

Callum F Ross

List of Publications by Year in descending order

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117
papers

6,883
citations

46918

47
h-index

66788

78
g-index

119
all docs

119
docs citations

119
times ranked

3491
citing authors

#	ARTICLE	IF	CITATIONS
1	Anthropoid Origins. <i>Science</i> , 1997, 275, 797-804.	6.0	283
2	Basicranial flexion, relative brain size, and facial kyphosis in nonhuman primates. <i>American Journal of Physical Anthropology</i> , 1993, 91, 305-324.	2.1	256
3	Modeling elastic properties in finite-element analysis: How much precision is needed to produce an accurate model?. <i>The Anatomical Record Part A: Discoveries in Molecular, Cellular, and Evolutionary Biology</i> , 2005, 283A, 275-287.	2.0	243
4	The feeding biomechanics and dietary ecology of <i>Australopithecus africanus</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 2124-2129.	3.3	232
5	Into the Light: The Origin of Anthrozoidea. <i>Annual Review of Anthropology</i> , 2000, 29, 147-194.	0.4	225
6	Finite element analysis in functional morphology. <i>The Anatomical Record Part A: Discoveries in Molecular, Cellular, and Evolutionary Biology</i> , 2005, 283A, 259-274.	2.0	203
7	Effects of brain and facial size on basicranial form in human and primate evolution. <i>Journal of Human Evolution</i> , 2010, 58, 424-431.	1.3	180
8	Allometric and functional influences on primate orbit orientation and the origins of the Anthrozoidea. <i>Journal of Human Evolution</i> , 1995, 29, 201-227.	1.3	173
9	Phylogenetic analysis of anthropoid relationships. <i>Journal of Human Evolution</i> , 1998, 35, 221-307.	1.3	168
10	Evolution of activity patterns and chromatic vision in primates: morphometrics, genetics and cladistics. <i>Journal of Human Evolution</i> , 2001, 40, 111-149.	1.3	159
11	Basicranial flexion, relative brain size, and facial kyphosis in <i>Homo sapiens</i> and some fossil hominids. <i>American Journal of Physical Anthropology</i> , 1995, 98, 575-593.	2.1	155
12	Evolution of eye size and shape in primates. <i>Journal of Human Evolution</i> , 2007, 52, 294-313.	1.3	153
13	Eye shape and activity pattern in birds. <i>Journal of Zoology</i> , 2007, 271, 437-444.	0.8	152
14	Adaptive explanation for the origins of the anthropoidea (primates). , 1996, 40, 205-230.		138
15	Modeling masticatory muscle force in finite element analysis: Sensitivity analysis using principal coordinates analysis. <i>The Anatomical Record Part A: Discoveries in Molecular, Cellular, and Evolutionary Biology</i> , 2005, 283A, 288-299.	2.0	121
16	In vivo function of the craniofacial haft: The interorbital ?pillar?. <i>American Journal of Physical Anthropology</i> , 2001, 116, 108-139.	2.1	107
17	Curvilinear, geometric and phylogenetic modeling of basicranial flexion: is it adaptive, is it constrained?. <i>Journal of Human Evolution</i> , 2004, 46, 185-213.	1.3	107
18	Innovative Approaches to the Relationship Between Diet and Mandibular Morphology in Primates. <i>International Journal of Primatology</i> , 2012, 33, 632-660.	0.9	104

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19	Primate auditory diversity and its influence on hearing performance. <i>The Anatomical Record</i> , 2004, 281A, 1123-1137.	2.3	102
20	The Feeding Biomechanics and Dietary Ecology of <i>Paranthropus boisei</i> . <i>Anatomical Record</i> , 2015, 298, 145-167.	0.8	100
21	Masticatory biomechanics and its relevance to early hominid phylogeny: An examination of palatal thickness using finite-element analysis. <i>Journal of Human Evolution</i> , 2007, 52, 585-599.	1.3	98
22	Viewpoints: Diet and dietary adaptations in early hominins: The hard food perspective. <i>American Journal of Physical Anthropology</i> , 2013, 151, 339-355.	2.1	89
23	Physician opinions about an anatomy core curriculum: A case for medical imaging and vertical integration. <i>Anatomical Sciences Education</i> , 2014, 7, 251-261.	2.5	87
24	In vivo bone strain and finite-element modeling of the craniofacial haft in catarrhine primates. <i>Journal of Anatomy</i> , 2011, 218, 112-141.	0.9	83
25	The influence of food material properties on jaw kinematics in the primate, <i>Cebus</i> . <i>Archives of Oral Biology</i> , 2010, 55, 946-962.	0.8	82
26	The evolution of cranial design and performance in squamates: Consequences of skull-bone reduction on feeding behavior. <i>Integrative and Comparative Biology</i> , 2007, 47, 107-117.	0.9	81
27	<i>Darwinius masillae</i> is a strepsirrhine—a reply to Franzen et al. (2009). <i>Journal of Human Evolution</i> , 2010, 59, 567-573.	1.3	80
28	Temporalis function in anthropoids and strepsirrhines: An EMG study. <i>American Journal of Physical Anthropology</i> , 2005, 128, 35-56.	2.1	79
29	Modulation of intra-oral processing in mammals and lepidosaurs. <i>Integrative and Comparative Biology</i> , 2007, 47, 118-136.	0.9	79
30	The effects of modeling simplifications on craniofacial finite element models: The alveoli (tooth) Tj ETQq0 0 0 rgBT (Overlock 10 Tf 50 30	0.9	79
31	Similarity in Neuronal Firing Regimes across Mammalian Species. <i>Journal of Neuroscience</i> , 2016, 36, 5736-5747.	1.7	78
32	Primary motor and sensory cortical areas communicate via spatiotemporally coordinated networks at multiple frequencies. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 5083-5088.	3.3	78
33	Finite element analysis in vertebrate biomechanics. <i>The Anatomical Record Part A: Discoveries in Molecular, Cellular, and Evolutionary Biology</i> , 2005, 283A, 253-258.	2.0	75
34	Modulation of mandibular loading and bite force in mammals during mastication. <i>Journal of Experimental Biology</i> , 2007, 210, 1046-1063.	0.8	74
35	Free body analysis, beam mechanics, and finite element modeling of the mandible of <i>Alligator mississippiensis</i> . <i>Journal of Morphology</i> , 2011, 272, 910-937.	0.6	73
36	Comparison of beam theory and finite-element analysis with in vivo bone strain data from the alligator cranium. <i>The Anatomical Record Part A: Discoveries in Molecular, Cellular, and Evolutionary Biology</i> , 2005, 283A, 331-348.	2.0	71

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37	The Structural Rigidity of the Cranium of <i>Australopithecus africanus</i> : Implications for Diet, Dietary Adaptations, and the Allometry of Feeding Biomechanics. <i>Anatomical Record</i> , 2010, 293, 583-593.	0.8	70
38	Bone strain gradients and optimization in vertebrate skulls. <i>Annals of Anatomy</i> , 2004, 186, 387-396.	1.0	69
39	What does feeding system morphology tell us about feeding?. <i>Evolutionary Anthropology</i> , 2014, 23, 105-120.	1.7	68
40	A new coelurosaurian dinosaur from the Early Cretaceous of South Africa. <i>Journal of Vertebrate Paleontology</i> , 2000, 20, 324-332.	0.4	65
41	Muscular and osseous anatomy of the primate anterior temporal fossa and the functions of the postorbital septum. <i>American Journal of Physical Anthropology</i> , 1995, 98, 275-306.	2.1	63
42	Ecological consequences of scaling of chew cycle duration and daily feeding time in Primates. <i>Journal of Human Evolution</i> , 2009, 56, 570-585.	1.3	61
43	Substrate Diameter and Orientation in the Context of Food Type in the Gray Mouse Lemur, <i>Microcebus murinus</i> : Implications for the Origins of Grasping in Primates. <i>International Journal of Primatology</i> , 2015, 36, 583-604.	0.9	60
44	Craniodental allometry and heterochrony in two howler monkeys: <i>Alouatta seniculus</i> and <i>A. palliata</i> . <i>American Journal of Primatology</i> , 1994, 33, 277-299.	0.8	58
45	Sources of Variance in Temporal and Spatial Aspects of Jaw Kinematics in Two Species of Primates Feeding on Foods of Different Properties. <i>Integrative and Comparative Biology</i> , 2011, 51, 307-319.	0.9	55
46	Scaling of chew cycle duration in primates. <i>American Journal of Physical Anthropology</i> , 2009, 138, 30-44.	2.1	50
47	Chewing variation in lepidosaurs and primates. <i>Journal of Experimental Biology</i> , 2010, 213, 572-584.	0.8	50
48	<i>In vivo</i> bone strain and finite element modeling of the mandible of <i>Alligator mississippiensis</i> . <i>Journal of Anatomy</i> , 2013, 223, 195-227.	0.9	50
49	Biomechanical Implications of Intraspecific Shape Variation in Chimpanzee Crania: Moving Toward an Integration of Geometric Morphometrics and Finite Element Analysis. <i>Anatomical Record</i> , 2015, 298, 122-144.	0.8	47
50	Electromyography of the anterior temporalis and masseter muscles of owl monkeys (<i>Aotus</i>). <i>Journal of Neurophysiology</i> , 2000, 112, 455-468.	2.1	46
51	Evolution of the special senses in primates: Past, present, and future. <i>The Anatomical Record</i> , 2004, 281A, 1078-1082.	2.3	46
52	Modulation Dynamics in the Orofacial Sensorimotor Cortex during Motor Skill Acquisition. <i>Journal of Neuroscience</i> , 2014, 34, 5985-5997.	1.7	46
53	Teaching anatomy with dissection in the time of COVID-19 is essential and possible. <i>Clinical Anatomy</i> , 2021, 34, 1135-1136.	1.5	44
54	Mechanical evidence that <i>Australopithecus sediba</i> was limited in its ability to eat hard foods. <i>Nature Communications</i> , 2016, 7, 10596.	5.8	43

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55	Human feeding biomechanics: performance, variation, and functional constraints. PeerJ, 2016, 4, e2242.	0.9	43
56	The Role of the Sutures in Biomechanical Dynamic Simulation of a Macaque Cranial Finite Element Model: Implications for the Evolution of Craniofacial Form. Anatomical Record, 2012, 295, 278-288.	0.8	39
57	Food acquisition on arboreal substrates by the grey mouse lemur: implication for primate grasping evolution. Journal of Zoology, 2013, 291, 235-242.	0.8	39
58	Dynamic Musculoskeletal Functional Morphology: Integrating diceCT and XROMM. Anatomical Record, 2018, 301, 378-406.	0.8	39
59	A new pipoid anuran from the Late Cretaceous of South Africa. Journal of Vertebrate Paleontology, 2005, 25, 533-547.	0.4	37
60	The impact of bone and suture material properties on mandibular function in Alligator mississippiensis: testing theoretical phenotypes with finite element analysis. Journal of Anatomy, 2011, 218, 59-74.	0.9	37
61	Improved Understanding of Human Anatomy through Self-guided Radiological Anatomy Modules. Academic Radiology, 2012, 19, 902-907.	1.3	37
62	Inter-stride variability triggers gait transitions in mammals and birds. Proceedings of the Royal Society B: Biological Sciences, 2018, 285, 20181766.	1.2	37
63	Material properties of mandibular cortical bone in the American alligator, Alligator mississippiensis. Bone, 2010, 46, 860-867.	1.4	36
64	In vivo bone strain and finite element modeling of a rhesus macaque mandible during mastication. Zoology, 2017, 124, 13-29.	0.6	36
65	Rhythmic chewing with oral jaws in teleost fishes: a comparison with amniotes. Journal of Experimental Biology, 2010, 213, 1868-1875.	0.8	35
66	A finite element analysis of masticatory stress hypotheses. American Journal of Physical Anthropology, 2011, 145, 1-10.	2.1	34
67	The Mechanical Effect of the Periodontal Ligament on Bone Strain Regimes in a Validated Finite Element Model of a Macaque Mandible. Frontiers in Bioengineering and Biotechnology, 2019, 7, 269.	2.0	33
68	Allometry of Masticatory Loading Parameters in Mammals. Anatomical Record, 2010, 293, 557-571.	0.8	32
69	Review of <i>In Vivo</i> Bone Strain Studies and Finite Element Models of the Zygomatic Complex in Humans and Nonhuman Primates: Implications for Clinical Research and Practice. Anatomical Record, 2016, 299, 1753-1778.	0.8	32
70	Probabilistic finite element analysis of a craniofacial finite element model. Journal of Theoretical Biology, 2012, 300, 242-253.	0.8	30
71	Sexual dimorphism in bite force in the grey mouse lemur. Journal of Zoology, 2015, 296, 133-138.	0.8	30
72	The petrosal of Omomys carteri and the evolution of the primate basicranium. Journal of Human Evolution, 2000, 39, 225-252.	1.3	28

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73	Directional information from neuronal ensembles in the primate orofacial sensorimotor cortex. <i>Journal of Neurophysiology</i> , 2013, 110, 1357-1369.	0.9	28
74	Electromyography and the evolution of motor control: limitations and insights. <i>Integrative and Comparative Biology</i> , 2008, 48, 261-271.	0.9	26
75	In vivo bone strain in the mandibular corpus of <i>Sapajus</i> during a range of oral food processing behaviors. <i>Journal of Human Evolution</i> , 2016, 98, 36-65.	1.3	26
76	Lepidosaurian remains from the Lower Cretaceous Kirkwood Formation of South Africa. <i>Journal of Vertebrate Paleontology</i> , 1999, 19, 21-27.	0.4	25
77	Microwear, mechanics and the feeding adaptations of <i>Australopithecus africanus</i> . <i>Journal of Human Evolution</i> , 2012, 62, 165-168.	1.3	24
78	Jaw Muscle Fiber Architecture and Leverage in the Hard Object Feeding Sooty Mangabey are not Structured to Facilitate Relatively Large Bite Forces Compared to Other Papionins. <i>Anatomical Record</i> , 2018, 301, 325-342.	0.8	24
79	Jaw muscle force and excursion scale with negative allometry in platyrrhine primates. <i>American Journal of Physical Anthropology</i> , 2015, 158, 242-256.	2.1	23
80	Functional correlates of the position of the axis of rotation of the mandible during chewing in non-human primates. <i>Zoology</i> , 2017, 124, 106-118.	0.6	23
81	The Instantaneous Center of Rotation of the Mandible in Nonhuman Primates. <i>Integrative and Comparative Biology</i> , 2011, 51, 320-332.	0.9	22
82	Fossil <i>papio</i> cranium from !Ncumtsa (Koanaka) Hills, western Ngamiland, Botswana. <i>American Journal of Physical Anthropology</i> , 2012, 149, 1-17.	2.1	22
83	XROMM and diceCT reveal a hydraulic mechanism of tongue base retraction in swallowing. <i>Scientific Reports</i> , 2020, 10, 8215.	1.6	22
84	The functional significance of the lower temporal bar in <i>Sphenodon punctatus</i> . <i>Journal of Experimental Biology</i> , 2008, 211, 3908-3914.	0.8	21
85	THE EVOLUTION OF LOCOMOTOR RHYTHMICITY IN TETRAPODS. <i>Evolution; International Journal of Organic Evolution</i> , 2013, 67, 1209-1217.	1.1	21
86	Joint angular excursions during cyclical behaviors differ between tetrapod feeding and locomotor systems. <i>Journal of Experimental Biology</i> , 2019, 222, .	0.8	21
87	The dental microwear of hard object feeding in laboratory <i>Sapajus apella</i> and its implications for dental microwear formation. <i>American Journal of Physical Anthropology</i> , 2020, 171, 439-455.	2.1	21
88	The biomechanics of voluntary orofacial muscle activity in South African australopiths: an experimental study using finite element analysis. <i>Anatomical Record</i> , 2017, 300, 171-195.	0.8	19
89	Evolution of Muscle Activity Patterns Driving Motions of the Jaw and Hyoid during Chewing in Gnathostomes. <i>Integrative and Comparative Biology</i> , 2011, 51, 235-246.	0.9	17
90	Biomechanics of the mandible of <i>Macaca mulatta</i> during the power stroke of mastication: Loading, deformation, and strain regimes and the impact of food type. <i>Journal of Human Evolution</i> , 2020, 147, 102865.	1.3	17

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91	A †œbasal†† tetanuran from the Lower Cretaceous Kirkwood Formation of South Africa. <i>Journal of Vertebrate Paleontology</i> , 2009, 29, 283-285.	0.4	15
92	Integrating XMALab and DeepLabCut for high-throughput XROMM. <i>Journal of Experimental Biology</i> , 2020, 223, .	0.8	14
93	Comparative cranial biomechanics in two lizard species: impact of variation in cranial design. <i>Journal of Experimental Biology</i> , 2021, 224, .	0.8	14
94	Twist and chew: three-dimensional tongue kinematics during chewing in macaque primates. <i>Biology Letters</i> , 2021, 17, 20210431.	1.0	14
95	Direct correlation of radiologic and cadaveric structures in a gross anatomy course. <i>Medical Teacher</i> , 2012, 34, e779-e784.	1.0	13
96	Bone strain magnitude is correlated with bone strain rate in tetrapods: implications for models of mechanotransduction. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2015, 282, 20150321.	1.2	13
97	Dynamics of motor cortical activity during naturalistic feeding behavior. <i>Journal of Neural Engineering</i> , 2019, 16, 026038.	1.8	13
98	Sexual Shape Dimorphism in Tuatara. <i>Copeia</i> , 2009, 2009, 727-731.	1.4	12
99	Scaling of rotational inertia of primate mandibles. <i>Journal of Human Evolution</i> , 2017, 106, 119-132.	1.3	11
100	<i>In vivo</i> cranial bone strain and bite force in the agamid lizard <i>Uromastix geyri</i> . <i>Journal of Experimental Biology</i> , 2014, 217, 1983-92.	0.8	10
101	Bite force and cranial bone strain in four species of lizards. <i>Journal of Experimental Biology</i> , 2018, 221, .	0.8	10
102	Primary sensorimotor cortex exhibits complex dependencies of spike-field coherence on neuronal firing rates, field power, and behavior. <i>Journal of Neurophysiology</i> , 2018, 120, 226-238.	0.9	8
103	Skull shape and the demands of feeding: a biomechanical study of peccaries (Mammalia,) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5 0,6	0.6	8
104	Comparative biomechanics of the <i>Pan</i> and <i>Macaca</i> mandibles during mastication: finite element modelling of loading, deformation and strain regimes. <i>Interface Focus</i> , 2021, 11, 20210031.	1.5	8
105	Elastic Properties of Chimpanzee Craniofacial Cortical Bone. <i>Anatomical Record</i> , 2016, 299, 1718-1733.	0.8	7
106	Evaluating the triplet hypothesis during rhythmic mastication in primates. <i>Journal of Experimental Biology</i> , 2018, 221, .	0.8	7
107	Internal Bone Architecture in the Zygoma of Human and <i>Pan</i> . <i>Anatomical Record</i> , 2016, 299, 1704-1717.	0.8	5
108	Taking a big bite: Working together to better understand the evolution of feeding in primates. <i>American Journal of Primatology</i> , 2019, 81, e22981.	0.8	5

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109	Suction feeding biomechanics of <i>Polypterus bichir</i> : investigating linkage mechanisms and the contributions of cranial kinesis to oral cavity volume change. <i>Journal of Experimental Biology</i> , 2022, 225, .	0.8	5
110	Feeding postural behaviors and food geometric and material properties in bearded capuchin monkeys (<i>Sapajus libidinosus</i>). <i>American Journal of Biological Anthropology</i> , 2022, 178, 3-16.	0.6	5
111	Granger causality analysis of functional connectivity of spiking neurons in orofacial motor cortex during chewing and swallowing. , 2012, 2012, 4587-90.		3
112	Semiautomatic marker tracking of tongue positions captured by videofluoroscopy during primate feeding. , 2015, 2015, 5347-50.		3
113	Morphological disparity and evolutionary transformations in the primate hyoid apparatus. <i>Journal of Human Evolution</i> , 2022, 162, 103094.	1.3	3
114	Mechanical compensation in the evolution of the early hominin feeding apparatus. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2022, 289, .	1.2	2
115	Recurrence network analysis of multiple local field potential bands from the orofacial portion of primary motor cortex. , 2015, 2015, 5343-6.		0
116	Latent variable models for uncovering motor cortical ensemble dynamics. , 2017, , .		0
117	Jaw Elevator Muscle Coordination during Rhythmic Mastication in Primates: Are Triplets Units of Motor Control?. <i>Brain, Behavior and Evolution</i> , 2020, 95, 1-14.	0.9	0