetics*, **2010**, 26, 400-5	8.5	132
73	Molecular dating, evolutionary rates, and the age of the grasses. *Systematic Biology*, **2014**, 63, 153-65	8.4	128
72	Phylogenomics of C(4) photosynthesis in sedges (Cyperaceae): multiple appearances and genetic convergence. *Molecular Biology and Evolution*, **2009**, 26, 1909-19	8.3	115
71	Stability-activity tradeoffs constrain the adaptive evolution of RubisCO. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 2223-8	11.5	108
70	Evolutionary switch and genetic convergence on rbcL following the evolution of C4 photosynthesis. *Molecular Biology and Evolution*, **2008**, 25, 2361-8	8.3	102
69	Phylogenetics of Olea (Oleaceae) based on plastid and nuclear ribosomal DNA sequences: tertiary climatic shifts and lineage differentiation times. *Annals of Botany*, **2009**, 104, 143-60	4.1	100
68	Complex evolutionary transitions and the significance of c(3)-c(4) intermediate forms of photosynthesis in Molluginaceae. *Evolution; International Journal of Organic Evolution*, **2011**, 65, 643-60	3.8	97
67	Adaptive evolution of C(4) photosynthesis through recurrent lateral gene transfer. *Current Biology*, **2012**, 22, 445-9	6.3	96
66	Photosynthetic pathway and ecological adaptation explain stomatal trait diversity amongst grasses. *New Phytologist*, **2012**, 193, 387-96	9.8	90
65	C(4) eudicots are not younger than C(4) monocots. *Journal of Experimental Botany*, **2011**, 62, 3171-81	7	86

64	Determinants of flammability in savanna grass species. *Journal of Ecology*, **2016**, 104, 138-148	6	82
63	C4 photosynthesis promoted species diversification during the Miocene grassland expansion. *PLoS ONE*, **2014**, 9, e97722	3.7	73
62	Deconstructing Kranz anatomy to understand C4 evolution. *Journal of Experimental Botany*, **2014**, 65, 3357-69	7	70
61	The evolutionary ecology of C4 plants. *New Phytologist*, **2014**, 204, 765-81	9.8	69
60	Integrating phylogeny into studies of C4 variation in the grasses. *Plant Physiology*, **2009**, 149, 82-7	6.6	67
59	From museums to genomics: old herbarium specimens shed light on a C3 to C4 transition. *Journal of Experimental Botany*, **2014**, 65, 6711-21	7	66
58	Can phylogenetics identify C(4) origins and reversals?. *Trends in Ecology and Evolution*, **2010**, 25, 403-9	10.9	63
57	Shared origins of a key enzyme during the evolution of C4 and CAM metabolism. *Journal of Experimental Botany*, **2014**, 65, 3609-21	7	59
56	Genome-wide association to fine-scale ecological heterogeneity within a continuous population of Biscutella laevigata (Brassicaceae). *New Phytologist*, **2008**, 178, 436-447	9.8	58
55	Evolution of C(4) phosphoenolpyruvate carboxykinase in grasses, from genotype to phenotype. *Molecular Biology and Evolution*, **2009**, 26, 357-65	8.3	54
54	Evolutionary insights on C4 photosynthetic subtypes in grasses from genomics and phylogenetics. *Genome Biology and Evolution*, **2009**, 1, 221-30	3.9	53
53	Lateral transfers of large DNA fragments spread functional genes among grasses. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 4416-4425	11.5	52
52	Photosynthetic innovation broadens the niche within a single species. *Ecology Letters*, **2015**, 18, 1021-9	10	52
51	C4 photosynthesis boosts growth by altering physiology, allocation and size. *Nature Plants*, **2016**, 2, 16038	11.5	52
50	One-third of the plastid genes evolved under positive selection in PACMAD grasses. *Planta*, **2018**, 247, 255-266	4.7	50
49	Parallel recruitment of multiple genes into c4 photosynthesis. *Genome Biology and Evolution*, **2013**, 5, 2174-87	3.9	49
48	Genetic enablers underlying the clustered evolutionary origins of C4 photosynthesis in angiosperms. *Molecular Biology and Evolution*, **2015**, 32, 846-58	8.3	46
47	Fire ecology of C3 and C4 grasses depends on evolutionary history and frequency of burning but not photosynthetic type. *Ecology*, **2015**, 96, 2679-91	4.6	45

46	How did the domestication of Fertile Crescent grain crops increase their yields?. *Functional Ecology*, **2017**, 31, 387-397	5.6	44
45	Evolutionary implications of C3 -C4 intermediates in the grass Alloteropsis semialata. *Plant, Cell and Environment*, **2016**, 39, 1874-85	8.4	43
44	The genetics of convergent evolution: insights from plant photosynthesis. *Nature Reviews Genetics*, **2019**, 20, 485-493	30.1	42
43	Phylogenomics and taxonomy of Lecomtelleae (Poaceae), an isolated panicoid lineage from Madagascar. *Annals of Botany*, **2013**, 112, 1057-66	4.1	42
42	Multiple photosynthetic transitions, polyploidy, and lateral gene transfer in the grass subtribe Neurachninae. *Journal of Experimental Botany*, **2012**, 63, 6297-308	7	40
41	Genome biogeography reveals the intraspecific spread of adaptive mutations for a complex trait. *Molecular Ecology*, **2016**, 25, 6107-6123	5.7	35
40	The recurrent assembly of C4 photosynthesis, an evolutionary tale. *Photosynthesis Research*, **2013**, 117, 163-75	3.7	35
39	Seasonal Net Ecosystem Carbon Exchange of a Regenerating Cutaway Bog: How Long Does it Take to Restore the C-Sequestration Function?. *Restoration Ecology*, **2011**, 19, 480-489	3.1	33
38	Introgression and repeated co-option facilitated the recurrent emergence of C photosynthesis among close relatives. *Evolution; International Journal of Organic Evolution*, **2017**, 71, 1541-1555	3.8	32
37	Spatial genetic structure in the Laperrine's olive (Olea europaea subsp. laperrinei), a long-living tree from the central Saharan mountains. *Heredity*, **2007**, 99, 649-57	3.6	32
36	Two independent C4 origins in Aristidoideae (Poaceae) revealed by the recruitment of distinct phosphoenolpyruvate carboxylase genes. *American Journal of Botany*, **2009**, 96, 2234-9	2.7	31
35	Photosynthesis in C3-C4 intermediate Moricandia species. *Journal of Experimental Botany*, **2017**, 68, 191-206	7	30
34	Phylogeny and generic delimitation in Molluginaceae, new pigment data in Caryophyllales, and the new family Corbichoniaceae. *Taxon*, **2016**, 65, 775-793	0.8	29
33	Thlaspi caerulescens (Brassicaceae) population genetics in western Switzerland: is the genetic structure affected by natural variation of soil heavy metal concentrations?. *New Phytologist*, **2009**, 181, 974-984	9.8	28
32	Highly Expressed Genes Are Preferentially Co-Opted for C4 Photosynthesis. *Molecular Biology and Evolution*, **2018**, 35, 94-106	8.3	25
31	Phylogenomics using low-depth whole genome sequencing: A case study with the olive tribe. *Molecular Ecology Resources*, **2019**, 19, 877-892	8.4	22
30	Despite phylogenetic effects, C3-C4 lineages bridge the ecological gap to C4 photosynthesis. *Journal of Experimental Botany*, **2017**, 68, 241-254	7	22
29	Molecular phylogenies disprove a hypothesized C4 reversion in Eragrostis walteri (Poaceae). *Annals of Botany*, **2011**, 107, 321-5	4.1	21

28	C anatomy can evolve via a single developmental change. *Ecology Letters*, **2019**, 22, 302-312	10	20
27	Gene duplication and dosage effects during the early emergence of C4 photosynthesis in the grass genus Alloteropsis. *Journal of Experimental Botany*, **2018**, 69, 1967-1980	7	17
26	C photosynthesis evolved in warm climates but promoted migration to cooler ones. *Ecology Letters*, **2018**, 21, 376-383	10	16
25	On the disintegration of Molluginaceae: a new genus and family (Kewa, Kewaceae) segregated from Hypertelis, and placement of Macarthuria in Macarthuriaceae. *Phytotaxa*, **2014**, 181, 238	0.7	16
24	The influence of environmental spatial structure on the life-history traits and diversity of species in a metacommunity. *Ecological Modelling*, **2009**, 220, 2857-2864	3	16
23	Were Fertile Crescent crop progenitors higher yielding than other wild species that were never domesticated?. *New Phytologist*, **2015**, 207, 905-13	9.8	15
22	Effect of genetic convergence on phylogenetic inference. *Molecular Phylogenetics and Evolution*, **2012**, 62, 921-7	4.1	14
21	Population-Specific Selection on Standing Variation Generated by Lateral Gene Transfers in a Grass. *Current Biology*, **2019**, 29, 3921-3927.e5	6.3	13
20	The recent and rapid spread of Themeda triandra. *Botany Letters*, **2017**, 164, 327-337	1.1	12
19	Developmental and biophysical determinants of grass leaf size worldwide. *Nature*, **2021**, 592, 242-247	50.4	12
18	Continued Adaptation of C4 Photosynthesis After an Initial Burst of Changes in the Andropogoneae Grasses. *Systematic Biology*, **2020**, 69, 445-461	8.4	11
17	Key changes in gene expression identified for different stages of C4 evolution in Alloteropsis semialata. *Journal of Experimental Botany*, **2019**, 70, 3255-3268	7	9
16	Herbarium genomics retraces the origins of C4-specific carbonic anhydrase in Andropogoneae (Poaceae). *Botany Letters*, **2018**, 165, 419-433	1.1	7
15	Contrasted histories of organelle and nuclear genomes underlying physiological diversification in a grass species. *Proceedings of the Royal Society B: Biological Sciences*, **2020**, 287, 20201960	4.4	7
14	Phylogenomics indicates the "living fossil" Isoetes diversified in the Cenozoic. *PLoS ONE*, **2020**, 15, e0227525	3.7	6
13	Lateral Gene Transfer Acts As an Evolutionary Shortcut to Efficient C4 Biochemistry. *Molecular Biology and Evolution*, **2020**, 37, 3094-3104	8.3	5
12	Evolutionary genomics of C4 photosynthesis in grasses requires a large species sampling. *Comptes Rendus - Biologies*, **2010**, 333, 577-81	1.4	5
11	Kinetic Modifications of C PEPC Are Qualitatively Convergent, but Larger in Than in. *Frontiers in Plant Science*, **2020**, 11, 1014	6.2	4

10	Widespread lateral gene transfer among grasses. *New Phytologist*, **2021**, 230, 2474-2486	9.8	4
9	Sample Sequence Analysis Uncovers Recurrent Horizontal Transfers of Transposable Elements among Grasses. *Molecular Biology and Evolution*, **2021**, 38, 3664-3675	8.3	3
8	Can microsatellite data allow identification of oleaster Plio-Pleistocene refuge zones in the Mediterranean Basin?. *Journal of Biogeography*, **2007**, 34, 559-560	4.1	2
7	The morphogenesis of fast growth in plants. *New Phytologist*, **2020**, 228, 1306-1315	9.8	2
6	Low dispersal and ploidy differences in a grass maintain photosynthetic diversity despite gene flow and habitat overlap. *Molecular Ecology*, **2021**, 30, 2116-2130	5.7	2
5	Traces of strong selective pressures in the genomes of C4 grasses. *Journal of Experimental Botany*, **2017**, 68, 103-105	7	1
4	Widespread lateral gene transfer among grasses		1
3	Phylogenomics supports a Cenozoic rediversification of the ▯iving fossil▯soetes		1
2	Hybridisation boosts dispersal of two contrasted ecotypes in a grass species		1
1	Hybridization boosts dispersal of two contrasted ecotypes in a grass species.. *Proceedings of the Royal Society B: Biological Sciences*, **2022**, 289, 20212491	4.4	0