Palaeontological Association 70th Annual Meeting Schedule

Note presenting author only listed

TUESDAY 8 DECEMBER

Morning

Workshops and tours – details to follow for those booked

Afternoon

13:00-13:30	**Registration**	**Mathematical Institute**
13:30-17:15	**Symposium**	**Mathematical Institute L1**
	Deep time insights into major evolutionary transitions	
13:30-13:45	Welcome	
13:45-14:15	*Kurt Konhauser*	
14:15-14:45	*Maxwell Lechte*	
14:45-15:15	*Lidya Tarhan*	
15:15-15:45	**Break (uncatered)**	**Mathematical Institute**
15:45-16:15	*Lisa Schnetz*	
16:15-16:45	*Brennan O'Connell*	
16:45-17:15	*Russell Garwood*	

Evening

18:00-20:00	**Icebreaker**	**Museum of Natural History**

WEDNESDAY 9 DECEMBER

Morning

08:30-08:50	**Registration with tea/coffee/pastries**	**Mathematical Institute**

08:50-10:30	**Session 1a**	**Mathematical Institute L1**
08:50-09:00	Welcome	
09:00-09:15	Development of alligator thecodonty sheds light on evolution of archosaurian tooth implantation *Yihui Ke*	
09:15-09:30	'Whiplash' tail variability in flagellicaudatan sauropods *Tom T. P. van der Linden*	
09:30-09:45	Testing the hypothesis of parrot-like mandibles in oviraptorosaurs *Damiano Landi*	
09:45-10:00	Biting through life: an evolutionary tale of ornithischian dental sierras and jaw biomechanics *Isaura Aguilar Pedrayes*	
10:00-10:15	Joint mobility in the hallux of anisodactyl birds as a proxy for non-neornithine avialan pedal function *Grace Kinney-Broderick*	
10:15-10:30	The diet of enantiornithine birds *Case Vincent Miller*	

08:50-10:30	**Session 1b**	**Mathematical Institute L2**
08:50-09:00	Welcome	
09:00-09:15	Causal inference of macroevolutionary dynamics from the fossil record *Nicole Obren*	
09:15-09:30	Body size and the evolution of tissues and organs in Metazoa *Arsham Nejad Kourki*	
09:30-09:45	What is the effect of ancestral state estimations on disparity analyses? *Caleb Scutt*	
09:45-10:00	TrajecTools, a R package to compare multivariate ontogenetic trajectories: insights into morphological convergence in ammonites *Aimie Doriath-Döhler*	
10:00-10:15	When clustering fails: testing bioregionalization methods with realistic simulated bioregions *Liudas Daumantas*	

10:15-10:30	Food web dynamics determine extinction outcomes through the Phanerozoic *Alexander M. Dunhill*	

08:50-10:30	**Session 1c**	**Mathematical Institute L3**
08:50-09:00	Welcome	
09:00-09:15	Kaolinite and exceptional fossilization: testing a taphonomic association with new mineral mapping technologies *William J. McMahon*	
09:15-09:30	Sediment controls the trajectory of microbial necrobiome succession during marine invertebrate decay *Felicity M. Roberts*	
09:30-09:45	Characterization of decay in filamentous cyanobacteria reveals a predictable, broadly conserved taphonomic pathway *Philip B. Vixseboxse*	
09:45-10:00	The origin of burrowing: a multidisciplinary approach to asking ‘how did the first burrowers move through sediments?’ *Jane Reeves*	
10:00-10:15	Digging deeper: piperock and the agronomic revolution in the Mahto Formation, Alberta, Canada *Baptiste Coutret*	
10:15-10:30	Ordered sheaths and oriented calcites: calcification and preservation of an Ordovician cyanobacterial fossil *Changtai Niu*	

10:30-11:00	**Break (catered)**	**Mathematical Institute**

11:00-12:30	**Session 2 – President’s Prize**	**Mathematical Institute L1**
11:00-11:15	Optical-photothermal infrared (O-PTIR) spectroscopic study on Neoproterozoic carbonaceous macrofossils from South China *Hanzhi Qu*	
11:15-11:30	Origination shapes the marine latitudinal diversity gradient through deep time *Naïs M. S. Laporte*	
11:30-11:45	Quantifying 400-million-year forest structural evolution *Bingcai Liu*	
11:45-12:00	Environmental heterogeneity predicts regional biodiversity across 500 million years of Earth history *Hanhui Huang*	
12:00-12:15	Cosmopolitanism during the Early Carboniferous (Tournaisian) in the context of Late Palaeozoic trends *Lila Blake*	

12:15-12:30	A Jurassic fossil reveals the stepwise evolution of thorny-headed worms *Cihang Luo*	
12:30-13:00	**Poster Session 1**	**Mathematical Institute**
13:00-14:00	**Lunch (catered)**	**Mathematical Institute**
13:15-14:00	**Diversity Meeting**	**Mathematical Institute L3**

Afternoon

14:00-15:30	**Session 3a**	**Mathematical Institute L1**
14:00-14:15	A fresh look at the eurysternid turtles from Late Jurassic of France *Gaël E. Spicher*	
14:15-14:30	Functional significance of tubular enamel in extinct Rhynchocephalia: insights from extant uromastycine lizards *Marco Bianchin*	
14:30-14:45	Estimating visual performance in Mesozoic marine reptiles using preserved scleral rings *Matthew D. McKeown*	
14:45-15:00	'Brain vs. brawn': the effect of allometry on trade-offs between brain and jaw muscle shape in mammals. *Jack Oyston*	
15:00-15:15	High functional optimality in mammalian jaws revealed through theoretical morphologies *Harry Berks*	
15:15-15:30	Skulls, genes, and deep time: total evidence dating in cetaceans *Laura Mulvey*	

14:00-15:30	**Session 3b**	**Mathematical Institute L2**
14:00-14:15	Exceptional three-dimensional cellular preservation of enigmatic macrofossils from the Proterozoic of Australia *Brooke Johnson*	
14:15-14:30	New Ediacaran triradial animal illuminates the origins of ctenophores and cnidarians *Xiaopeng Wang*	
14:30-14:45	A phylogenetically diverse deuterostome fauna from the late Ediacaran Jiangchuan Biota *Gaorong Li*	

14:45-15:00 Three vanes, two species, one problem: a reappraisal of *Pteridinium*
Philip C. Boan

15:00-15:15 The evolution of Ediacaran morphological disparity
Thomas J. Roper-Smith

15:15-15:30 A revisionist interpretation of early spiculate sponges
Nicholas J. Butterfield

14:00-15:30 Session 3c Mathematical Institute L3

14:00-14:15 Pollination ecology of wasps and bees from the paratropical Eocene of northwestern Europe
Loup Boudet

14:15-14:30 How consistent is the genome size – guard cell length relationship across major land plant clades?
Hannah Morck

14:30-14:45 Arboreality in a Middle Jurassic cladotherian mammal from the Kilmaluag Formation of the Isle of Skye
James R. G. Rawson

14:45-15:00 The Clarkia Biota: an exceptionally preserved Miocene lake ecosystem
Joshua W. Turner

15:00-15:15 Complex biogeographical patterns revealed by new species of fossil snakes from the Oligo-Miocene of South America
Andres Alfonso-Rojas

15:15-15:30 Integrated micropalaeontological constraints on the age and palaeoenvironmental evolution of Late Miocene sediments in the Niger
Helen-Gloria Nwachukwu

15:30-16:00 Break (catered) Mathematical Institute

16:00-16:30 Annual General Meeting Mathematical Institute L1

16:30-17:30 Annual Address Mathematical Institute L1

The shape of life: a deep-time perspective
Anjali Goswami FRS

Evening

19:00-22:30 Annual Dinner Merton College

THURSDAY 10 DECEMBER

Morning

08:30-09:00 **Tea/coffee/pastries** **Mathematical Institute**

09:00-10:30 **Session 4a** **Mathematical Institute L1**

09:00-09:15 Assessing ecological partitioning in the first marine turtles (Thalassochelydia) using stable oxygen isotopes
Chloe Mazier

09:15-09:30 Does body size dictate evolutionary rates? Insights from plesiosaur evolution
Ruizhe Jackevan Zhao

09:30-09:45 Latest Cretaceous Laramidian terrestrial communities underwent climatic changes, functional diversity shifts and diversification
Cassius Morrison

09:45-10:00 Ecological reconstruction of the earliest terrestrial predators via digital fossil mining
Ryo Taniguchi

10:00-10:15 The effect of cranial ornamentation on the feeding biomechanics of large theropod dinosaurs
Lavanya Ralhan

10:15-10:30 Large-bodied mammals explored novel jaw ecomorphologies through the Cenozoic and exhibited increased rates of trait evolution
Gemma Benevento

09:00-10:30 **Session 4b** **Mathematical Institute L2**

09:00-09:15 Before Mary Anning: did a (proto-)scientific form of palaeontology exist in Ancient Egypt?
Marwan Kilani and Lauren Dogaer

09:15-09:30 A comprehensive phylogenomic framework for brachiopod evolution among lophotrochozoans
Mingzhu Yang

09:30-09:45 Character evolution in fossil non-radial echinoderms
Lucy Jackson

09:45-10:00 Redescription of *Priapulites konecniorum* from the Mazon Creek Lagerstätte validates a calibration for crown-group Priapulida
Thomas P. Farrell

10:00-10:15 One model to segment them all: AmberSAM for automated 3D segmentation of amber arthropods
Corentin Jouault

10:15-10:30	Unlocking the origins of spiders: 3D-preserved Carboniferous arachnids from the Montceau-les-Mines Lagerstätte *Camille Vidal-Marty*	

09:00-10:30	**Session 4c**	**Mathematical Institute L3**
09:00-09:15	Macroevolutionary patterns of cephalic mechanical resistance in early Palaeozoic trilobites *Alejandro González-Cloquells*	
09:15-09:30	Ammonoid extinction and nautilid survival at the end-Cretaceous: what has hatching size got to do with it? *Michael Schmutzer*	
09:30-09:45	High evolutionary turnover of fusulinids during the late Palaeozoic ice age *Shu-han Zhang*	
09:45-10:00	Deep-sea ostracod faunal change from the Late Cretaceous to the Early Miocene *Yumeng Wei*	
10:00-10:15	Quantifying metazoan locomotion *Harry Savage*	
10:15-10:30	From ambiguity to information: accounting for intraspecific polymorphism in morphological phylogenetics *Walker Sexton*	

10:30-11:00	**Break (catered)**	**Mathematical Institute**

11:00-12:30	**Session 5 – President's Prize**	**Mathematical Institute L1**
11:00-11:15	From phylogeny to palaeoecology: what conifer wood anatomy reveals about Cordaitales *Katherine Bober*	
11:15-11:30	Evolutionary and ontogenetic trends in skull shape underpinned theropod dinosaur ecology *Charlie R. Scherer*	
11:30-11:45	Ichthyosaurs from the Middle Jurassic of the Isle of Skye, Scotland *Molly Tumelty*	
11:45-12:00	'Reptilian domination' in Pleistocene Australia and limited human impacts on competition among its megafaunal carnivores *Adam Lindholm*	
12:00-12:15	From Caribbean apex predator to Cuban remnant: Holocene range collapse of *Crocodylus rhombifer* informs its future conservation *Sachin Bhardwaj Lock*	

12:15-12:30	Disentangling oxygen and temperature as controls on extinction risk in marine invertebrates over the Phanerozoic *Cooper M. Malanoski*	
12:30-13:00	**Poster Session 2**	**Mathematical Institute**
13:00-14:00	**Lunch (catered)**	**Mathematical Institute**
13:15-14:00	**LGBTQ+ Meeting**	**Mathematical Institute L3**
14:00-15:00	**Session 6a – Lightning Talk Prize**	**Mathematical Institute L1**
14:00-14:05	Testing the phylogenetic affinities of Archaeocyatha and Chancelloriida within a comprehensive morphological framework of Porifera *Linjun Zou*	
14:05-14:10	Mosaic pattern of morphological change in the cranidia and pygidia of Remopleurididae Hawle & Corda (1847) (Trilobita) *Jesus Maria Dorado*	
14:10-14:15	A Chengjiang-like biota from the Early Cambrian of western Canada *Giovanni Mussini*	
14:15-14:20	An ichnological bridge between two radiations: diverse trace fossils from the middle–late Cambrian of North Wales *Yorick Veenma*	
14:20-14:25	Reconstructing the postcranial anatomy and locomotion of ostracoderms using X-ray microtomography *William Newton*	
14:25-14:30	The thermometabolism of pseudosuchians: a study of Phylogenetic Comparative Methods *Cassandra Cheyron*	
14:30-14:35	Biotic succession and palaeoenvironmental change in the Jiufengshan record of the Jehol Biota, Northeast China *Yan Xue*	
14:35-14:40	Exploring the correspondence between the brain and the endocranial cavity in sauropsids *Amelia Mead*	
14:40-14:45	Dinosaurian basipterygoid processes (braincase elements): anatomy and evolution *Annabel Hunt*	
14:45-15:00	Questions	

14:00-15:00 **Session 6b** **Mathematical Institute L2**

14:00-14:05 New organic-walled microfossil assemblage from the 1.8-billion-year-old Rove Formation, Animikie Group, Canada
Sanaa Mughal

14:05-14:10 Pliocene ecosystems at Chinchilla (Queensland, Australia): insights from large herbivores
Oscar E. Wilson

14:10-14:15 Low-latitude within-area speciation drove early trilobite bioregionalization
Harriet B. Drage

14:15-14:20 Metazoan diversification characterized by elevated rates of evolution during the middle Ediacaran to earliest Cambrian
Zhiqing Guo

14:20-14:25 Gut morphology and preservation in trilobites from the Fezouata Shale
Francesc Pérez-Peris

14:25-14:30 Low background oxygen enabled aerobically selective extinction during the Late Ordovician mass extinction
Pedro Monarrez

14:30-14:35 Heliolitids as analogues for modern reef corals: a case study from the Devonian of Queensland
Jan Król

14:35-14:40 Quantifying changes in ammonoid morphological disparity during the Late Devonian
Ninon Allaire

14:40-14:45 Macroevolutionary shift in early ray-finned fishes associated with the Devonian–Carboniferous transition
Sam Giles

14:45-15:00 Questions

14:00-15:00 **Session 6c** **Mathematical Institute L3**

14:00-14:05 Trajectories of taxonomic and functional diversity of marine organisms across the Permo-Triassic extinction and radiation
Clare Liedstrand

14:05-14:10 Beyond the cuticle: hidden internal anatomy in Mesozoic terrestrial arthropods
Shengyu Wang

14:10-14:15 Three-dimensional mineralized skin in Triassic drepanosaurs from Italy
Valentina Rossi

14:15-14:20 DinoSAW experimental biomechanical system: testing the cutting efficiency of ziphodont teeth in theropod dinosaurs
Manubu Sakamoto

14:20-14:25 Mapping stomatal variation in the Cretaceous conifer *Frenelopsis*: insights into ecophysiology and taxonomy

Axel Montigny

14:25-14:30 Taste of change: floral turnover and the restructuring of herbivore communities before the K-Pg extinction in the Hell Creek Formation
Nicolas A. Stagg

14:30-14:35 Environmental heterogeneity and contrasting oyster-bank-associated molluscan communities from the Eocene of western India
Adrisuta Ghosh

14:35-14:40 A niche modelling approach adapted to small datasets
Pauline Guenser

14:40-14:45 Lyell in Chicago: a historic collection illuminates a missing chapter in nineteenth century geology
Roy E. Plotnick

14:45-15:00 Questions

15:00-15:30 Break (catered) Mathematical Institute

15:30-17:00 Session 7 Mathematical Institute L1

15:30-15:45 Episodic body size variations in early Palaeozoic trilobites linked to marine redox changes
Zhixin Sun

15:45-16:00 An early Cambrian mosaic stem-euarthropod sheds light on the origin of arthropodized trunk appendages
Yu Wu

16:00-16:15 Biogeochemical consequences of benthic ecosystem engineering in the aftermath of the end-Permian mass extinction
Alison T. Cribb

16:15-16:30 *Rhyniognatha* revisited: rethinking the oldest ‘insect’
Emma J. Long

16:30-16:45 Rapid evolution of mammalian brain shape preceded encephalization in the Late Cretaceous
Andrew Knapp

16:45-17:00 Back to the water – coordinated evolution of the inner ear and cervical spine in aquatic carnivorans
Julia A. Schwab

17:00-17:15 Presentations by ProgPal27 and PalAss27 Mathematical Institute L1

17:15-17:30 Awards and closing remarks Mathematical Institute L1

FRIDAY 11 DECEMBER

Post-conference fieldtrip – details to follow for those booked

Poster Session 1 – Wednesday 9 December

Posters eligible for Council Poster Prize

Trilobite evolutionary history is organised into six major evolutionary faunas	*Jonathan Adrain*
Defining the 'mass' in mass extinctions - inferring the scope and scale of Phanerozoic extinction events	*Bethany J. Allen*
Insect miniaturization from a palaeontological perspective: a review of wing morphology in fossil microwasps	*Sergio Álvarez-Parra*
Shark fins through time: exploring the diversity of Galeomorph body configuration	*Manuel Amadori*
Putative pterosaur (*Cryodrakon boreas*) manus-only tracks in a multitaxic tracksite from the Dinosaur Park Formation (Campanian)	*Sarah Ashby*
The Brymbo Fossil Forest, a new Upper Carboniferous (Moscovian) Konzentrat-Lagerstätte	*Tim Astrop*
New macroevolutionary insights into the Middle Triassic Neopterygian radiation	*Emma Ayres*
Extinction: sink or swim? metabolism and survival in fossil fishes across the K-Pg boundary	*Emily Ball*
Variation in the three-dimensional structure of stereom in articulate crinoids	*Charles Bates*
Furongian (Upper Cambrian) faunas from the Montagne Noire: new data and palaeobiogeographical implications	*Enzo Birolini*
An alluvial floodplain assemblage of Early Cretaceous ornithopods and theropods in Bexhill-on-Sea, East Sussex	*Tone Blakesley*
Evolutionary patterns in a diverse group of trilobites: morphological disparity and phenotypic trends in Asteropyginae	*Anya Blanshard*
Understanding the complexity of the extinct triradial body plan: a morphometric analysis of Tribrachidium	*Tory Botha*
The metabolic index through deep-time: a Phanerozoic analysis of temperature and hypoxia tolerance	*Tim Breeze*
Biogeography and diversity of fossil spores from the Devonian of Gondwana	*Harold Bridger*
Small but intriguing: the unusual growth dynamics of the dwarf '*Candiacervus*'	*Teresa Calderón*
From land to sea: disparate macroevolutionary dynamics in terrestrial and marine artiodactyls	*Thayara Carrasco*
High resolution mapping of an *in situ* Upper Carboniferous fossil forest (Brymbo, Wrexham	*Tyler Carter*
Evolution and adaptation of the dinosaur naris	*Daniel Cashmore*
Evidence of neurocranial pneumaticity in a Late Triassic archosaur with dinosaurian affinity	*Urmi Chakraborty*
UnEarthing the social worlds of palaeobiological research: heritage, legality, and pluralistic approaches to ethics	*Madeline-Claire (Leni) Charbonnaeu*
The marine vertebrate fauna and palaeoenvironment of the Kellaways Formation (Wiltshire, UK)	*Aman Chhaya*
Two decades of declining academic career prospects in UK palaeontology	*Thomas Clements*
Spatial scaling of diversity in Phanerozoic marine animals	*Roger Close*
Reinvestigating *Ventarura lyonii*, the last plant species described from the Rhynie cherts	*Laura Cooper*
Revisiting the preservation of chloroplasts in the mid-Miocene Clarkia Biota	*Nora Corthésy*

A new mitrate (Echinodermata, Stylophora) from the Fezouata Shale (Lower Ordovician, Morocco) and the origin of the Anomalocystitidae	*Vincent de Oliveira Santos*
Palaeoecology of the Devonian 'button coral' *Microcyclus* (Anthozoa: Rugosa) and its recent functional analogues	*Bartłomiej Domaszewicz*
The palaeoneurology of the Triassic cynodont *Diademodon tetragonus* unveiled through computed tomography	*Thomas Ducrey*
Testing the *Limulus*–trilobite locomotion analogy	*Jorge Esteve*
Diving beetles (Coleoptera: Dytiscidae) through time: uncovering their ancient origin and pulsed diversification	*Jules Ferreira*
Tubes, fronds, and something in between: Newfound Ediacaran fossils from Newfoundland	*Danielle Fitzgerald*
Be curveful: the omission of wing curvature and its consequences on pterosaur flight performances across the Mesozoic era	*Maxime Flaunet*
Carbonaceous compression and tissue-specific organic signatures in the Qingjiang Biota	*Dongjing Fu*
Deep burrowing behaviour in trilobites: taphonomic insights	*Inés Fuertes-Murciego*
Ontogeny and variability of an early Vallesian bovid (Boselaphini) from CCN20 (Vallès-Penedès Basin, NE Iberian Peninsula)	*Jesús Gamarra*
New possibilities for the UV-visible-near infrared investigation of fossils	*Pierre Gueriau*
The marine influence on the Latest Cretaceous North American terrestrial ecosystems and the impact on community structure	*Chance Guest*
Ecological and environmental influences on the evolution of cranial morphology in Mesozoic Archosauromorpha	*Matthew Hayden*
From brick to bones: microvertebrates of the Wealden, Clockhouse Brickworks, Surrey	*Thomas Henderson*
Visualizing the Rhynie chert plant community in 3D	*Alexander Hetherington*
Skeletally immature ichthyosaur skulls inform on ontogenetic dietary shifts and the palaeoecosystem at Strawberry Bank	*Max Hoepelman*
When the Obolus Sea turned black: ecosystem collapse during the Alum Oceanic Anoxic Event	*Lars E. Holmer*
A new horseshoe crab (Xiphosura: Limulidae) from the Middle Jurassic of England	*Richard Howard*
The recurrence principle: a proven link between evolutionary convergence and predictability	*Jennifer Hoyal Cuthill*
Cenozoic crinoids from Taiwan reveal tectonically driven marine passive dispersal	*Chia-Hsin Hsu*
Functional convergence through ontogenetic divergence in two arthropod guts separated by 500 million years	*Alejandro Izquierdo-López*
Breaching the walls: an interlocking durophagous apparatus in a stem arthropod	*Francesco Izzo*
From fire and water: assessing ecosystem structure in coastal Mesozoic ecosystems using the Wessex Formation as a case study	*Harry Jones*
The sensory toolkit of the early terrestrial predator, *Palaeocharinus* (Trignotarbida, Arachnida), from the Rhynie cherts (407Ma)	*Beau Jones*
Reconstruction of the diagenetic sequence of the Sarvak Formation type section based on textural relationships and petrographic evidence	*Kiana Kiarostami*
The fate of supposed plesiosaur vomit from Jurassic delta deposits offshore Norway	*Dirk Knaust*
Upper Cretaceous bivalves of Western Kyzylkum, Uzbekistan	*Robin Knight*
Early Spathian conodont radiation assessed through a multiproxy approach	*Theresa Kutzner*

Inside a trilobite gut – the digestive anatomy and feeding in *Deanaspis goldfussi* from synchrotron data	*Lukáš Laibl*
Beak performance: convergent evolution of beaks underpins the adaptation of herbivory in dinosaurs	*Stephan Lautenschlager*
Collections and taphonomic bias of Silurian trilobites in the Lapworth Museum of Geology, Birmingham, UK	*Daniel Lawrenson*
Sailing to Gondwana: multiple waves of spinosaurid dispersal to the southern continents	*Zak E. Lewis*
Disruption of the mats: evaluating ecosystem shift and the first extinction pulse in Late Ediacaran	*Yarong Liu*
Quantitative assessment of community structure of fossil forests from the Devonian to Jurassic periods	*Bingcai Liu*
Morphology and evolution of early Ecdysozoans	*Martin R. Smith*

Poster Session 2 – Thursday 10 December

Posters eligible for Council Poster Prize

Using tooth whorls to elucidate the ancient evolutionary origin of the tooth attachment system	*Aaron R. H. LeBlanc*
The external and internal anatomy of the cervical vertebrae of the sauropod dinosaur *Lingwulong shenqi* and its implications for	*Shumin Liu*
Quantifying the quality of the non-hominin hominoid fossil record and elucidating geological and anthropogenic biases.	*Rosie May Lock*
Insights into the Ediacaran–Cambrian transition from cherts and phosphorites of South China	*Orin Lole Durbin*
Bentiaba: a southern hemisphere perspective on Maastrichtian marine ecosystems	*Arthur Maréchal*
A for acrodonty: the ambiguity of acrodonty amplified by agamid acrodontans	*Dan Marke*
Preliminary finite element analysis of the internal structure of two distinct azhdarchoid jaws from the Kem Kem Group of Morocco	*Julen Martínez-Barredo*
Silent past: biogeographic gaps in the Cenozoic fossil archive	*Marta Matamala-Pagès*
Ecological functional stability in the dinosaurian fauna of the Upper Jurassic Morrison Formation, USA	*Robert Mayer*
Distribution and preservation of *Kimberella quadrata* from the Ediacara Member, South Australia	*Heather McCandless*
Myology and microraptorines: exploring the functional capabilities of paravian wings	*Alexandra R. McCombie*
The evolution of pentaradial symmetry in echinoderms	*James McDermott*
Fantastic beasts and where to find them at fossil festivals	*James McKay*
Triassic ammonoids of Pakistan: reconstructing Tethyan palaeobiogeography and marine biodiversity	*Khan Mian Sayed*
Variable effects of endocranial volume on sulcal lengths in the mammalian order Carnivora: a quantitative analysis	*Isabelle Milford*
New detailed palaeogeographical maps for the last 1 billion years	*Benjamin Mills*
Plant-sediment interactions in early terrestrial ecosystems: evidence from the Devonian record of the UK	*Annabelle Moger-Taylor*
The brain and sensory organs of *Shuyu* Galeaspid	*Max H. Mulligan*
Intra-regional changes in Cambrian trilobite functional diversity during a post-extinction radiation	*Adam Murphy*
Gaultness me! - reconstructing the palaeoecology and palaeoenvironment of the Gault Clay (Albian, Cretaceous) of South England	*Berengar Needham*
A predator-prey arms race in the Mesozoic oceans	*Annabel L. Nicholls*
How environmental conditions correlate with exceptional preservation in the Middle Cambrian depositional systems of Montana	*Hunter C. Olson*
Mineralogical records of complex microbial activities from the 1.8 Ga Duck Creek Formation, Western Australia	*Qing Ouyang*
Trichopherophyton teuchansii: getting to the root of their extinction	*Rosa Parkin*
Late Oligocene-late Miocene fossil camels from the John Day Basin, north-central and eastern Oregon	*Scarlet Parod*
The morphological disparity of trilobite biofacies within the Middle Ordovician of Laurentia	*Scott L. Parry*
Quantifying the swimming and floating performance of extinct arthropods	*Stephen Pates*

Who's a good fossil? Exploring the functional limits of skull evolution in domestic dogs, wild canids and their fossil relatives	*Tahlia Pollock*
Quantifying the impact of exceptional preservation on Early Ordovician community ecology	*Tara K. Prole*
New palaeoecological data on Iberian palaeomerycids (Artiodactyla, Ruminantia) in the context of Miocene climatic changes	*Paula Ramírez-Morales*
Climatic specialization and evolutionary time shape small-mammal diversity at the global scale	*Ivan Rey Rodriguez*
Bigger fish to fry? An analysis of the *Edmondia* marine band of Brymbo, North Wales	*Adam Roberts*
The internal anatomy of Heterostraci: systematic digital reconstruction and description	*Jack Rochead*
A new Ediacaran chancelloriid with a sparse scleritome from the Avalon Assemblage of Newfoundland	*Simon Rosse-Guillevic*
El Soplao amber: a remarkable window into low-latitude resinous forests during the Cretaceous Resinous Interval	*Alba Sánchez-García*
Complex sensory organs of Ediacaran cnidarians	*Brigitte Schoenemann*
Morphological plasticity in benthic foraminifera during Palaeogene warming	*Yujie Shi*
Brach to the future: soft-tissue preservation in Silurian brachiopods	*Jakob Slater-Morris*
Integrating microfossils and palaeoenvironmental data from Late Ordovician Lagerstätten localities for ecosystem reconstruction	*Urgon Snider*
The royal fish? Multiple possible fates for historical sturgeon catches in Britain	*Lucia Snyderman*
Power laws in fossil abundance, cross-recurrence analysis and biostratigraphic correlation of critical events	*Andrej Spiridonov*
Protein-templated crystallization of authigenic minerals: a route to the molecular controls on exceptional fossilization	*Piyush Sriwastava*
Shapes of the deep: AI-driven shape analysis of fossil and extant dogfish shark teeth	*Kim Jaqueline Stroben*
Bearing stress is an impressive ‘feet’: a comparison of known perissodactyl foot conditions to the unknown anchitheriin foot	*Amy Sue*
How to make a dwarf elephant: dental allometry in *Stegodon* (Mammalia: Proboscidea)	*Meyrick Tablizo*
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