Andrew Gonzalez

List of Publications by Year
in descending order

157 papers	28,969 citations	15495 65 h-index	7152 153 g-index
191 all docs	191 docs citations	191 times ranked	29488 citing authors

#	Article	IF	Citations
1	Biodiversity loss and its impact on humanity. Nature, 2012, 486, 59-67.	13.7	4,969
2	The metacommunity concept: a framework for multi-scale community ecology. Ecology Letters, 2004, 7, 601-613.	3.0	4,069
3	Habitat fragmentation and its lasting impact on Earthâ€™s ecosystems. Science Advances, 2015, 1, e1500052.	4.7	2,541
4	A global synthesis reveals biodiversity loss as a major driver of ecosystem change. Nature, 2012, 486, 105-108.	13.7	1,750
5	The functional role of producer diversity in ecosystems. American Journal of Botany, 2011, 98, 572-592.	0.8	991
6	Biodiversity as spatial insurance in heterogeneous landscapes. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 12765-12770.	3.3	805
7	Improving the forecast for biodiversity under climate change. Science, 2016, 353, .	6.0	780
8	Linking the influence and dependence of people on biodiversity across scales. Nature, 2017, 546, 65-72.	13.7	474
9	Evolutionary rescue can prevent extinction following environmental change. Ecology Letters, 2009, 12, 942-948.	3.0	450
10	Is habitat fragmentation good for biodiversity?. Biological Conservation, 2018, 226, 9-15.	1.9	430
11	Metapopulation Dynamics, Abundance, and Distribution in a Microecosystem. , 1998, 281, 2045-2047.		391
12	The Causes and Consequences of Compensatory Dynamics in Ecological Communities. Annual Review of Ecology, Evolution, and Systematics, 2009, 40, 393-414.	3.8	388
13	The geography of biodiversity change in marine and terrestrial assemblages. Science, 2019, 366, 339-345.	6.0	385
14	Are natural microcosms useful model systems for ecology?. Trends in Ecology and Evolution, 2004, 19, 379-384.	4.2	331
15	Adaptation and Evolutionary Rescue in Metapopulations Experiencing Environmental Deterioration. Science, 2011, 332, 1327-1330.	6.0	331
16	Species Richness and the Temporal Stability of Biomass Production: A New Analysis of Recent Biodiversity Experiments. American Naturalist, 2014, 183, 1-12.	1.0	309
17	Evolutionary rescue: an emerging focus at the intersection between ecology and evolution. Philosophical Transactions of the Royal Society B: Biological Sciences, 2013, 368, 20120404.	1.8	306
18	Linking Landscape Connectivity and Ecosystem Service Provision: Current Knowledge and Research Gaps. Ecosystems, 2013, 16, 894-908.	1.6	299

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19	Linking Biodiversity and Ecosystem Services: Current Uncertainties and the Necessary Next Steps. BioScience, 2014, 64, 49-57.	2.2	285
20	Scalingâ€up biodiversityâ€ecosystem functioning research. Ecology Letters, 2020, 23, 757-776.	3.0	270
21	Research gaps in knowledge of the impact of urban growth on biodiversity. Nature Sustainability, 2020, 3, 16-24.	11.5	267
22	Estimating local biodiversity change: a critique of papers claiming no net loss of local diversity. Ecology, 2016, 97, 1949-1960.	1.5	224
23	The Bryosphere: An Integral and Influential Component of the Earthâ€™s Biosphere. Ecosystems, 2010, 13, 612-627.	1.6	210
24	Corridors maintain species richness in the fragmented landscapes of a microecosystem. Proceedings of the Royal Society B: Biological Sciences, 1998, 265, 577-582.	1.2	198
25	Applying network theory to prioritize multispecies habitat networks that are robust to climate and landâ€use change. Conservation Biology, 2017, 31, 1383-1396.	2.4	194
26	Loss of habitat and connectivity erodes species diversity, ecosystem functioning, and stability in metacommunity networks. Ecography, 2017, 40, 98-108.	2.1	190
27	STABLE COEXISTENCE IN A FLUCTUATING ENVIRONMENT: AN EXPERIMENTAL DEMONSTRATION. Ecology, 2005, 86, 2815-2824.	1.5	184
28	Pollination services are mediated by bee functional diversity and landscape context. Agriculture, Ecosystems and Environment, 2015, 200, 12-20.	2.5	184
29	Heterotroph species extinction, abundance and biomass dynamics in an experimentally fragmented microecosystem. Journal of Animal Ecology, 2002, 71, 594-602.	1.3	172
30	Effects of network modularity on the spread of perturbation impact in experimental metapopulations. Science, 2017, 357, 199-201.	6.0	169
31	Species richness change across spatial scales. Oikos, 2019, 128, 1079-1091.	1.2	160
32	Quantifying effects of biodiversity on ecosystem functioning across times and places. Ecology Letters, 2018, 21, 763-778.	3.0	157
33	Metacommunity theory explains the emergence of food web complexity. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 19293-19298.	3.3	149
34	Experimental evidence does not support the Habitat Amount Hypothesis. Ecography, 2017, 40, 48-55.	2.1	145
35	Effects on population persistence: the interaction between environmental noise colour, intraspecific competition and space. Proceedings of the Royal Society B: Biological Sciences, 1997, 264, 1841-1847.	1.2	142
36	Connectivity, nonâ€random extinction and ecosystem function in experimental metacommunities. Ecology Letters, 2010, 13, 543-552.	3.0	132

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37	The inflationary effects of environmental fluctuations in source-sink systems. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 14872-14877.	3.3	128
38	Forest fragments modulate the provision of multiple ecosystem services. Journal of Applied Ecology, 2014, 51, 909-918.	1.9	128
39	Is local biodiversity declining or not? A summary of the debate over analysis of species richness time trends. Biological Conservation, 2018, 219, 175-183.	1.9	127
40	Climate change and habitat fragmentation drive the occurrence of <scp>B</scp>orrelia burgdorferi, the agent of Lyme disease, at the northeastern limit of its distribution. Evolutionary Applications, 2014, 7, 750-764.	1.5	122
41	The disentangled bank: How loss of habitat fragments and disassembles ecological networks. American Journal of Botany, 2011, 98, 503-516.	0.8	119
42	Sourceâ€“sink dynamics shape the evolution of antibiotic resistance and its pleiotropic fitness cost. Proceedings of the Royal Society B: Biological Sciences, 2007, 274, 2351-2356.	1.2	117
43	Evolutionary rescue and adaptation to abrupt environmental change depends upon the history of stress. Philosophical Transactions of the Royal Society B: Biological Sciences, 2013, 368, 20120079.	1.8	115
44	Multipurpose habitat networks for shortâ€range and longâ€range connectivity: a new method combining graph and circuit connectivity. Methods in Ecology and Evolution, 2016, 7, 222-231.	2.2	112
45	A general biodiversityâ€“function relationship is mediated by trophic level. Oikos, 2017, 126, 18-31.	1.2	112
46	The impacts of urban sprawl on ecological connectivity in the Montreal Metropolitan Region. Environmental Science and Policy, 2016, 58, 61-73.	2.4	110
47	Community relaxation in fragmented landscapes: the relation between species richness, area and age. Ecology Letters, 2000, 3, 441-448.	3.0	109
48	Synchrony and Stability of Food Webs in Metacommunities. American Naturalist, 2010, 175, E16-E34.	1.0	107
49	Economic Inequality Predicts Biodiversity Loss. PLoS ONE, 2007, 2, e444.	1.1	106
50	Metacommunity diversity depends on connectivity and patch arrangement in heterogeneous habitat networks. Ecography, 2011, 34, 415-424.	2.1	105
51	Biodiversity as insurance: from concept to measurement and application. Biological Reviews, 2021, 96, 2333-2354.	4.7	101
52	Ecological Systems as Complex Systems: Challenges for an Emerging Science. Diversity, 2010, 2, 395-410.	0.7	98
53	The overlooked impact of rising glyphosate use on phosphorus loading in agricultural watersheds. Frontiers in Ecology and the Environment, 2019, 17, 48-56.	1.9	97
54	Landscape structure affects the provision of multiple ecosystem services. Environmental Research Letters, 2016, 11, 124017.	2.2	94

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55	Strong and nonlinear effects of fragmentation on ecosystem service provision at multiple scales. Environmental Research Letters, 2015, 10, 094014.	2.2	93
56	Dispersal governs the reorganization of ecological networks under environmental change. Nature Ecology and Evolution, 2017, 1, 162.	3.4	92
57	Population and community variability in randomly fluctuating environments. Oikos, 2004, 106, 105-116.	1.2	87
58	Causes of maladaptation. Evolutionary Applications, 2019, 12, 1229-1242.	1.5	85
59	Unifying sources and sinks in ecology andÂ<scp>E</scp>arth sciences. Biological Reviews, 2013, 88, 365-379.	4.7	85
60	THE INFLATIONARY EFFECTS OF ENVIRONMENTAL FLUCTUATIONS ENSURE THE PERSISTENCE OF SINK METAPOPULATIONS. Ecology, 2007, 88, 2848-2856.	1.5	83
61	The strength of the biodiversityâ€“ecosystem function relationship depends on spatial scale. Proceedings of the Royal Society B: Biological Sciences, 2018, 285, 20180038.	1.2	82
62	A Crossâ€National Analysis of How Economic Inequality Predicts Biodiversity Loss. Conservation Biology, 2009, 23, 1304-1313.	2.4	81
63	Life in fluctuating environments. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190454.	1.8	81
64	Patterns of pollinator turnover and increasing diversity associated with urban habitats. Urban Ecosystems, 2017, 20, 1359-1371.	1.1	77
65	Biodiversityâ€“productivity relationships are key to nature-based climate solutions. Nature Climate Change, 2021, 11, 543-550.	8.1	77
66	The rate of environmental change drives adaptation to an antibiotic sink. Journal of Evolutionary Biology, 2008, 21, 1724-1731.	0.8	75
67	Traits explain community disassembly and trophic contraction following experimental environmental change. Global Change Biology, 2012, 18, 2448-2457.	4.2	73
68	Community rescue in experimental metacommunities. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14307-14312.	3.3	65
69	Ecosystem Functions across Trophic Levels Are Linked to Functional and Phylogenetic Diversity. PLoS ONE, 2015, 10, e0117595.	1.1	60
70	Understanding Maladaptation by Uniting Ecological and Evolutionary Perspectives. American Naturalist, 2019, 194, 495-515.	1.0	60
71	Whither adaptation?. Biology and Philosophy, 2008, 23, 673-699.	0.7	59
72	A patch-dynamic framework for food web metacommunities. Theoretical Ecology, 2010, 3, 223-237.	0.4	59

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73	Agricultural landscape structure affects arthropod diversity and arthropod-derived ecosystem services. Agriculture, Ecosystems and Environment, 2014, 192, 144-151.	2.5	58
74	Signatures of the collapse and incipient recovery of an overexploited marine ecosystem. Royal Society Open Science, 2017, 4, 170215.	1.1	57
75	Selecting surrogate species for connectivity conservation. Biological Conservation, 2018, 227, 326-334.	1.9	56
76	No consistent effects of humans on animal genetic diversity worldwide. Ecology Letters, 2020, 23, 55-67.	3.0	55
77	Functional diversity and management mediate aboveground carbon stocks in small forest fragments. Ecosphere, 2013, 4, 1-21.	1.0	54
78	Ecological Data Should Not Be So Hard to Find and Reuse. Trends in Ecology and Evolution, 2019, 34, 494-496.	4.2	52
79	Impacts of environmental variability in open populations and communities: â€œinflationâ€•in sink environments. Theoretical Population Biology, 2003, 64, 315-330.	0.5	51
80	Synchronous dynamics of zooplankton competitors prevail in temperate lake ecosystems. Proceedings of the Royal Society B: Biological Sciences, 2014, 281, 20140633.	1.2	50
81	Expert perspectives on global biodiversity loss and its drivers and impacts on people. Frontiers in Ecology and the Environment, 2023, 21, 94-103.	1.9	49
82	POPULATION SYNCHRONY INDUCED BY RESOURCE FLUCTUATIONS AND DISPERSAL IN AN AQUATIC MICROCOSM. Ecology, 2005, 86, 1463-1471.	1.5	46
83	Spatial ecological networks: planning for sustainability in the long-term. Current Opinion in Environmental Sustainability, 2017, 29, 187-197.	3.1	46
84	Ecosystem multifunctionality in metacommunities. Ecology, 2016, 97, 2867-2879.	1.5	45
85	Community rescue in experimental phytoplankton communities facing severe herbicide pollution. Nature Ecology and Evolution, 2020, 4, 578-588.	3.4	45
86	Biodiversity as spatial insurance: the effects of habitat fragmentation and dispersal on ecosystem functioning. , 2009, , 134-146.		45
87	Complementary crops and landscape features sustain wild bee communities. Ecological Applications, 2018, 28, 1093-1105.	1.8	43
88	Moving forward in implementing green infrastructures: Stakeholder perceptions of opportunities and obstacles in a major North American metropolitan area. Cities, 2018, 81, 61-70.	2.7	43
89	Flower choice by honey bees (Apis mellifera L.): sex-phase of flowers and preferences among nectar and pollen foragers. Oecologia, 1995, 101, 258-264.	0.9	42
90	Urban tinkering. Sustainability Science, 2018, 13, 1549-1564.	2.5	40

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91	Temperate forest fragments maintain aboveground carbon stocks out to the forest edge despite changes in community composition. Oecologia, 2014, 176, 893-902.	0.9	38
92	Changes in nestedness in experimental communities of soil fauna undergoing extinction. Pedobiologia, 2007, 50, 497-503.	0.5	35
93	Landscape resistance and habitat combine to provide an optimal model of genetic structure and connectivity at the range margin of a small mammal. Molecular Ecology, 2014, 23, 3983-3998.	2.0	34
94	The MontÃ©rÃ©gie Connection: linking landscapes, biodiversity, and ecosystem services to improve decision making. Ecology and Society, 2015, 20, .	1.0	34
95	A novel experimental apparatus to study the impact of white noise and 1/f noise on animal populations. Proceedings of the Royal Society B: Biological Sciences, 1998, 265, 11-15.	1.2	33
96	Ecosystem services and the resilience of agricultural landscapes. Advances in Ecological Research, 2021, , 1-43.	1.4	33
97	A roadmap towards predicting species interaction networks (across space and time). Philosophical Transactions of the Royal Society B: Biological Sciences, 2021, 376, 20210063.	1.8	33
98	When does ecosystem engineering cause invasion and species replacement?. Oikos, 2008, 117, 1247-1257.	1.2	32
99	Stochastic environmental fluctuations drive epidemiology in experimental hostâ€“parasite metapopulations. Proceedings of the Royal Society B: Biological Sciences, 2013, 280, 20131747.	1.2	31
100	The negative relationship between mammal host diversity and Lyme disease incidence strengthens through time. Ecology, 2014, 95, 3244-3250.	1.5	31
101	Landscape modification and nutrientâ€driven instability at a distance. Ecology Letters, 2021, 24, 398-414.	3.0	30
102	Spectral mimicry: A method of synthesizing matching time series with different Fourier spectra. Circuits, Systems, and Signal Processing, 1999, 18, 431-442.	1.2	29
103	Mixed evidence for adaptation to environmental pollution. Evolutionary Applications, 2019, 12, 1259-1273.	1.5	28
104	Scale Dependence of Speciesâ€Energy Relationships: Evidence from Fishes in Thousands of Lakes. American Naturalist, 2008, 171, 800-815.	1.0	27
105	Rapid morphological divergence in two closely related and co-occurring species over the last 50Âyears. Evolutionary Ecology, 2017, 31, 847-864.	0.5	27
106	Extinction Debt in Source-Sink Metacommunities. PLoS ONE, 2011, 6, e17567.	1.1	24
107	Evolution of Dispersal in a Predator-Prey Metacommunity. American Naturalist, 2012, 179, 204-216.	1.0	24
108	Warming induces synchrony and destabilizes experimental pond zooplankton metacommunities. Oikos, 2015, 124, 1171-1180.	1.2	24

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109	Scaling up biodiversityâ€“ecosystem functioning relationships: the role of environmental heterogeneity in space and time. Proceedings of the Royal Society B: Biological Sciences, 2021, 288, 20202779.	1.2	24
110	Evolutionary rescue can maintain an oscillating community undergoing environmental change. Interface Focus, 2013, 3, 20130036.	1.5	23
111	Coding for Life: Designing a Platform for Projecting and Protecting Global Biodiversity. BioScience, 2022, 72, 91-104.	2.2	23
112	The Potential Connectivity of Waterhole Networks and the Effectiveness of a Protected Area under Various Drought Scenarios. PLoS ONE, 2014, 9, e95049.	1.1	23
113	Trophic structure modulates community rescue following acidification. Proceedings of the Royal Society B: Biological Sciences, 2019, 286, 20190856.	1.2	22
114	Towards the Establishment of a Green Infrastructure in the Region of Montreal (Quebec, Canada). Planning Practice and Research, 2015, 30, 355-375.	0.8	20
115	Dispersal, environmental forcing, and parasites combine to affect metapopulation synchrony and stability. Ecology, 2015, 96, 284-290.	1.5	19
116	Embracing Urban Complexity. , 2018, , 45-67.		19
117	Biotic nitrogen fixation in the bryosphere is inhibited more by drought than warming. Oecologia, 2016, 181, 1243-1258.	0.9	18
118	Management of vegetation under electric distribution lines will affect the supply of multiple ecosystem services. Land Use Policy, 2016, 51, 66-75.	2.5	17
119	Act to staunch loss of research data. Nature, 2015, 520, 436-436.	13.7	16
120	Multi-taxa integrated landscape genetics for zoonotic infectious diseases: deciphering variables influencing disease emergence. Genome, 2016, 59, 349-361.	0.9	16
121	Survival, growth, and recruitment of octocoral species (Coelenterata: Octocorallia) in Coiba National Park, Pacific Panama. Bulletin of Marine Science, 2014, 90, 623-650.	0.4	15
122	Converting Ecological Currencies: Energy, Material, and Information Flows. Trends in Ecology and Evolution, 2020, 35, 1068-1077.	4.2	15
123	Environmental Variability Modulates the Insurance Effects of Diversity in Non-equilibrium Communities. , 2007, , 159-177.		14
124	Breaking ecological barriers: Anthropogenic disturbance leads to habitat transitions, hybridization, and high genetic diversity. Science of the Total Environment, 2020, 740, 140046.	3.9	13
125	Origin and deposition sites influence seed germination and seedling survival of Manilkara zapota: implications for long-distance, animal-mediated seed dispersal. Seed Science Research, 2011, 21, 305-313.	0.8	12
126	Defector clustering is linked to cooperation in a pathogenic bacterium. Proceedings of the Royal Society B: Biological Sciences, 2017, 284, 20172001.	1.2	12

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127	Tropical forest fragmentation and isolation: Is community decay a random process?. Global Ecology and Conservation, 2020, 23, e01168.	1.0	12
128	Resistance, resilience, and functional redundancy of freshwater bacterioplankton communities facing a gradient of agricultural stressors in a mesocosm experiment. Molecular Ecology, 2021, 30, 4771-4788.	2.0	12
129	Widespread agrochemicals differentially affect zooplankton biomass and community structure. Ecological Applications, 2021, 31, e02423.	1.8	12
130	Multiâ€trophic metacommunity interactions mediate asynchrony and stability in fluctuating environments. Ecological Monographs, 2022, 92, e1484.	2.4	12
131	A Glyphosate-Based Herbicide Cross-Selects for Antibiotic Resistance Genes in Bacterioplankton Communities. MSystems, 2022, 7, e0148221.	1.7	12
132	Missing Interactions: The Current State of Multispecies Connectivity Analysis. Frontiers in Ecology and Evolution, 2022, 10, .	1.1	12
133	Environmental fluctuations can promote evolutionary rescue in high-extinction-risk scenarios. Proceedings of the Royal Society B: Biological Sciences, 2020, 287, 20201144.	1.2	11
134	Effective dispersal of large seeds by Baird's tapir: a large-scale field experiment. Journal of Tropical Ecology, 2012, 28, 119-122.	0.5	10
135	Local densities connect spatial ecology to game, multilevel selection and inclusive fitness theories of cooperation. Journal of Theoretical Biology, 2015, 380, 414-425.	0.8	10
136	Predicting the outcome of competition when fitness inequality is variable. Royal Society Open Science, 2015, 2, 150274.	1.1	9
137	The Genetic Signature of Range Expansion in a Disease Vectorâ€”The Black-Legged Tick. Journal of Heredity, 2017, 108, esw073.	1.0	9
138	Functional connectivity of the white-footed mouse in Southern Quebec, Canada. Landscape Ecology, 2017, 32, 1987-1998.	1.9	9
139	Grand challenges in biodiversityâ€“ecosystem functioning research in the era of scienceâ€“policy platforms require explicit consideration of feedbacks. Proceedings of the Royal Society B: Biological Sciences, 2021, 288, 20210783.	1.2	8
140	Spatial evolutionary dynamics produce a negative cooperationâ€“population size relationship. Theoretical Population Biology, 2019, 125, 94-101.	0.5	7
141	Genotype diversity promotes the persistence of Daphnia populations exposed to severe copper stress. Journal of Evolutionary Biology, 2022, 35, 265-277.	0.8	7
142	Patchiness in a microhabitat chip affects evolutionary dynamics of bacterial cooperation. Lab on A Chip, 2015, 15, 3723-3729.	3.1	6
143	Reproductive traits and their relationship with water temperature in three common octocoral (Anthozoa: Octocoralia) species from the tropical eastern Pacific. Bulletin of Marine Science, 2018, 94, 1527-1541.	0.4	6
144	Monitoring socialâ€“ecological networks for biodiversity and ecosystem services in human-dominated landscapes. Facets, 2021, 6, 1670-1692.	1.1	6

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145	The maximal body mass-area relationship in island mammals. Journal of Biogeography, 2011, 38, 2278-2285.	1.4	5
146	The ecological deficit. Nature, 2013, 503, 206-207.	13.7	5
147	A network approach reveals surprises about the history of the niche. Ecosphere, 2016, 7, e01266.	1.0	5
148	Multiscale change in reef coral species diversity and composition in the Tropical Eastern Pacific. Coral Reefs, 2018, 37, 105-120.	0.9	5
149	Contrasting responses of soybean aphids, primary parasitoids, and hyperparasitoids to forest fragments and agricultural landscape structure. Agriculture, Ecosystems and Environment, 2022, 326, 107752.	2.5	5
150	Evolutionary Rescue Is Mediated by the History of Selection and Dispersal in Diversifying Metacommunities. Frontiers in Ecology and Evolution, 2020, 8, .	1.1	4
151	Stability and dynamic properties of octocoral communities in the Tropical Eastern Pacific. Marine Ecology - Progress Series, 2018, 588, 71-84.	0.9	4
152	Population decline and the effects of disturbances on the structure and recovery of octocoral communities (Coelenterata: Octocorallia) in Pacific Panama. Journal of the Marine Biological Association of the United Kingdom, 2015, 95, 81-90.	0.4	3
153	Prior exposure to stress allows the maintenance of an ecosystem cycle following severe acidification. Oikos, 2021, 130, 1062-1073.	1.2	3
154	Refining analyses of existing data sets is valuable for macrogenetics: a response to Pazâ€Vinas, Jensen et al., (2021). Ecology Letters, 2021, 24, 1285-1286.	3.0	2
155	Plant Biodiversity and Responses to Elevated Carbon Dioxide. Global Change - the IGBP Series, 2007, , 103-112.	2.1	2
156	How Humans Influence Evolution on Adaptive Landscapes. , 2013, , 180-202.		1
157	The MontÃ©rÃ©gie Connection: Understanding How Ecosystems Can Provide Resilience to the Risk of Ecosystem Service Change. , 2019, , 291-300.		0