Thibault Datry

List of Publications by Year
in descending order

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131 papers	7,927 citations	41344 49 h-index	60623 81 g-index
141 all docs	141 docs citations	141 times ranked	4789 citing authors

#	Article	IF	Citations
1	Emerging concepts in temporaryâ€river ecology. Freshwater Biology, 2010, 55, 717-738.	2.4	552
2	Intermittent Rivers: A Challenge for Freshwater Ecology. BioScience, 2014, 64, 229-235.	4.9	488
3	Ecology and management of the hyporheic zone: streamâ€“groundwater interactions of running waters and their floodplains. Journal of the North American Benthological Society, 2010, 29, 26-40.	3.1	307
4	Why Should We Care About Temporary Waterways?. Science, 2014, 343, 1080-1081.	12.6	270
5	Global prevalence of non-perennial rivers and streams. Nature, 2021, 594, 391-397.	27.8	221
6	Non-perennial Mediterranean rivers in Europe: Status, pressures, and challenges for research and management. Science of the Total Environment, 2017, 577, 1-18.	8.0	192
7	Ecological research and management of intermittent rivers: an historical review and future directions. Freshwater Biology, 2016, 61, 1181-1199.	2.4	190
8	Broadâ€scale patterns of invertebrate richness and community composition in temporary rivers: effects of flow intermittence. Ecography, 2014, 37, 94-104.	4.5	174
9	Towards understanding the organisation of metacommunities in highly dynamic ecological systems. Oikos, 2016, 125, 149-159.	2.7	174
10	Benthic and hyporheic invertebrate assemblages along a flow intermittence gradient: effects of duration of dry events. Freshwater Biology, 2012, 57, 563-574.	2.4	153
11	Using multi-tracer inference to move beyond single-catchment ecohydrology. Earth-Science Reviews, 2016, 160, 19-42.	9.1	142
12	Flow intermittence and ecosystem services in rivers of the Anthropocene. Journal of Applied Ecology, 2018, 55, 353-364.	4.0	113
13	Biomonitoring of intermittent rivers and ephemeral streams in Europe: Current practice and priorities to enhance ecological status assessments. Science of the Total Environment, 2018, 618, 1096-1113.	8.0	113
14	A landscape approach to advance intermittent river ecology. Freshwater Biology, 2016, 61, 1200-1213.	2.4	111
15	Drying as a primary hydrological determinant of biodiversity in river systems: a broadâ€scale analysis. Ecography, 2017, 40, 487-499.	4.5	109
16	A global analysis of terrestrial plant litter dynamics in non-perennial waterways. Nature Geoscience, 2018, 11, 497-503.	12.9	108
17	Flow intermittence controls leaf litter breakdown in a French temporary alluvial river: the â€œdrying memoryâ€• Aquatic Sciences, 2011, 73, 471-483.	1.5	103
18	Regionalization of patterns of flow intermittence from gauging station records. Hydrology and Earth System Sciences, 2013, 17, 2685-2699.	4.9	99

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19	The macroinvertebrate seedbank promotes community persistence in temporary rivers across climate zones. Freshwater Biology, 2013, 58, 1202-1220.	2.4	98
20	A global agenda for advancing freshwater biodiversity research. Ecology Letters, 2022, 25, 255-263.	6.4	95
21	Natural variation in immersion and emersion affects breakdown and invertebrate colonization of leaf litter in a temporary river. Aquatic Sciences, 2011, 73, 537-550.	1.5	90
22	Integrating dispersal proxies in ecological and environmental research in the freshwater realm. Environmental Reviews, 2017, 25, 334-349.	4.5	88
23	The three Rs of river ecosystem resilience: Resources, recruitment, and refugia. River Research and Applications, 2019, 35, 107-120.	1.7	86
24	Is drift the primary process promoting the resilience of river invertebrate communities? A manipulative field experiment in an intermittent alluvial river. Freshwater Biology, 2016, 61, 1276-1292.	2.4	83
25	Benthic and hyporheic invertebrate assemblages along a gradient of increasing streambed colmation by fine sediment. Aquatic Sciences, 2013, 75, 493-507.	1.5	81
26	Influence of streambed sediment clogging on microbial processes in the hyporheic zone. Freshwater Biology, 2010, 55, 1288-1302.	2.4	79
27	Interpreting betaâ€diversity components over time to conserve metacommunities in highly dynamic ecosystems. Conservation Biology, 2017, 31, 1459-1468.	4.7	79
28	Invertebrate assemblage responses and the dual roles of resistance and resilience to drying in intermittent rivers. Aquatic Sciences, 2016, 78, 291-301.	1.5	78
29	Recent perspectives on temporary river ecology. Aquatic Sciences, 2011, 73, 453-457.	1.5	77
30	Invertebrate and microbial responses to inundation in an ephemeral river reach in New Zealand: effects of preceding dry periods. Aquatic Sciences, 2007, 69, 554-567.	1.5	76
31	Responses of hyporheic invertebrate assemblages to large-scale variation in flow permanence and surface?subsurface exchange. Freshwater Biology, 2007, 52, 1452-1462.	2.4	73
32	DISPERSE, a trait database to assess the dispersal potential of European aquatic macroinvertebrates. Scientific Data, 2020, 7, 386.	5.3	73
33	Global CO2 emissions from dry inland waters share common drivers across ecosystems. Nature Communications, 2020, 11, 2126.	12.8	73
34	Simulating rewetting events in intermittent rivers and ephemeral streams: A global analysis of leached nutrients and organic matter. Global Change Biology, 2019, 25, 1591-1611.	9.5	71
35	Longitudinal river ecohydrology: flow variation down the lengths of alluvial rivers. Ecohydrology, 2011, 4, 532-548.	2.4	67
36	Challenges, developments and perspectives in intermittent river ecology. Freshwater Biology, 2016, 61, 1171-1180.	2.4	67

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37	Biodiversity in perennial and intermittent rivers: a metaâ€analysis. Oikos, 2017, 126, 1078-1089.	2.7	67
38	The Biota of Intermittent Rivers and Ephemeral Streams: Aquatic Invertebrates. , 2017, , 217-243.		67
39	Invertebrates and sestonic matter in an advancing wetted front travelling down a dry river bed (Albarine, France). Freshwater Science, 2012, 31, 1187-1201.	1.8	66
40	Resistance, Resilience, and Community Recovery in Intermittent Rivers and Ephemeral Streams. , 2017, , 349-376.		66
41	Structural and functional responses of invertebrate communities to climate change and flow regulation in alpine catchments. Global Change Biology, 2019, 25, 1612-1628.	9.5	65
42	A Metacommunity Approach to Improve Biological Assessments in Highly Dynamic Freshwater Ecosystems. BioScience, 2020, 70, 427-438.	4.9	64
43	Zero or not? Causes and consequences of zeroâ€flow stream gage readings. Wiley Interdisciplinary Reviews: Water, 2020, 7, e1436.	6.5	63
44	Invertebrate communities in gravel-bed, braided rivers are highly resilient to flow intermittence. Freshwater Science, 2016, 35, 164-177.	1.8	60
45	Drying determines the temporal dynamics of stream invertebrate structural and functional beta diversity. Ecography, 2020, 43, 620-635.	4.5	60
46	Metacommunity patterns across three Neotropical catchments with varying environmental harshness. Freshwater Biology, 2016, 61, 277-292.	2.4	58
47	Variation in reach-scale hydraulic conductivity of streambeds. Geomorphology, 2016, 259, 70-80.	2.6	56
48	Determinants of local and regional communities in intermittent and perennial headwaters of the Bolivian Amazon. Freshwater Biology, 2016, 61, 1335-1349.	2.4	54
49	A conceptual framework for understanding the biogeochemistry of dry riverbeds through the lens of soil science. Earth-Science Reviews, 2019, 188, 441-453.	9.1	54
50	Spatial Patterns and Drivers of Nonperennial Flow Regimes in the Contiguous United States. Geophysical Research Letters, 2021, 48, e2020GL090794.	4.0	54
51	Terrestrial and aquatic invertebrates in the riverbed of an intermittent river: parallels and contrasts in community organisation. Freshwater Biology, 2016, 61, 1308-1320.	2.4	51
52	Relating hydraulic conductivity and hyporheic zone biogeochemical processing to conserve and restore river ecosystem services. Science of the Total Environment, 2017, 579, 1815-1821.	8.0	51
53	Assessing placement bias of the global river gauge network. Nature Sustainability, 2022, 5, 586-592.	23.7	51
54	Citizen scientists document long-term streamflow declines in intermittent rivers of the desert southwest, USA. Freshwater Science, 2019, 38, 244-256.	1.8	49

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55	Whatâ€™s in a Name? Patterns, Trends, and Suggestions for Defining Non-Perennial Rivers and Streams. Water (Switzerland), 2020, 12, 1980.	2.7	49
56	Estimation of Sediment Hydraulic Conductivity in River Reaches and its Potential Use to Evaluate Streambed Clogging. River Research and Applications, 2015, 31, 880-891.	1.7	48
57	Flow Regimes in Intermittent Rivers and Ephemeral Streams. , 2017, , 51-78.		48
58	Sediment Respiration Pulses in Intermittent Rivers and Ephemeral Streams. Global Biogeochemical Cycles, 2019, 33, 1251-1263.	4.9	48
59	Assessing metacommunity processes through signatures in spatiotemporal turnover of community composition. Ecology Letters, 2020, 23, 1330-1339.	6.4	47
60	Pervasive changes in stream intermittency across the United States. Environmental Research Letters, 2021, 16, 084033.	5.2	47
61	Treating causes not symptoms: restoration of surface - groundwater interactions in rivers. Marine and Freshwater Research, 2009, 60, 976.	1.3	46
62	Comparison of Different Techniques to Assess Surface and Subsurface Streambed Colmation with Fine Sediments. International Review of Hydrobiology, 2010, 95, 520-540.	0.9	43
63	From metaâ€system theory to the sustainable management of rivers in the Anthropocene. Frontiers in Ecology and the Environment, 2022, 20, 49-57.	4.0	43
64	Spatial and temporal aquaticâ€“terrestrial transitions in the temporary Albarine River, France: responses of invertebrates to experimental rewetting. Freshwater Biology, 2012, 57, 716-727.	2.4	42
65	Hydrological Connectivity in Intermittent Rivers and Ephemeral Streams. , 2017, , 79-108.		42
66	Trends in flow intermittence for European rivers. Hydrological Sciences Journal, 2021, 66, 37-49.	2.6	41
67	Testing the Mantel statistic with a spatiallyâ€constrained permutation procedure. Methods in Ecology and Evolution, 2019, 10, 532-540.	5.2	40
68	Drying responses of microbial litter decomposition and associated fungal and bacterial communities are not affected by emersion frequency. Freshwater Science, 2015, 34, 1233-1244.	1.8	39
69	Stream solute tracer timescales changing with discharge and reach length confound process interpretation. Water Resources Research, 2016, 52, 3227-3245.	4.2	37
70	River ecosystem conceptual models and nonâ€perennial rivers: A critical review. Wiley Interdisciplinary Reviews: Water, 2020, 7, e1473.	6.5	37
71	A comparison of biotic groups as dry-phase indicators of ecological quality in intermittent rivers and ephemeral streams. Ecological Indicators, 2019, 97, 165-174.	6.3	35
72	Increased depth to the water table during river drying decreases the resilience of Gammarus pulex and alters ecosystem function. Ecohydrology, 2016, 9, 1177-1186.	2.4	33

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73	Science and Management of Intermittent Rivers and Ephemeral Streams (SMIRES). Research Ideas and Outcomes, 0, 3, e21774.	1.0	33
74	Invertebrate distribution across nested geomorphic features in braided-river landscapes. Freshwater Science, 2013, 32, 1188-1204.	1.8	31
75	Woody debris is related to reachâ€scale hotspots of lowland stream ecosystem respiration under baseflow conditions. Ecohydrology, 2018, 11, e1952.	2.4	31
76	Intermittent rivers and ephemeral streams: Perspectives for critical zone science and research on socioâ€ecosystems. Wiley Interdisciplinary Reviews: Water, 2021, 8, e1523.	6.5	31
77	Mediterranean intermittent rivers and ephemeral streams: Challenges in monitoring complexity. Ecohydrology, 2019, 12, e2149.	2.4	30
78	Drying in newly intermittent rivers leads to higher variability of invertebrate communities. Freshwater Biology, 2021, 66, 730-744.	2.4	30
79	A comparison of pitfall-trap and quadrat methods for sampling ground-dwelling invertebrates in dry riverbeds. Hydrobiologia, 2013, 717, 13-26.	2.0	29
80	Extrapolating regional probability of drying of headwater streams using discrete observations and gauging networks. Hydrology and Earth System Sciences, 2018, 22, 3033-3051.	4.9	29
81	Protecting U.S. temporary waterways. Science, 2018, 361, 856-857.	12.6	29
82	Accounting for flow intermittency in environmental flows design. Journal of Applied Ecology, 2020, 57, 742-753.	4.0	29
83	River flow controls ecological processes and invertebrate assemblages in subsurface flowpaths of an ephemeral river reach. Canadian Journal of Fisheries and Aquatic Sciences, 2008, 65, 1532-1544.	1.4	27
84	Drying of a temperate, intermittent river has little effect on adjacent riparian arthropod communities. Freshwater Biology, 2014, 59, 666-678.	2.4	26
85	Exploring Tracer Information and Model Framework Tradeâ€Offs to Improve Estimation of Stream Transient Storage Processes. Water Resources Research, 2019, 55, 3481-3501.	4.2	26
86	Fragmentation promotes the role of dispersal in determining 10 intermittent headwater stream metacommunities. Freshwater Biology, 2020, 65, 2169-2185.	2.4	26
87	Organizational Principles of Hyporheic Exchange Flow and Biogeochemical Cycling in River Networks Across Scales. Water Resources Research, 2022, 58, .	4.2	26
88	Habitat Fragmentation and Metapopulation, Metacommunity, and Metaecosystem Dynamics in Intermittent Rivers and Ephemeral Streams. , 2017, , 377-403.		25
89	Ecosystem Services, Values, and Societal Perceptions of Intermittent Rivers and Ephemeral Streams. , 2017, , 455-476.		24
90	A global perspective on the functional responses of stream communities to flow intermittence. Ecography, 2021, 44, 1511-1523.	4.5	24

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91	Towards an improved understanding of biogeochemical processes across surface-groundwater interactions in intermittent rivers and ephemeral streams. Earth-Science Reviews, 2021, 220, 103724.	9.1	24
92	Lateral and longitudinal patterns within the stygoscape of an alluvial river corridor. Fundamental and Applied Limnology, 2008, 171, 335-347.	0.7	22
93	Impacts of water level on metabolism and transient storage in vegetated lowland rivers: Insights from a mesocosm study. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 628-644.	3.0	22
94	An unexpected source of invertebrate community recovery in intermittent streams from a humid continental climate. Freshwater Biology, 2019, 64, 1971-1983.	2.4	22
95	Rethinking ecosystem service indicators for their application to intermittent rivers. Ecological Indicators, 2022, 137, 108693.	6.3	21
96	Groundâ€dwelling arthropod communities across braided river landscape mosaics: a Mediterranean perspective. Freshwater Biology, 2014, 59, 1308-1322.	2.4	20
97	Parallels and contrasts between intermittently freezing and drying streams: From individual adaptations to biodiversity variation. Freshwater Biology, 2019, 64, 1679-1691.	2.4	20
98	Gammarus pulex (Crustacea: Amphipoda) avoids increasing water temperature and intraspecific competition through vertical migration into the hyporheic zone: a mesocosm experiment. Aquatic Sciences, 2017, 79, 45-55.	1.5	19
99	The terrestrial and semiâ€aquatic invertebrates of intermittent rivers and ephemeral streams. Biological Reviews, 2022, 97, 1408-1425.	10.4	19
100	Recognition of stream drying based on benthic macroinvertebrates: A new tool in Central Europe. Ecological Indicators, 2019, 106, 105486.	6.3	18
101	Contextâ€dependent resistance of freshwater invertebrate communities to drying. Ecology and Evolution, 2017, 7, 3201-3211.	1.9	17
102	Alpha and beta diversity of connected benthicâ€“subsurface invertebrate communities respond to drying in dynamic river ecosystems. Ecography, 2019, 42, 2060-2073.	4.5	17
103	Direct and indirect effects of flood regime on macroinvertebrate assemblages in a floodplain riverscape. Ecohydrology, 2019, 12, e2095.	2.4	16
104	Climatic aridity increases temporal nestedness of invertebrate communities in naturally drying rivers. Ecography, 2021, 44, 860-869.	4.5	16
105	Enhancing DNA metabarcoding performance and applicability with bait capture enrichment and DNA from conservative ethanol. Molecular Ecology Resources, 2020, 20, 79-96.	4.8	15
106	One for All, All for One: A Global River Research Network. Eos, 2016, 97, .	0.1	15
107	Reconceptualizing the hyporheic zone for nonperennial rivers and streams. Freshwater Science, 2022, 41, 167-182.	1.8	15
108	Exploring the role of hydraulic conductivity on the contribution of the hyporheic zone to inâ€stream nitrogen uptake. Ecohydrology, 2019, 12, e2139.	2.4	12

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109	Drought in intermittent river and ephemeral stream networks. Ecohydrology, 2022, 15, e2390.	2.4	12
110	Taxon-specific sensitivities to flow intermittence reveal macroinvertebrates as potential bioindicators of intermittent rivers and streams. Science of the Total Environment, 2022, 804, 150022.	8.0	11
111	Disentangling responses to natural stressor and human impact gradients in river ecosystems across Europe. Journal of Applied Ecology, 2022, 59, 537-548.	4.0	11
112	Passive sampling of environmental DNA in aquatic environments using 3Dâ€printed hydroxyapatite samplers. Molecular Ecology Resources, 2022, 22, 2158-2170.	4.8	11
113	Genetic, Evolutionary, and Biogeographical Processes in Intermittent Rivers and Ephemeral Streams. , 2017, , 405-431.		10
114	Mesocosm experiments reveal the direction of groundwaterâ€“surface water exchange alters the hyporheic refuge capacity under warming scenarios. Freshwater Biology, 2018, 63, 165-177.	2.4	10
115	Intermittent Rivers and Ephemeral Streams: A Unique Biome With Important Contributions to Biodiversity and Ecosystem Services. , 2020, , 419-429.		10
116	Dispersal limitation by structures is more important than intermittent drying effects for metacommunity dynamics in a highly fragmented river network. Freshwater Science, 2021, 40, 302-315.	1.8	10
117	Science Gets Up to Speed on Dry Rivers. Eos, 2020, 101, .	0.1	10
118	Unlocking our understanding of intermittent rivers and ephemeral streams with genomic tools. Frontiers in Ecology and the Environment, 2021, 19, 574-583.	4.0	9
119	The Biota of Intermittent Rivers and Ephemeral Streams: Terrestrial AND Semiaquatic Invertebrates. , 2017, , 245-271.		8
120	Spatial factors control the structure of fish metacommunity in a Mediterranean intermittent river. Ecohydrology and Hydrobiology, 2020, 20, 346-356.	2.3	8
121	Ecological values of intermittent rivers for terrestrial vertebrate fauna. Science of the Total Environment, 2022, 806, 151308.	8.0	8
122	<scp>IRBAS</scp>: An online database to collate, analyze, and synthesize data on the biodiversity and ecology of intermittent rivers worldwide. Ecology and Evolution, 2017, 7, 815-823.	1.9	5
123	Plant Litter Decomposition in Intermittent Rivers and Ephemeral Streams. , 2021, , 73-100.		5
124	Aquatic organic matter decomposition in the terrestrial environments of an intermittent headwater stream. Aquatic Sciences, 2022, 84, .	1.5	5
125	What's in a Name? Patterns, Trends, and Suggestions for Defining Non-Perennial Rivers and Streams. Water (Switzerland), 2020, 12, 1980.	2.7	4
126	Securing Biodiversity, Functional Integrity, and Ecosystem Services in Drying River Networks (DRYvER). Research Ideas and Outcomes, 0, 7, .	1.0	4

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127	Efficiency of invertebrate-based bioassessment for evaluating the ecological status of streams along a gradient of flow intermittence. Ecological Indicators, 2021, 133, 108440.	6.3	4
128	Ecological drivers of macroinvertebrate metacommunity assembly in a subtropical river basin in the Yangtze River Delta, China. Science of the Total Environment, 2022, 837, 155687.	8.0	3
129	The method controls the story - Sampling method impacts on the detection of pore-water nitrogen concentrations in streambeds. Science of the Total Environment, 2020, 709, 136075.	8.0	2
130	River ecosystem conceptual models and non-perennial rivers: A critical review. Wiley Interdisciplinary Reviews: Water, 2020, 7, .	6.5	0
131	Intermittent Rivers and Ephemeral Streams. , 2021, , .		0