Rupert Sutherland

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/1163258/publications.pdf

Version: 2024-02-01

88630 57758 5,638 131 44 70 citations h-index g-index papers 140 140 140 3451 docs citations times ranked citing authors all docs

#	Article	IF	CITATIONS
1	Latest Cretaceous and Paleocene biostratigraphy and paleogeography of northern Zealandia, IODP Site U1509, New Caledonia Trough, southwest Pacific. New Zealand Journal of Geology, and Geophysics, 2024, 67, 20-44.	1.8	2
2	Cretaceous Riftâ€Drift Tectonics Then Paleogene Prearc Subsidence Related to Subduction Initiation: Aotea Basin, Zealandia, Southwest Pacific. Tectonics, 2022, 41, .	2.8	4
3	Neogene Mass Accumulation Rate of Carbonate Sediment Across Northern Zealandia, Tasman Sea, Southwest Pacific. Paleoceanography and Paleoclimatology, 2022, 37, e2021PA004294.	2.9	8
4	Stress transition from horizontal to vertical forces during subduction initiation. Nature Geoscience, 2022, 15, 149-155.	12.9	20
5	Stratigraphic architecture of Solander Basin records Southern Ocean currents and subduction initiation beneath southwest New Zealand. Basin Research, 2021, 33, 403-426.	2.7	7
6	Spatiotemporal clustering of great earthquakes on a transform fault controlled by geometry. Nature Geoscience, 2021, 14, 314-320.	12.9	38
7	Strikeâ€Slip Enables Subduction Initiation Beneath a Failed Rift: New Seismic Constraints From Puysegur Margin, New Zealand. Tectonics, 2021, 40, e2020TC006436.	2.8	17
8	Biotic Response to Early Eocene Warming Events: Integrated Record From Offshore Zealandia, North Tasman Sea. Paleoceanography and Paleoclimatology, 2021, 36, e2020PA004179.	2.9	4
9	Gravity survey of the central Alpine Fault near the DFDP-2 drill site, Whataroa, South Island, New Zealand. New Zealand Journal of Geology, and Geophysics, 2020, 63, 128-144.	1.8	1
10	Thermal properties of the hanging wall of the central Alpine Fault, New Zealand. New Zealand Journal of Geology, and Geophysics, 2020, , $1-12$.	1.8	0
11	Eocene (46–44ÂMa) Onset of Australiaâ€Pacific Plate Motion in the Southwest Pacific Inferred From Stratigraphy in New Caledonia and New Zealand. Geochemistry, Geophysics, Geosystems, 2020, 21, e2019GC008699.	2.5	15
12	Chapter 2â€fGeodynamics of the SW Pacific: a brief review and relations with New Caledonian geology. Geological Society Memoir, 2020, 51, 13-26.	1.7	20
13	Crustal Thermal Structure and Exhumation Rates in the Southern Alps Near the Central Alpine Fault, New Zealand. Geochemistry, Geophysics, Geosystems, 2020, 21, e2020GC008972.	2.5	6
14	Continental-scale geographic change across Zealandia during Paleogene subduction initiation. Geology, 2020, 48, 419-424.	4.4	69
15	Eocene to Miocene Subduction Initiation Recorded in Stratigraphy of Reinga Basin, Northwest New Zealand. Tectonics, 2020, 39, e2019TC005899.	2.8	7
16	Upper Plate Heterogeneity Along the Southern Hikurangi Margin, New Zealand. Geophysical Research Letters, 2020, 47, e2019GL085511.	4.0	11
17	Recycling of depleted continental mantle by subduction and plumes at the Hikurangi Plateau large igneous province, southwestern Pacific Ocean. Geology, 2019, 47, 795-798.	4.4	21
18	Incipient subduction at the contact with stretched continental crust: The Puysegur Trench. Earth and Planetary Science Letters, 2019, 520, 212-219.	4.4	34

#	Article	IF	CITATIONS
19	How to Create New Subduction Zones: A Global Perspective. Oceanography, 2019, 32, 160-174.	1.0	41
20	Physical properties and seismic-reflection interpretation of bathyal marine sediments affected by carbonate and silica diagenesis in the Tasman Sea. New Zealand Journal of Geology, and Geophysics, 2018, 61, 96-111.	1.8	5
21	Textural changes of graphitic carbon by tectonic and hydrothermal processes in an active plate boundary fault zone, Alpine Fault, New Zealand. Geological Society Special Publication, 2018, 453, 205-223.	1.3	19
22	Regional volcanism of northern Zealandia: post-Gondwana break-up magmatism on an extended, submerged continent. Geological Society Special Publication, 2018, 463, 199-226.	1.3	39
23	Deepwater sedimentation and Cenozoic deformation in the Southern New Caledonia Trough (Northern Zealandia, SW Pacific). Marine and Petroleum Geology, 2018, 92, 764-779.	3.3	12
24	The Alpine Fault Hangingwall Viewed From Within: Structural Analysis of Ultrasonic Image Logs in the DFDPâ€2B Borehole, New Zealand. Geochemistry, Geophysics, Geosystems, 2018, 19, 2492-2515.	2. 5	14
25	The Significance of Heat Transport by Shallow Fluid Flow at an Active Plate Boundary: The Southern Alps, New Zealand. Geophysical Research Letters, 2018, 45, 10,323.	4.0	6
26	Frontal fault location and most recent earthquake timing for the Alpine Fault at Whataroa, Westland, New Zealand. New Zealand Journal of Geology, and Geophysics, 2018, 61, 329-340.	1.8	9
27	A Faulted Thinâ€Sheet Model of Plate Boundary Deformation That Fits Observations. Journal of Geophysical Research: Solid Earth, 2018, 123, 9162-9185.	3.4	3
28	Fluid Flux in Fractured Rock of the Alpine Fault Hangingâ€Wall Determined from Temperature Logs in the DFDPâ€2B Borehole, New Zealand. Geochemistry, Geophysics, Geosystems, 2018, 19, 2631-2646.	2.5	7
29	Seismic stratigraphy and paleogeographic evolution of Fairway Basin, Northern Zealandia, Southwest Pacific: from Cretaceous Gondwana breakup to Cenozoic Tonga–Kermadec subduction. Basin Research, 2017, 29, 189-212.	2.7	20
30	Geochemical and microstructural evidence for interseismic changes in fault zone permeability and strength, <scp>A</scp> lpine <scp>F</scp> ault, <scp>N</scp> ew <scp>Z</scp> ealand. Geochemistry, Geophysics, Geosystems, 2017, 18, 238-265.	2.5	20
31	Widespread compression associated with Eocene Tonga-Kermadec subduction initiation. Geology, 2017, 45, 355-358.	4.4	73
32	High-velocity frictional properties of Alpine Fault rocks: Mechanical data, microstructural analysis, and implications for rupture propagation. Journal of Structural Geology, 2017, 97, 71-92.	2.3	48
33	Extreme hydrothermal conditions at an active plate-bounding fault. Nature, 2017, 546, 137-140.	27.8	84
34	Bedrock geology of DFDP-2B, central Alpine Fault, New Zealand. New Zealand Journal of Geology, and Geophysics, 2017, 60, 497-518.	1.8	24
35	Petrophysical, Geochemical, and Hydrological Evidence for Extensive Fractureâ€Mediated Fluid and Heat Transport in the Alpine Fault's Hangingâ€Wall Damage Zone. Geochemistry, Geophysics, Geosystems, 2017, 18, 4709-4732.	2.5	31
36	Realâ€Time Earthquake Monitoring during the Second Phase of the Deep Fault Drilling Project, Alpine Fault, New Zealand. Seismological Research Letters, 2017, 88, 1443-1454.	1.9	2

#	Article	lF	Citations
37	Zealandia: Earth's Hidden Continent. GSA Today, 2017, , 27-35.	2.0	216
38	Crustal structure of the Kermadec arc from MANGO seismic refraction profiles. Journal of Geophysical Research: Solid Earth, 2016, 121, 7514-7546.	3.4	29
39	Largeâ€displacement, hydrothermal frictional properties of DFDPâ€1 fault rocks, Alpine Fault, New Zealand: Implications for deep rupture propagation. Journal of Geophysical Research: Solid Earth, 2016, 121, 624-647.	3.4	40
40	Stratigraphy of Reinga and Aotea basins, NW New Zealand: constraints from dredge samples on regional correlations and reservoir character. New Zealand Journal of Geology, and Geophysics, 2016, 59, 396-415.	1.8	17
41	Fault Zone Guided Wave generation on the locked, late interseismic Alpine Fault, New Zealand. Geophysical Research Letters, 2015, 42, 5736-5743.	4.0	28
42	SAHKE seismicâ€scatter imaging of subduction beneath Wellington, North Island, New Zealand. Geophysical Research Letters, 2015, 42, 3240-3247.	4.0	6
43	A seismic reflection image for the base of a tectonic plate. Nature, 2015, 518, 85-88.	27.8	100
44	Fault rock lithologies and architecture of the central Alpine fault, New Zealand, revealed by DFDP-1 drilling. Lithosphere, 2015, 7, 155-173.	1.4	70
45	Orogenic paleofluid flow recorded by discordant detrital zircons in the Caledonian foreland basin of northern Greenland. Lithosphere, 2015, 7, 138-143.	1.4	17
46	Clay mineral formation and fabric development in the DFDP-1B borehole, central Alpine Fault, New Zealand. New Zealand Journal of Geology, and Geophysics, 2015, 58, 13-21.	1.8	27
47	Changes in hot spring temperature and hydrogeology of the <scp>A</scp> lpine <scp>F</scp> ault hanging wall, <scp>N</scp> ew <scp>Z</scp> ealand, induced by distal <scp>S</scp> outh <scp>I</scp> sland earthquakes. Geofluids, 2015, 15, 216-239.	0.7	62
48	Use of ancient wave-ravinement surfaces to determine palaeogeography and vertical crustal movements around New Zealand. New Zealand Journal of Geology, and Geophysics, 2014, 57, 459-467.	1.8	10
49	High permeability and low temperature correlates with proximity to brittle failure within mountains at an active tectonic boundary, Manapouri tunnel, Fiordland, New Zealand. Earth and Planetary Science Letters, 2014, 389, 176-187.	4.4	12
50	Hydraulic and acoustic properties of the active Alpine Fault, New Zealand: Laboratory measurements on DFDP-1 drill core. Earth and Planetary Science Letters, 2014, 390, 45-51.	4.4	50
51	Slow wavespeeds and fluid overpressure in a region of shallow geodetic locking and slow slip, Hikurangi subduction margin, New Zealand. Earth and Planetary Science Letters, 2014, 389, 1-13.	4.4	74
52	Anomalous passive subsidence of deepâ€water sedimentary basins: a prearc basin example, southern New Caledonia Trough and Taranaki Basin, New Zealand. Basin Research, 2014, 26, 242-268.	2.7	40
53	A model of active faulting in New Zealand. New Zealand Journal of Geology, and Geophysics, 2014, 57, 32-56.	1.8	147
54	Seismic stratigraphic record of transition from Mesozoic subduction to continental breakup in the Zealandia sector of eastern Gondwana. Gondwana Research, 2014, 26, 1060-1078.	6.0	72

#	Article	IF	CITATIONS
55	Lidar reveals uniform Alpine fault offsets and bimodal plate boundary rupture behavior, New Zealand: COMMENT. Geology, 2014, 42, e351-e351.	4.4	O
56	Frictional properties of exhumed fault gouges in DFDPâ€1 cores, Alpine Fault, New Zealand. Geophysical Research Letters, 2014, 41, 356-362.	4.0	65
57	Petroleum implications of stacked deltas in the Fairway Basin, offshore New Caledonia, Northern Tasman Frontier. APPEA Journal, 2014, 54, 537.	0.2	2
58	Petroleum Prospectivity of the Tasman Frontier. APPEA Journal, 2014, 54, 520.	0.2	0
59	Revised Interface Geometry for the Hikurangi Subduction Zone, New Zealand. Seismological Research Letters, 2013, 84, 1066-1073.	1.9	163
60	Lateâ€interseismic state of a continental plateâ€bounding fault: Petrophysical results from DFDPâ€1 wireline logging and core analysis, Alpine Fault, New Zealand. Geochemistry, Geophysics, Geosystems, 2013, 14, 3801-3820.	2.5	43
61	SAHKE geophysical transect reveals crustal and subduction zone structure at the southern Hikurangi margin, New Zealand. Geochemistry, Geophysics, Geosystems, 2013, 14, 2063-2083.	2.5	52
62	Wide-angle OBS velocity structure and gravity modeling along the SAHKE transect, southern North Island, New Zealand. , 2013 , , .		1
63	Seismic Stratigraphy of the Reinga Basin, Northwest New Zealand: Tectonic and Petroleum Implications., 2013,, 221-252.		3
64	Late Holocene Rupture History of the Alpine Fault in South Westland, New Zealand. Bulletin of the Seismological Society of America, 2012, 102, 620-638.	2.3	45
65	Drilling reveals fluid control on architecture and rupture of the Alpine fault, New Zealand. Geology, 2012, 40, 1143-1146.	4.4	121
66	Structure and breakup history of the rifted margin of West Antarctica in relation to Cretaceous separation from Zealandia and Bellingshausen plate motion. Geochemistry, Geophysics, Geosystems, 2012, 13, .	2.5	43
67	Stratigraphy of the southern Norfolk Ridge and the Reinga Basin: A record of initiation of Tonga–Kermadec–Northland subduction in the southwest Pacific. Earth and Planetary Science Letters, 2012, 321-322, 41-53.	4.4	54
68	Rifting and subduction initiation history of the New Caledonia Trough, southwest Pacific, constrained by process-oriented gravity models. Geophysical Journal International, 2012, 189, 1293-1305.	2.4	17
69	New Zealand Geology. Episodes, 2012, 35, 57-71.	1.2	20
70	Seismic reflection character of the Hikurangi subduction interface, New Zealand, in the region of repeated Gisborne slow slip events. Geophysical Journal International, 2010, 180, 34-48.	2.4	160
71	Oblique slip on the Puysegur subduction interface in the 2009 July MW 7.8 Dusky Sound earthquake from GPS and InSAR observations: implications for the tectonics of southwestern New Zealand. Geophysical Journal International, 2010, 183, 1265-1286.	2.4	54
72	Mantle upwellings above slab graveyards linked to the global geoid lows. Nature Geoscience, 2010, 3, 435-438.	12.9	50

#	Article	IF	CITATIONS
73	Mantle upwelling after Gondwana subduction death explains anomalous topography and subsidence histories of eastern New Zealand and West Antarctica. Geology, 2010, 38, 155-158.	4.4	49
74	Inferring mantle properties with an evolving dynamic model of the Antarcticaâ€New Zealand region from the Late Cretaceous. Journal of Geophysical Research, 2010, 115, .	3.3	21
75	Foreâ€arc deformation and underplating at the northern Hikurangi margin, New Zealand. Journal of Geophysical Research, 2010, 115, .	3.3	26
76	Subduction Systems Revealed: Studies of the Hikurangi Margin. Eos, 2010, 91, 417-418.	0.1	5
77	Threeâ€dimensional velocity structure of the northern Hikurangi margin, Raukumara, New Zealand: Implications for the growth of continental crust by subduction erosion and tectonic underplating. Geochemistry, Geophysics, Geosystems, 2010, 11, .	2.5	48
78	Lithosphere delamination with foundering of lower crust and mantle caused permanent subsidence of New Caledonia Trough and transient uplift of Lord Howe Rise during Eocene and Oligocene initiation of Tonga-Kermadec subduction, western Pacific. Tectonics, 2010, 29, n/a-n/a.	2.8	76
79	Geometry of the Hikurangi subduction thrust and upper plate, North Island, New Zealand. Geochemistry, Geophysics, Geosystems, 2009, 10, .	2.5	108
80	Characterizing the seismogenic zone of a major plate boundary subduction thrust: Hikurangi Margin, New Zealand. Geochemistry, Geophysics, Geosystems, 2009, 10, .	2.5	142
81	Reactivation of tectonics, crustal underplating, and uplift after 60 Myr of passive subsidence, Raukumara Basin, Hikurangiâ€Kermadec fore arc, New Zealand: Implications for global growth and recycling of continents. Tectonics, 2009, 28, .	2.8	35
82	Regional exhumation history of brittle crust during subduction initiation, Fiordland, southwest New Zealand, and implications for thermochronologic sampling and analysis strategies., 2009, 5, 409-425.		30
83	Deep Fault Drilling Project—Alpine Fault, New Zealand. Scientific Drilling, 2009, , .	0.6	10
84	Capel and Faust basinsâ€"integrated geoscientific assessment of Australia's remote offshore eastern frontier. APPEA Journal, 2009, 49, 586.	0.2	0
85	Transform and rift structure of Paleogene crust near Resolution Ridge, Tasman Sea, southwest New Zealand. Geochemistry, Geophysics, Geosystems, 2008, 9, .	2.5	6
86	The discovery of a new sedimentary basin: offshore Raukumara, East Coast, North Island, New Zealand. APPEA Journal, 2008, 48, 53.	0.2	4
87	Orbital forcing of mid-latitude Southern Hemisphere glaciation since 100 ka inferred from cosmogenic nuclide ages of moraine boulders from the Cascade Plateau, southwest New Zealand. Bulletin of the Geological Society of America, 2007, 119, 443-451.	3.3	43
88	Pleistocene glaciomarine sediments of the Kisbee Formation, Wilson River, southwest Fiordland, and some tectonic and paleoclimatic implications. New Zealand Journal of Geology, and Geophysics, 2007, 50, 193-204.	1.8	10
89	Regional geological framework of South Island, New Zealand, and its significance for understanding the active plate boundary. Geophysical Monograph Series, 2007, , 19-46.	0.1	60
90	Do great earthquakes occur on the Alpine Fault in central South Island, New Zealand?. Geophysical Monograph Series, 2007, , 235-251.	0.1	84

#	Article	IF	Citations
91	PETROLEUM POTENTIAL OF THE GREAT SOUTH BASIN, NEW ZEALANDâ€"NEW SEISMIC DATA IMPROVES IMAGING. APPEA Journal, 2007, 47, 145.	0.2	12
92	Mioceneâ€Recent deformation, surface elevation, and volcanic intrusion of the overriding plate during subduction initiation, offshore southern Fiordland, Puysegur margin, southwest New Zealand. New Zealand Journal of Geology, and Geophysics, 2006, 49, 131-149.	1.8	53
93	Dinosaur sanctuary on the Chatham Islands, Southwest Pacific: First record of theropods from the K–T boundary Takatika Grit. Palaeogeography, Palaeoclimatology, Palaeoecology, 2006, 230, 243-250.	2.3	73
94	Quaternary slip rate and geomorphology of the Alpine fault: Implications for kinematics and seismic hazard in southwest New Zealand. Bulletin of the Geological Society of America, 2006, 118, 464-474.	3.3	120
95	Strike-slip structure and sedimentary basins of the southern Alpine Fault, Fiordland, New Zealand. Bulletin of the Geological Society of America, 2005, 117, 411.	3.3	70
96	Patterns of Late Cenozoic exhumation deduced from apatite and zircon U-He ages from Fiordland, New Zealand. Geochemistry, Geophysics, Geosystems, 2005, 6, n/a-n/a.	2.5	19
97	Prediction of Emperor-Hawaii seamount locations from a revised model of global plate motion and mantle flow. Nature, 2004, 430, 167-173.	27.8	324
98	Uplift rate and landscape development in southwest Fiordland, New Zealand, determined using 10Be and 26Al exposure dating of marine terraces. Geochimica Et Cosmochimica Acta, 2004, 68, 2313-2319.	3.9	26
99	Uplift in the Fiordland Region, New Zealand: Implications for Incipient Subduction. Science, 2002, 297, 2038-2041.	12.6	65
100	Frontal accretion and thrust wedge evolution under very oblique plate convergence: Fiordland Basin, New Zealand. Basin Research, 2002, 14, 439-466.	2.7	23
101	Torlesse greywacke and Haast Schist source for Pliocene conglomerates near Reefton, New Zealand. New Zealand Journal of Geology, and Geophysics, 2001, 44, 105-111.	1.8	12
102	Cretaceous demise of the Moa plate and strike-slip motion at the Gondwana margin. Geology, 2001, 29, 279.	4.4	53
103	Rapid creation and destruction of sedimentary basins on mature strike-slip faults: an example from the offshore Alpine Fault, New Zealand. Journal of Structural Geology, 2001, 23, 1727-1739.	2.3	41
104	Cretaceousâ€Tertiary tectonic history of the Fiordland margin, New Zealand. New Zealand Journal of Geology, and Geophysics, 2000, 43, 289-302.	1.8	16
105	Paleoceanographic significance of Late Paleocene dysaerobia at the shelf/slope break around New Zealand. Palaeogeography, Palaeoclimatology, Palaeoecology, 2000, 156, 51-70.	2.3	37
106	Plate boundary deformation in South Island, New Zealand, is related to inherited lithospheric structure. Earth and Planetary Science Letters, 2000, 177, 141-151.	4.4	144
107	Formation and evolution of the Solander Basin, southwestern South Island, New Zealand, controlled by a major fault in continental crust and upper mantle. Tectonics, 2000, 19, 44-61.	2.8	19
108	Basement geology and tectonic development of the greater New Zealand region: an interpretation from regional magnetic data. Tectonophysics, 1999, 308, 341-362.	2.2	232

#	Article	IF	CITATIONS
109	Crustal structure and neotectonics of the Puysegur oblique subduction zone, New Zealand. Tectonophysics, 1999, 313, 335-362.	2.2	36
110	Cenozoic bending of New Zealand basement terranes and Alpine Fault displacement: A brief review. New Zealand Journal of Geology, and Geophysics, 1999, 42, 295-301.	1.8	127
111	Reconstructing the southwest Pacific. Eos, 1997, 78, 21.	0.1	4
112	The Oligocene-Miocene Pacific-Australia plate boundary, south of New Zealand: Evolution from oceanic spreading to strike-slip faulting. Earth and Planetary Science Letters, 1997, 148, 129-139.	4.4	78
113	Age of Jackson Formation proves late Cenozoic allochthony in South Westland, New Zealand. New Zealand Journal of Geology, and Geophysics, 1996, 39, 559-563.	1.8	5
114	Transpressional development of the Australiaâ€Pacific boundary through southern South Island, New Zealand: Constraints from Mioceneâ€Pliocene sediments, Waihoâ€1 borehole, South Westland. New Zealand Journal of Geology, and Geophysics, 1996, 39, 251-264.	1.8	88
115	From strike-slip faulting to oblique subduction: A survey of the Alpine Fault-Puysegur Trench transition, New Zealand, results of cruise Geodynz-sud leg 2. Marine Geophysical Researches, 1996, 18, 383-399.	1.2	45
116	Displacement since the Pliocene along the southern section of the Alpine fault, New Zealand: Comment and Reply. Geology, 1995, 23, 475.	4.4	1
117	Plioceneâ€Quaternary sedimentation and Alpine Fault related tectonics in the lower Cascade valley, South Westland, New Zealand. New Zealand Journal of Geology, and Geophysics, 1995, 38, 431-450.	1.8	18
118	Late Quaternary displacement rate, paleoseismicity, and geomorphic evolution of the Alpine Fault: Evidence from Hokuri Creek, South Westland, New Zealand. New Zealand Journal of Geology, and Geophysics, 1995, 38, 419-430.	1.8	79
119	The Australia-Pacific boundary and Cenozoic plate motions in the SW Pacific: Some constraints from Geosat data. Tectonics, 1995, 14, 819-831.	2.8	245
120	Displacement since the Pliocene along the southern section of the Alpine fault, New Zealand. Geology, 1994, 22, 327-330.	4.4	64
121	GEOLOGICAL DRAUGHTING WITH COREL DRAW. Terra Nova, 1991, 3, 555-558.	2.1	1
122	SEX EDUCATION AND GUIDANCE: AN EDUCATIONAL PROBLEM. Nature, 1943, 151, 356-357.	27.8	0
123	Expedition 371 summary. Proceedings of the International Ocean Discovery Program, 0, , .	0.0	10
124	Expedition 371 methods. Proceedings of the International Ocean Discovery Program, 0, , .	0.0	14
125	Site U1507. Proceedings of the International Ocean Discovery Program, 0, , .	0.0	4
126	Site U1508. Proceedings of the International Ocean Discovery Program, 0, , .	0.0	5

#	Article	IF	CITATIONS
127	Site U1509. Proceedings of the International Ocean Discovery Program, 0, , .	0.0	4
128	Site U1510. Proceedings of the International Ocean Discovery Program, 0, , .	0.0	2
129	Site U1511. Proceedings of the International Ocean Discovery Program, 0, , .	0.0	2
130	Deep Fault Drilling Project & Drilling, 0, 8, 75-82.	0.6	43
131	Site U1506. Proceedings of the International Ocean Discovery Program, 0, , .	0.0	2