Barry J F Biggs

List of Publications by Year
in descending order

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82 papers	6,851 citations	61984 43 h-index	62596 80 g-index
82 all docs	82 docs citations	82 times ranked	4133 citing authors

#	Article	IF	Citations
1	Periphyton biomass dynamics in gravel bed rivers: the relative effects of flows and nutrients. Freshwater Biology, 1989, 22, 209-231.	2.4	380
2	Eutrophication of streams and rivers: dissolved nutrient-chlorophyll relationships for benthic algae. Journal of the North American Benthological Society, 2000, 19, 17-31.	3.1	355
3	The contribution of flood disturbance, catchment geology and land use to the habitat template of periphyton in stream ecosystems. Freshwater Biology, 1995, 33, 419-438.	2.4	300
4	MULTISCALE RIVER ENVIRONMENT CLASSIFICATION FOR WATER RESOURCES MANAGEMENT1. Journal of the American Water Resources Association, 2002, 38, 1225-1239.	2.4	288
5	A habitat matrix conceptual model for stream periphyton. Fundamental and Applied Limnology, 1998, 143, 21-56.	0.7	249
6	Linking scales of flow variability to lotic ecosystem structure and function. River Research and Applications, 2005, 21, 283-298.	1.7	239
7	Relationships between benthic biota and hydrological indices in New Zealand streams. Freshwater Biology, 1997, 38, 327-342.	2.4	235
8	SUBSIDY AND STRESS RESPONSES OF STREAM PERIPHYTON TO GRADIENTS IN WATER VELOCITY AS A FUNCTION OF COMMUNITY GROWTH FORM. Journal of Phycology, 1998, 34, 598-607.	2.3	202
9	Flow variables for ecological studies in temperate streams: groupings based on covariance. Journal of Hydrology, 2000, 237, 184-197.	5.4	198
10	Hydrologic and hydraulic control of macrophyte establishment and performance in streams. Limnology and Oceanography, 2003, 48, 1488-1497.	3.1	197
11	On gravel-bed roughness characterization. Water Resources Research, 1998, 34, 517-527.	4.2	186
12	DISTURBANCE OF STREAM PERIPHYTON BY PERTURBATIONS IN SHEAR STRESS: TIME TO STRUCTURAL FAILURE AND DIFFERENCES IN COMMUNITY RESISTANCE1. Journal of Phycology, 1995, 31, 233-241.	2.3	185
13	Taxonomic richness of stream benthic algae: Effects of flood disturbance and nutrients. Limnology and Oceanography, 2002, 47, 1175-1186.	3.1	164
14	Microhabitat preferences of benthic invertebrates and the development of generalisedDeleatidiumspp. habitat suitability curves, applied to four New Zealand rivers. New Zealand Journal of Marine and Freshwater Research, 1991, 25, 187-199.	2.0	158
15	HYDRAULIC HABITAT OF PLANTS IN STREAMS. River Research and Applications, 1996, 12, 131-144.	0.8	157
16	PHOTOSYNTHESIS-IRRADIANCE PATTERNS IN BENTHIC MICROALGAE: VARIATIONS AS A FUNCTION OF ASSEMBLAGE THICKNESS AND COMMUNITY STRUCTURE. Journal of Phycology, 1999, 35, 42-53.	2.3	138
17	Nutrient Limitation of Algal Biomass Accrual in Streams: Seasonal Patterns and a Comparison of Methods. Journal of the North American Benthological Society, 1999, 18, 242-260.	3.1	135
18	Taxon-specific responses to high-flow disturbance in streams:implications for population persistence. Journal of the North American Benthological Society, 2000, 19, 670-679.	3.1	117

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19	Water quality in lowâ€elevation streams and rivers of New Zealand: Recent state and trends in contrasting landâ€cover classes. New Zealand Journal of Marine and Freshwater Research, 2004, 38, 347-366.	2.0	117
20	Water Velocity Attenuation by Stream Periphyton and Macrophytes in Relation to Growth Form and Architecture. Journal of the North American Benthological Society, 2002, 21, 2-15.	3.1	112
21	Short-term Effects of Elevated Velocity and Sediment Abrasion on Benthic Algal Communities. Hydrobiologia, 2006, 561, 59-69.	2.0	111
22	Ecological characterisation, classification, and modelling of New Zealand rivers: An introduction and synthesis. New Zealand Journal of Marine and Freshwater Research, 1990, 24, 277-304.	2.0	110
23	Periphyton communities and their environments in New Zealand rivers. New Zealand Journal of Marine and Freshwater Research, 1990, 24, 367-386.	2.0	107
24	Improved eco-hydrological classification of rivers. River Research and Applications, 2005, 21, 609-628.	1.7	101
25	Effects of fish size, time-to-fatigue and turbulence on swimming performance: a case study of Galaxias maculatus. Journal of Fish Biology, 2003, 63, 1365-1382.	1.6	94
26	A survey of filamentous algal proliferations in New Zealand rivers. New Zealand Journal of Marine and Freshwater Research, 1987, 21, 175-191.	2.0	92
27	Massâ€transferâ€limited nitrogen and phosphorus uptake by stream periphyton:A conceptual model and experimental evidence. Limnology and Oceanography, 2004, 49, 1992-2000.	3.1	92
28	Periphyton responses to a hydraulic gradient in a regulated river in New Zealand. Freshwater Biology, 1994, 32, 49-59.	2.4	90
29	The nonâ€indigenous diatom Didymosphenia geminata alters benthic communities in New Zealand rivers. Freshwater Biology, 2009, 54, 1990-2002.	2.4	88
30	Temporal variation of N and P uptake in 2 New Zealand streams. Journal of the North American Benthological Society, 2005, 24, 1-18.	3.1	83
31	Is the River Environment Classification an improved landscape-scale classification of rivers?. Journal of the North American Benthological Society, 2004, 23, 580-598.	3.1	82
32	Trophic cascades in streams: effects of nutrient enrichment on autotrophic and consumer benthic communities under two different fish predation regimes. Canadian Journal of Fisheries and Aquatic Sciences, 2000, 57, 1380-1394.	1.4	81
33	Distributional Responses to Flow Disturbance by a Stream-Dwelling Snail. Oikos, 1999, 87, 36.	2.7	76
34	Six newActinella(Bacillariophyta) species from Papua New Guinea, Australia and New Zealand: further evidence for widespread diatom endemism in the Australasian region. European Journal of Phycology, 2001, 36, 321-340.	2.0	75
35	HYDRAULIC HABITAT SUITABILITY FOR PERIPHYTON IN RIVERS. River Research and Applications, 1996, 12, 251-261.	0.8	66
36	Periphyton development in relation to macroâ€scale (geology) and microâ€scale (velocity) limiters in two gravelâ€bed rivers, New Zealand. New Zealand Journal of Marine and Freshwater Research, 1993, 27, 39-53.	2.0	63

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37	Physical characterisation of microform bed cluster refugia in 12 headwater streams, New Zealand. New Zealand Journal of Marine and Freshwater Research, 1997, 31, 413-422.	2.0	59
38	Habitat-Specific Nitrogen Dynamics in New Zealand Streams Containing Native or Invasive Fish. Ecosystems, 2004, 7, 777-792.	3.4	58
39	Microform bed clusters as refugia for periphyton in a floodâ€prone headwater stream. New Zealand Journal of Marine and Freshwater Research, 1998, 32, 363-374.	2.0	53
40	Responses of two trophic levels to patch enrichment along a New Zealand stream continuum. New Zealand Journal of Marine and Freshwater Research, 1994, 28, 119-134.	2.0	50
41	HABITAT-SPECIFIC VARIATION AND PERFORMANCE TRADE-OFFS IN SHELL ARMATURE OF NEW ZEALAND MUDSNAILS. Ecology, 2006, 87, 1038-1047.	3.2	50
42	Flow regime requirements and the biological effectiveness of habitatâ€based minimum flow assessments for six rivers. International Journal of River Basin Management, 2006, 4, 179-189.	2.7	47
43	Refuge-use strategies of stream fishes in response to extreme low flows. Journal of Fish Biology, 2006, 69, 1047-1059.	1.6	46
44	Flood and velocity effects on periphyton and silt accumulation in two New Zealand rivers. New Zealand Journal of Marine and Freshwater Research, 1997, 31, 287-300.	2.0	45
45	Resource Stress Alters Hydrological Disturbance Effects in a Stream periphyton Community. Oikos, 1999, 85, 95.	2.7	44
46	Flow effects on periphyton patches and their ecological consequences in a <scp>N</scp>ew <scp>Z</scp>ealand river. Freshwater Biology, 2013, 58, 1588-1602.	2.4	44
47	Biomonitoring of organic pollution using periphyton, South Branch, Canterbury, New Zealand. New Zealand Journal of Marine and Freshwater Research, 1989, 23, 263-274.	2.0	42
48	Effects of sample storage and mechanical blending on the quantitative analysis of river perighyton. Freshwater Biology, 1987, 18, 197-203.	2.4	41
49	Periphyton development in three valley segments of a New Zealand grassland river: test of a habitat matrix conceptual model within a catchment. Fundamental and Applied Limnology, 1998, 143, 147-177.	0.7	40
50	Distribution of macrophytes in New Zealand streams and lakes in relation to disturbance frequency and resource supplyâ€"a synthesis and conceptual model. New Zealand Journal of Marine and Freshwater Research, 2001, 35, 255-267.	2.0	39
51	Benthic community dynamics during summer lowâ€flows in two rivers of contrasting enrichment 2. Invertebrates. New Zealand Journal of Marine and Freshwater Research, 2003, 37, 71-83.	2.0	39
52	Benthic community dynamics during summer lowâ€flows in two rivers of contrasting enrichment 1. Periphyton. New Zealand Journal of Marine and Freshwater Research, 2003, 37, 53-70.	2.0	39
53	Application of the â€˜natural flow paradigmâ€™ in a New Zealand context. River Research and Applications, 2009, 25, 1126-1135.	1.7	39
54	Macroinvertebrates associated with various aquatic macrophytes in the backwaters and lakes of the upper Clutha Valley, New Zealand. New Zealand Journal of Marine and Freshwater Research, 1982, 16, 81-88.	2.0	38

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55	Macrophytes in Urban Stream Rehabilitation: Establishment, Ecological Effects, and Public Perception. Restoration Ecology, 2006, 14, 429-440.	2.9	37
56	Rules for macroorganisms applied to microorganisms: patterns of endemism in benthic freshwater diatoms. Oikos, 2007, 116, 550-564.	2.7	37
57	On stream periphytonâ€turbulence interactions. New Zealand Journal of Marine and Freshwater Research, 1997, 31, 435-448.	2.0	36
58	Artificial substrate exposure times for periphyton biomass estimates in rivers. New Zealand Journal of Marine and Freshwater Research, 1988, 22, 507-515.	2.0	30
59	Use of relative specific growth rates of periphytic diatoms to assess enrichment of a stream. New Zealand Journal of Marine and Freshwater Research, 1990, 24, 9-18.	2.0	30
60	The effects of the moss Fissidens rigidulus (Fissidentaceae: Musci) on nearâ€bed flowstructure in an experimental cobble bed flume. Limnology and Oceanography, 1998, 43, 1321-1331.	3.1	30
61	Benthic Diatom Communities in Subalpine Pools in New Zealand: Relationships to Environmental Variables. Hydrobiologia, 2006, 561, 95-110.	2.0	30
62	Silverstream ecoâ€hydraulics flume: Hydraulic design and tests. New Zealand Journal of Marine and Freshwater Research, 1998, 32, 607-620.	2.0	27
63	NUTRIENT CONCENTRATION CRITERIA AND CHARACTERIZATION OF PATTERNS IN TROPHIC STATE FOR RIVERS IN HETEROGENEOUS LANDSCAPES. Journal of the American Water Resources Association, 2004, 40, 1-13.	2.4	25
64	Food Limitation Affects Algivory and Grazer Performance for New Zealand Stream Macroinvertebrates. Hydrobiologia, 2006, 561, 83-94.	2.0	24
65	Sediment texture mediates high-flow effects on lotic macroinvertebrates. Journal of the North American Benthological Society, 2003, 22, 542-553.	3.1	23
66	Seasonal changes in macrophyte biomass in South Island lowland streams, New Zealand. New Zealand Journal of Marine and Freshwater Research, 2003, 37, 381-388.	2.0	23
67	Use of the SHMAK clarity tube for measuring water clarity: Comparison with the black disk method. New Zealand Journal of Marine and Freshwater Research, 2002, 36, 519-527.	2.0	19
68	Short-term effects of elevated velocity and sediment abrasion on benthic algal communities. , 2006, , 59-69.		16
69	Determination of flow regimes for protection of in-river values in New Zealand: an overview. Ecohydrology and Hydrobiology, 2008, 8, 17-29.	2.3	15
70	Physical microhabitat effects on 3â€dimensional spatial variability of the hydrobiid snail,Potamopyrgus antipodarum. New Zealand Journal of Marine and Freshwater Research, 2007, 41, 357-367.	2.0	14
71	Controlling the Invasive Diatom Didymosphenia geminata: An Ecotoxicity Assessment of Four Potential Biocides. Archives of Environmental Contamination and Toxicology, 2011, 61, 115-127.	4.1	14
72	Pulse-dose application of chelated copper to a river for Didymosphenia geminata control: Effects on macroinvertebrates and fish. Environmental Toxicology and Chemistry, 2011, 30, 181-195.	4.3	14

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73	Assessing the effectiveness of enhancement activities in urban streams: I. Habitat responses. River Research and Applications, 2005, 21, 381-401.	1.7	12
74	Optical properties of Lake Coleridge: The impacts of turbid inflows. New Zealand Journal of Marine and Freshwater Research, 1990, 24, 441-451.	2.0	10
75	A submersible device for measuring drag forces on aquatic plants and other organisms. New Zealand Journal of Marine and Freshwater Research, 2007, 41, 119-127.	2.0	10
76	A periphyton sampler for shallow, swift rivers. New Zealand Journal of Marine and Freshwater Research, 1988, 22, 189-199.	2.0	9
77	Algal proliferations in New Zealand's shallow stony foothills-fed rivers: Toward a predictive model. Verhandlungen Der Internationalen Vereinigung Fur Theoretische Und Angewandte Limnologie International Association of Theoretical and Applied Limnology, 1988, 23, 1405-1411.	0.1	8
78	Spatial and temporal variability in mire pool limnology. Fundamental and Applied Limnology, 2008, 171, 185-197.	0.7	6
79	Inhibition of Algae and Invertebrates by Malathion from Insecticide-Diffusing Substrata. Journal of Freshwater Ecology, 1999, 14, 179-186.	1.2	5
80	Spatiotemporal separation of New Zealand mudsnails from predatory fish. Journal of the North American Benthological Society, 2009, 28, 846-854.	3.1	5
81	Invertebrate grazing of filamentous green algae in outdoor channels. Verhandlungen Der Internationalen Vereinigung Fur Theoretische Und Angewandte Limnologie International Association of Theoretical and Applied Limnology, 2000, 27, 2408-2414.	0.1	3
82	Food limitation affects algivory and grazer performance for New Zealand stream macroinvertebrates. , 2006, , 83-94.		3