

# Paleo & Life

## Program

90<sup>th</sup> Annual Meeting  
of the Paleontological Society

(Paläontologische Gesellschaft)

Munich 15 – 19 September 2019



Paleo & Life



Munich PalGes 2019

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## Welcome to Paleo & Life 2019

Dear participants of the 2019 meeting of the Paläontologische Gesellschaft,

We are very pleased to see the lively interest in the 2019 annual meeting of the Paläontologische Gesellschaft in Munich and the many excellent contributions that have been submitted. The Paläontologische Gesellschaft, founded in 1912, is one of the oldest and largest paleontological associations worldwide. Paleontology communities are small in all countries, and hence international cooperation is mandatory to promote our field. Since its inception the Paläontologische Gesellschaft has therefore identified itself as an association with international orientation. The 2019 meeting of the Paläontologische Gesellschaft is in line with this ambition, having attracted colleagues from 15 different countries.

We are also delighted with the diversity of this meeting, not only with regard to the number of nations represented, but also because of a good gender balance and a large number of student attendees. One of the core functions of scientific meetings and conferences is to provide students and early-career researchers with a discussion forum for their scientific work, and allow them to network among peers – still essential in our increasingly digitized world.

Paleontology and neontology (biology) are highly interconnected in their desire to decipher the evolution of life on our planet, and we therefore decided to use Paleo & Life as the conference motto.

Munich has always figured prominently in German paleontology, and this year's gathering is in fact already the fifth annual meeting of the Paläontologische Gesellschaft in this city. We thank the numerous colleagues who have contributed to make this endeavor a success, in particular our staff and students, as well as our sponsors. We sincerely hope that you will enjoy the meeting and your visit to Bavaria's beautiful capital.

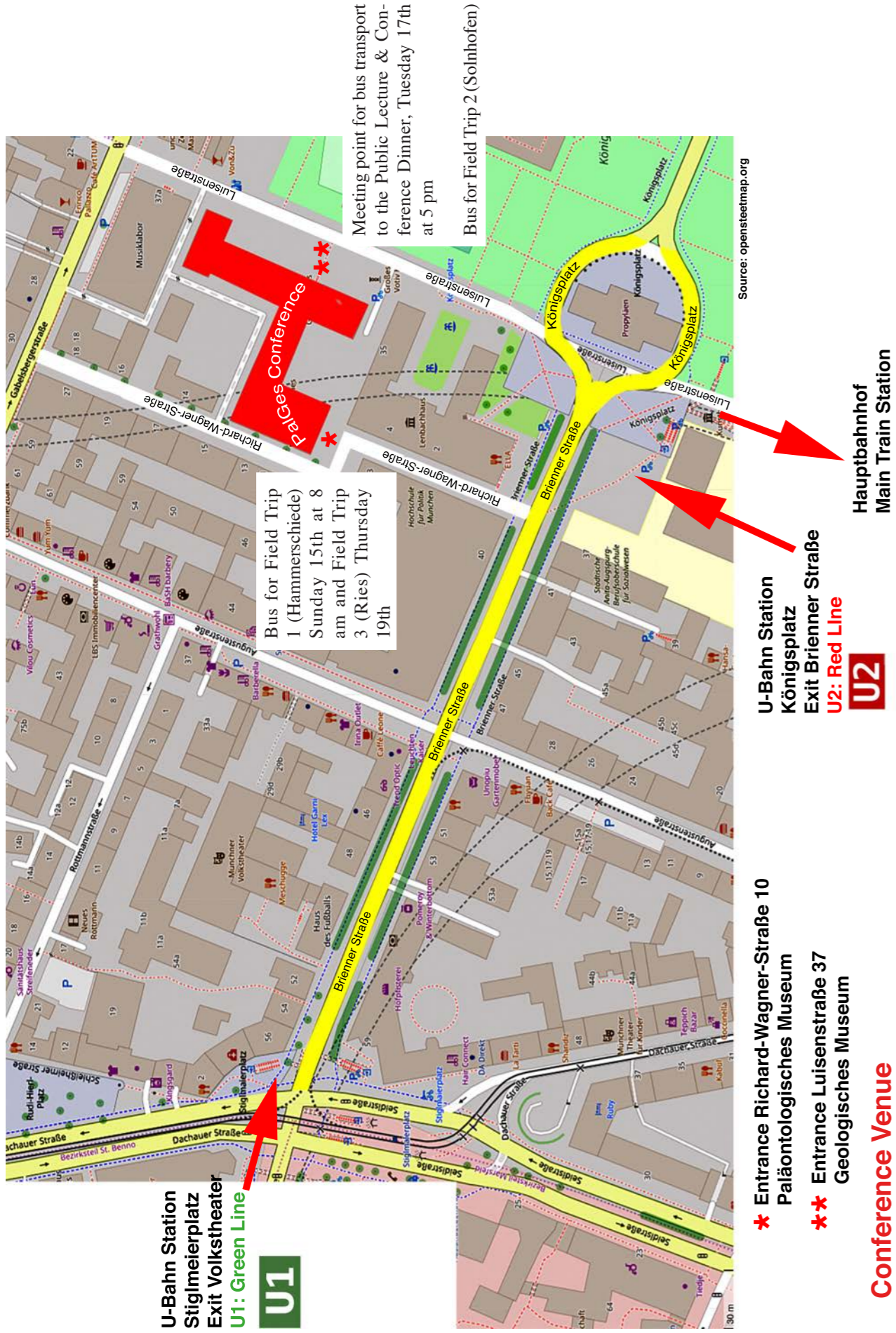
Sincerely,

*Alexander Nützel*

*Bettina Reichenbacher*

*Michael Krings*

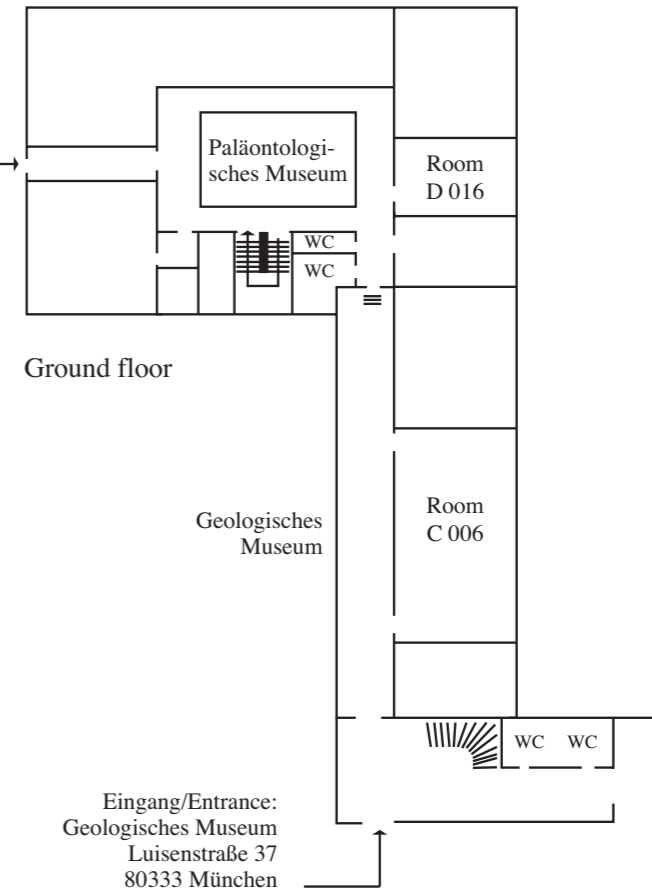
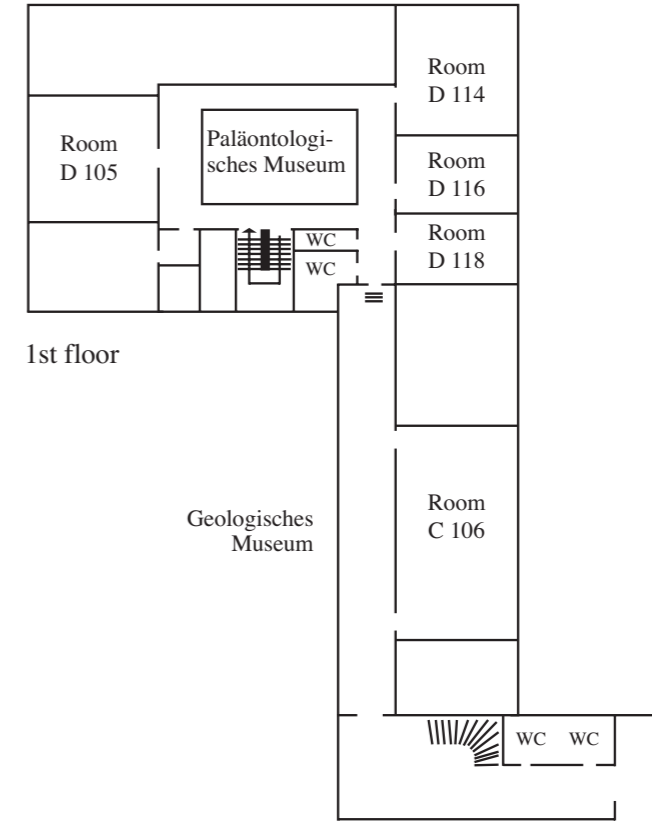
*Gert Wörheide*



### Floor Plan, Lecture Rooms

**Rooms:**

- D 105: Ice Breaker & Coffee Breaks
- D 114: Workshops
- D 116: Secretariat & Registration
- D 118: Posters
- C 106: Lecture Hall
- C 006: Lecture Hall
- D 016: Lecture Hall



## Venue of Public Lecture and Conference Dinner

### Öffentlicher Abendvortrag (Public Evening Lecture) & Conference Dinner

Tuesday 17th September, Evening

17:00

**Busses** for transportation to the public lecture and conference dinner depart from the entrance of the Geologisches Museum at Luisenstraße 37.

Alternatively, you may reach the venue at Menzinger Straße 65/67 by **public transportation**, but it may take up to one hour due to road construction work. Take Tram 17 (direction Romanplatz) from Munich Main Train Station (Hauptbahnhof, street level), and change to Bus SEV 17 (direction Amalienburgstraße) at Romanplatz; exit at bus stop Botanical Garden. There are also a few other options. You may take a taxi which takes about half an hour and costs ca. 20 €, so if you share a taxi it is actually not very costly.



Foto: Gerald v. Foris

**18:00–19:15 Öffentlicher Abendvortrag (Public evening lecture)** des bekannten Astrophysikers und Wissenschaftsjournalisten Harald Lesch: "Der Planet Erde und seine allerersten Bewohner" (in German)

Public evening lecture "Planet Earth and its very first inhabitants" (talk in German), to be delivered by the popular astrophysicist and science journalist Harald Lesch.

**Location:** Theater (Great Lecture Hall), Botanische Staatssammlung, Menzinger Straße 67, 80638 München (ground floor, entrance Menzinger Straße)



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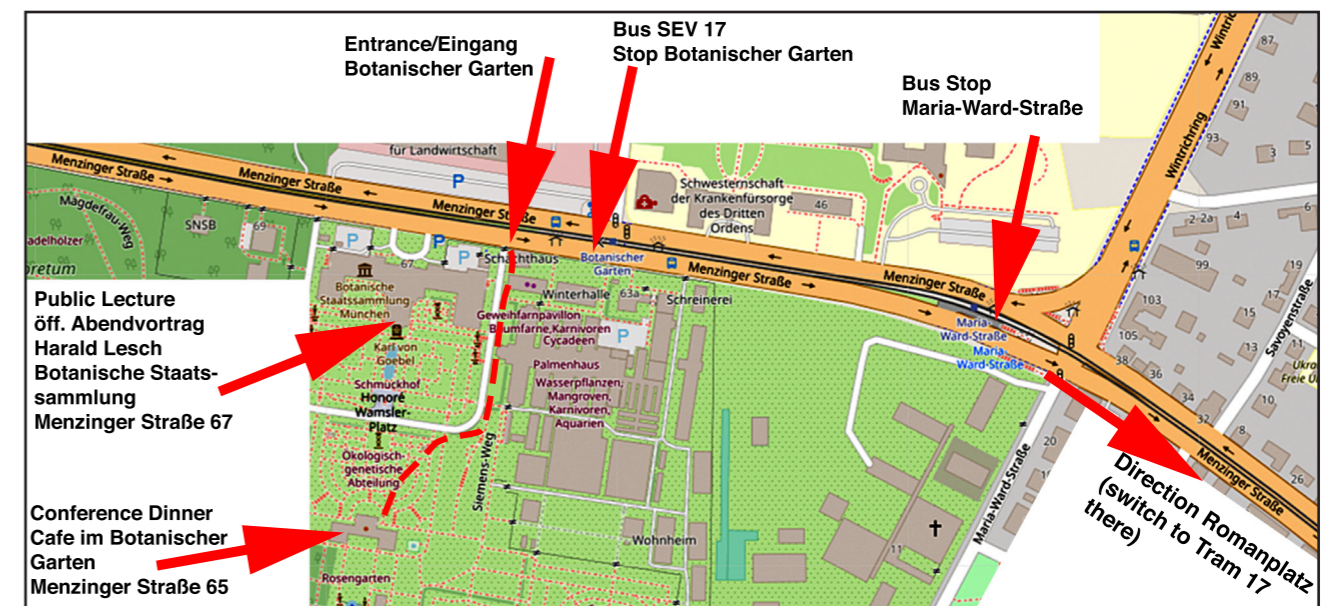
**19:30 Conference Dinner**

**Location:** Cafe in the Botanischer Garten Menzingerstraße 65, 80638 München, in walking distance of the location above.

The **Conference Dinner ends 0:30 h (12:30 a.m.)**. The last bus to Romanplatz departs 0:41 h (12:41 a.m.). Participants are responsible for their own transportation back to their respective residence (bus, taxi ...).



Horsehead Nebula  
(Foto: Christian Schulbert,  
Erlangen)



source: openstreetmap.org

## Program Overview

	<b>Program of the 90th Meeting of the Paläontologische Gesellschaft Munich 15th–19th September 2019</b>	
	<b>Sunday 15th Sept</b>	<b>Sunday 15th Sept</b>
08:00–16:00	<b>Field trip 1: Vertebrate excavation Hammerschmiede, Miocene Molasse Basin</b> Organizer: Madelaine Böhme	<b>Meeting point:</b> Richard-Wagner Str. 10, meet Bork Ilsemann in front of main entrance of the Paläontologisches Museum; driver Bork Ilsemann
08:00–16:00	<b>Field trip 2: Upper Jurassic Plattenkalke (lithographic limestones) of Solnhofen and Eichstätt</b> (includes visit to the Solnhofen Museums); Organizer: Martin Röper	<b>Meeting point:</b> Luisestraße 37, in front of main entrance of the Geologisches Museum Museum
09:00–12:30	<b>AK Paleobiology-Meeting: Ontogeny &amp; Phylogeny: Room D 016</b>	
13:00–16:00	<b>PalGes Board Meeting: Room C 202</b>	
16:00	<b>Registration, Room D 116</b>	
17:00	<b>Icebreaker, Room D 105</b>	
	<b>Monday 16th Sept. morning</b>	
08:00	<b>Registration, Room D 116</b> <i>Opening &amp; Plenaries</i> Room C 106	
09:00–09:30	<b>Opening ceremony:</b> President of LMU, Prof. Huber; General Director of SNSB, Prof. Haszprunar; Director of BSPG and chair of Palaeontology & Geobiology at LMU, Prof. Wörheide; President of PalGes, Prof. Kerp; Chair of organization committee, Prof. Nützel	
09:30–10:10	<b>Per Ahlberg, Plenary</b> What, if anything, is a placoderm? New discoveries and insights from the gnathostome stem group	
10:10–10:40	Coffee break	
10:40–11:20	<b>Donald E. Canfield, Plenary</b> Life at Low Oxygen	
11:20–12:00	<b>Jakob Vinther, Plenary</b> Fossils, molecules, development and morphology suggest that comb jellies (Ctenophora) are coelenterate diploblasts	
12:00–13:00	Lunch break	

	<b>Monday 16th Sept. afternoon</b>	<b>Monday 16th Sept. afternoon</b>
	<i>Plenaries</i> Room C 106	
13:00–13:40	<b>Gloria Arratia, Plenary</b> Fishes in a temporal dimension. Origins, radiations, and extinctions	
13:40–14:20	<b>Wolfgang Kießling, Plenary</b> Do reefs evolve?	
14:20–14:50	Coffee break	
	<i>Fossil fishes in the context of evolution, environments and biogeography</i> Room C 106	<i>Molecular Geobiology and Paleobiology</i> Room D 006
14:50–15:00	<b>Reichenbacher, Přikryl, Arratia:</b> Welcome and opening of fish session	
15:00–15:20	<b>Marramà et al.:</b> A new Eocene batoid fish (Elasmobranchii, Myliobatiformes) from Monte Bolca (Italy) reveals an extinct body plan for stingrays (237) <b>YSA</b>	<b>De Baets et al.:</b> Divergence time estimates of helminths: host constraints versus parasite fossils (222)
15:20–15:40	<b>Rücklin et al.:</b> Dental development and complexity in stem-Chondrichthyes (172)	<b>Hsiang &amp; Ronquist:</b> A probabilistic model of correlated discrete morphological character evolution for phylogenetic inference (242) <b>YSA</b>
15:40–16:00	<b>Stumpf et al.:</b> Of teeth and spines: The riddle of <i>Strophodus</i> (Hybodontiformes, Chondrichthyes) validity (1409)	<b>Coşkun et al.:</b> Quantifying population-specific carbon utilization in serpentine-hosted microbial communities at the Mid-Atlantic ridge (139) <b>YSA</b>
16:00–16:20	<b>Cuny et al.:</b> A new freshwater hybodont from the Upper Jurassic of Thailand (117)	<b>Conci et al.:</b> Tracing the evolution of the coral skeleton (175) <b>YSA</b>
16:20–16:40	<b>Pfeil:</b> Insights <i>Mesiteia emiliae</i> GORJANOVIĆ-KRAMBERGER, 1884 (134)	<b>Galitz &amp; Erpenbeck:</b> Tracing the evolution of secondary metabolite evolution in sponges (Porifera)
16:40–17:20	<b>Seeberg-Elverfeldt:</b> Fragen und Antworten zur DFG-Förderung (questions and answers about funding of the DFG, in German) Room C 106	
17:20	<b>Postersession</b> Room D 118	
18:30	<b>Mitgliederversammlung der Paläontologischen Gesellschaft</b> (General assembly PalGes): Room C 106	

	Tuesday 17th Sept. Morning	Tuesday 17th Sept. Morning	Tuesday 17th Sept. Morning
08:00	Registration Room D 116		
	<i>Late Paleozoic and Mesozoic Plants and Floras</i> Room C 106		
09:00-09:40	<b>William A. DiMichele et al., Plenary</b> Late Paleozoic xeromorphic floral elements as upland, extrabasinal, and/or paleoclimatic indicators, and why it is important to clarify the confusion surrounding these concepts		
	<i>Late Paleozoic and Mesozoic Plants and Floras</i> Room C 106	<i>Fossil fishes in the context of evolution, environments and biogeography</i> Room C 006	<i>Physiology in Deep Time</i> Room D 016
09:40-10:10	<b>Carla J. Harper et al., keynote</b> <i>Palaeolynx</i> (Cyanobacteria, Oscillatoriales) from the Triassic of Antarctica (107)	<b>Oiga Otero, keynote</b> Fish fossils and the reconstruction of continental paleoenvironments (245)	<b>Alexander M. Dunhill, keynote</b> Community structure and ecosystem collapse across major extinction events <b>YSA</b>
10:10-10:30	<b>Kerp &amp; Bödige:</b> A late Permian mesoflora from Trebnitz near Gera (Thuringia, Germany) (227)	<b>Dussán Villanueva &amp; Rauhut:</b> Paleoenvironments and taphonomy of the fish-rich marls of the Cañadón Calcaéreo Formation in Central Patagonia (228) <b>YSA</b>	<b>Balthasar:</b> Brachiopod Shell Thickness links Environment and Evolution (104)
10:30-11:00	Coffee break	Coffee break	Coffee break
	Room C 106	Room C 006	Room D 016
11:00-11:20	<b>Decombeix et al.:</b> Secondary vascular growth in Paleozoic plants: some advances and future directions (195)	<b>Altner et al.:</b> First record of a fossil predatory Haplochromini (Cichlidae) from the upper Miocene of Kenya (226) <b>YSA</b>	<b>Reddin et al.:</b> From short-term experiments to ancient hyperthermal events: marine clade sensitivities to climate change conform across time scales (158) <b>YSA</b>
11:20-11:40	<b>Trümper et al.:</b> Deciphering the formation of a unique fossil window into early Permian microworlds at the birthplace of palaeobotany (155)	<b>Kevrekidis et al.:</b> Evidence for a new extinct group of African cichlid fish (203) <b>YSA</b>	<b>Eichenseer et al.:</b> Jurassic decline in abiotic controls on marine ecological success (157) <b>YSA</b>
11:40-12:00	<b>Forté et al.:</b> Morphometric and δ13C ranges of the Lopingian (late Permian) conifers of the Bletterbach flora (Dolomites, NE Italy) (170) <b>YSA</b>	<b>Carrillo-Briceño et al.:</b> Neotropical freshwater fish fauna in "deep time": a perspective from the Caribbean basins of Colombia and Venezuela (108)	<b>Hethke et al.:</b> Environmental effects on clam shrimp size and shape: Implications for palaeontological studies (218)
12:00-12:20	<b>Heynck et al.:</b> Palynology of the Lopingian (late Permian) Bletterbach Gorge succession (N-Italy) (183) <b>YSA</b>	<b>Gierl et al.:</b> Phylogenetic placement of fossil gobioids: a total-evidence approach (241)	<b>Mironenko:</b> Unusual structure of the upper jaw of Jurassic and Cretaceous ammonites (163)
12:20-13:20	Lunch break	Lunch break	Lunch break

	Tuesday 17th Sept. Afternoon	Tuesday 17th Sept. Afternoon	Tuesday 17th Sept. Afternoon
	Room C 106	Room C 006	Room D 016
	<i>Late Paleozoic and Mesozoic Plants and Floras</i>	<i>Fossil fishes in the context of evolution, environments and biogeography</i>	<i>Physiology in Deep Time</i>
13:20-13:40	<b>Blumenkemper et al.:</b> Reconstructing late Permian <i>Dicroidium</i> plants from the Dead Sea Region, Jordan (202)	<b>Schulz-Mirbach et al.:</b> How do fish otoliths and ancillary hearing structures move in a sound field? – Insights from synchrotron radiation-based imaging (105)	<b>De Baets et al.:</b> The impact of the Pliensbachian-Toarcian crisis on belemnite distribution (214)
13:40-14:00	<b>Nowak &amp; Kustatscher:</b> Palaeogeographical distribution of terrestrial floras from the Lopingian to the Middle Triassic and implications for biodiversity (211) <b>YSA</b>	<b>Schwarzahns &amp; Carnevale:</b> The rise to dominance of lanternfishes (Myctophidae; Teleostei): a paleontological perspective (103)	<b>Evolving ecosystems</b> Room D 016
14:00-14:20	<b>Unverfärth et al.:</b> GANOVEX XIII: New plant-fossil sites in the Permian to Jurassic Victoria Group (Beacon Supergroup) in Victoria Land, Antarctica (204) <b>YSA</b>	<b>Bienkowska-Wasiulik:</b> Lower Oligocene fishes from the Dnyów Maris (Paratethys, Poland) and their paleobiogeographic implications (106)	Workshop Total-evidence
14:20-14:40	<b>Kustatscher et al.:</b> Did the Czekanowskiales already exist in the late Permian? (ID: 124)	<b>Carnevale &amp; Pflüry:</b> A tubeshoulder (Platyroctidae) from the early Oligocene of Czech Republic, and the fossil record of the Alepocephaliformes (128)	Workshop Total-evidence
14:40-15:10	Coffee break Room D 105	Coffee break Room D 105	Coffee break Room D 105
	<i>Open session</i> Room C 106	<i>Fossil fishes in the context of evolution, environments and biogeography</i> Room C 006	Room D 114
15:10-15:30	<b>Lang et al.:</b> Camassial crown curvature as a possible indicator for functional reduction in dentitions of carnivorous mammals (201) <b>YSA</b>	<b>Furrer:</b> Environment and biogeography of a Middle Triassic fish fauna near Davos (Canton Graubünden, Eastern Swiss Alps) (178)	Workshop Total-evidence
15:30-15:50	<b>van Heteren:</b> Description of a <i>Machirodus</i> (Mammalia, Carnivora, Felidae) skull from Rhodos (Greece) with some palaeoecological notes on the <i>M. ophanistus-giganteus</i> transition (223)	<b>Kogan &amp; Bakaev:</b> Permian and Triassic scanlepipiforms (Actinopterygii) of Eastern Europe and Northern Asia and their polypterid affinity (194)	Workshop Total-evidence
15:50-16:10	<b>von Koenigswald &amp; Göhlich:</b> Biogeography of Mammutidae (Proboscidea) or What's your name again? Mammut? (119)	<b>Maxwell et al.:</b> Revision of the pachycormiform fishes from the Upper Jurassic of Nusplingen (Baden-Württemberg, Germany) (111)	Workshop Total-evidence
16:10-16:30	<b>Schellhorn:</b> What was first: knob or facet on the Carpale 4 of <i>Prosaniorhinus germanicus</i> from Sandelzhausen? (182)	<b>Arratia:</b> Adding to the understanding of the so-called pholidophoriform fishes: News from the Jurassic of Nusplingen, Germany (176)	Workshop Total-evidence
18:00-19:15	<b>Harald Lesch: Die frühe Erde und Ihre Bewohner (in German)</b> public lecture/offentlicher Abendvortrag	<b>Location:</b> Theater (Great Lecture Hall), Botanische Staatssammlung, Menzinger Straße 67, 80638 München	<b>Buses for transport depart from the entrance at Luisenstrasse 37 at 17:00</b>
19:30	<b>Conference Dinner</b> at the Botanical Garden	<b>Location:</b> Cafe in the Botanischer Garten Menzingerstraße 65, 80638 München in walking distance from location above	<b>Buses for transport depart from the entrance at Luisenstrasse 37 at 17:00</b>

	Wednesday 18th Sept. Morning	Wednesday 18th Sept. Morning	Wednesday 18th Sept. Morning	Wednesday 18th Sept. Morning
	<b>Open session</b> Room C 106	<i>Fossil fishes in the context of evolution, environments and biogeography</i> Room C 006	<i>Evolving ecosystems</i> Room D 016	<i>Workshop open data</i> Room D 114
09:00-09:20	<b>Pohle &amp; Klug:</b> Pairwise clustering of Devonian oncozeroids (Cephalopoda) suggests semelparity (122) <b>YSA</b>	<b>Kriwet et al.:</b> Success and demise of pycnodont fishes (Neopterygii, Pycnodontiformes) (166)	<b>Bischof &amp; Lehmann:</b> Maximum resilience after the P/T event - the ammonoid diversity peak of the Anisian (132) <b>YSA</b>	<b>De Baets:</b> Introduction
09:20-09:40	<b>Söte et al.:</b> Upper Frasnian tomoceratids (Goniatitida) from the Sand Formation of the Bergisch Gladbach-Paffrath Syncline (Rhenish Massif, Germany) (197) <b>YSA</b>	<b>Thies et al.:</b> Stomach Contents of the Early Jurassic Fish † <i>Lepidotes</i> AGASSIZ, 1832 (Actinopterygii, Lepisosteiformes) (181)	<b>Friesebichler et al.:</b> Palaeoecology of benthic faunas from three Middle Triassic carbonate platforms (116) <b>YSA</b>	<b>Hopkins:</b> Using the Paleobiology Database and MorphoBank to facilitate collaborative research and data archival (147)
09:40-10:00	<b>Amler &amp; Pfennings:</b> Quo vadis <i>Conocardium</i> ? – the archetype of <i>Rostroconchia</i> lost in the systematic jungle (154)	<b>Gregorova &amp; Duffin:</b> The pre-scientific history of <i>Lepidotes</i> Agassiz, 1832 (153)	<b>Roden et al.:</b> Drivers of beta diversity in Triassic reefs and reef basins (112) <b>YSA</b>	<b>Hopkins:</b> Using the Paleobiology Database and MorphoBank to facilitate collaborative research and data archival (147)
10:00-10:20	<b>Seuß et al.:</b> The Late Paleozoic Ice Age (LPIA) – Turnover rates during a phase of major climatic changes (150)	<b>Fish symposium final discussion</b>	<b>Hausmann &amp; Roden:</b> Mesh size effects on diversity and palaeoecological estimations of Late Triassic marine invertebrate assemblages (225) <b>YSA</b>	<b>Jarochowska et al.:</b> Save the conodonts! Archiving museum collections of Swedish Silurian conodonts in the Paleobiology
10:20-10:50	Coffee break Room D 105	Coffee break Room D 105	Coffee break Room D 105	Coffee break Room D 105
10:50-11:10	<b>Open session</b> , Room C 006	<b>Open session</b> , Room C 106	<b>Evolving ecosystems</b> Room D 016	<b>Workshop open data</b> Room D 114
	<b>Schneider et al.:</b> Cretaceous cold start: the Jurassic-Cretaceous transition in the Rollrock Section, Sverdrup Basin, Canadian Arctic Archipelago (192)	<b>Pazinato et al.:</b> Advances on reconstructing the evolutionary history of peracaridan crustaceans (188) <b>YSA</b>	<b>Roza:</b> Paleoeology of the Late Triassic Marine Biota from the Cassian Formation (213) <b>YSA</b>	<b>Huber et al.:</b> Reproducible data analysis of data archived in PANGAEA with pangaeapy and Jupyter notebooks (138)
11:10-11:30	<b>Schindler et al.:</b> A vendobiont from the Lower Devonian of Germany? (174)	<b>Baranov &amp; Haug, J.:</b> Fly palaeo-evo-devo: reconstructing ontogeny and growth of fossil window gnats (Diptera: Anisopodidae) (200) <b>YSA</b>	<b>Raja Schoob &amp; Kießling:</b> Origination and dispersal dynamics of Cenozoic marine plankton (199) <b>YSA</b>	<b>Pye et al.:</b> ImageJ and 3D Slicer: Open Source 2/3D Morphometric Software (219) <b>YSA</b>
11:30-11:50	<b>Spindler:</b> Live Birth in a Jurassic Marine Crocodile (102)	<b>Wagner et al.:</b> Scorpions in “space” – morphometric approach to the diversity of scorpion shape (208) <b>YSA</b>	<b>Knoblach &amp; Nohl:</b> Brackish water algal reefs-facies development in the Miocene deposits in Mainz-Weisenau (142) <b>YSA</b>	<b>Lautenschlager:</b> Best practices and approaches for open data sharing and publication (246)
11:50-12:10	<b>Guimaraes:</b> Discovery of non-rigid eggs and hatchlings in two <i>Archaeopteryx</i> fossils (162)	<b>Schädel et al.:</b> How to dispose a systematic waste basket – Revision of the fossil isopod form genus “ <i>Palaeoga</i> ” (210) <b>YSA</b>	<b>Nohl et al.:</b> The lithological dependence of <i>Hydrobia</i> (gastropod) preservation in monospecific deposits of the Miocene Mainz Basin (209) <b>YSA</b>	<b>Hopkins:</b> New approaches to peer review in the age of online, open-access publishing (145)
12:10-13:10	Lunch break	Lunch break	Lunch break	Lunch break

	Open session, Room C 106	Open session, Room C 006	Evolving ecosystems Room D 016	Workshop open data Room D 114
	<b>Wednesday 18th Sept. Afternoon</b>	<b>Wednesday 18th Sept. Afternoon</b>	<b>Wednesday 18th Sept. Afternoon</b>	<b>Wednesday 18th Sept. Afternoon</b>
13:10-13:30	<b>Gauweiler &amp; Haug, J.:</b> How to recognise a species – quantifying a case in horned dinosaurs (193) <b>YSA</b>	<b>Haug, C.:</b> Getting a grasp on the concept of convergence - evolution of prehensile appendages in the group Euarthropoda (185)	<b>Rasser &amp; Covich:</b> Die Evolution der Schnecken im Steinhelmer Becken (Mittelmiozän, SW-Deutschland): Prädation als Steuerungs-faktor? (206)	Open Data (poster activity)
13:30-13:50	<b>Schade &amp; Rauhut:</b> Within a dinosaur's head - Braincase morphology in spinosaurid theropods (Dinosauria: Theropoda) (120) <b>YSA</b>	<b>Haug, J.:</b> Diversity beyond taxonomy - what the fossil record of larvae can contribute (184)	<b>Pasinetti et al.:</b> Stable isotopes sclerochronology on freshwater gastropods of the Steinheim Basin (196) <b>YSA</b>	Open Data (open discussion)
13:50-14:10	<b>Desojo et al.:</b> Revision of the type material of <i>Prestosuchus chiniquensis</i> (Archosauria, Pseudosuchia): implications for pseudosuchian phylogeny and diversity (244)	<b>Herrera Florez &amp; Haug, J.:</b> Morphological diversity of myrmeleontiformian larvae through time (238) <b>YSA</b>	<b>Nitzel:</b> Gastropods as parasites and carnivorous grazers – a major guild in marine ecosystems (127)	Open Data (final words)
14:30	<b>Closing ceremony &amp; Young Scientist Award</b> Room C 106	<b>Closing ceremony &amp; Young Scientist Award</b> Room C 106	<b>Closing ceremony &amp; Young Scientist Award</b> Room C 106	<b>Closing ceremony &amp; Young Scientist Award</b> Room C 106
8:00- ca. 16:00	<b>Thursday 19th Sept.</b> <b>Field trip 3: Paleontology and geology of the Miocene Ries meteor crater, Nördlingen</b> (includes visit of the Rieskrater-Museum)	<b>Meeting point:</b> Richard-Wagner Str. 10, meet Dr. Martin Nose in front of main entrance of the Paläontologisches Museum		



## Detailed Program

### Sunday 15<sup>th</sup> September

- 8:00–ca. 16:00 Field trip 1: Vertebrate excavation Hammerschmiede, Miocene Molasse Basin; Organizer: Prof. Dr. Madelaine Böhme; Meeting point (Bork Ilsemann): Richard-Wagner Str. 10, in front of main entrance of the Paläontologisches Museum
- 8:00–ca. 16:00 Field trip 2: Upper Jurassic Plattenkalke (lithographic limestones) of Solnhofen and Eichstätt (includes visit to the Solnhofen Museums); Organizer: Dr. Martin Röper; Meeting point: Luisenstraße 37, in front of main entrance of the Geologisches Museum
- 9:00–12:30 Arbeitskreis Paleobiology-Meeting: Ontogeny & Phylogeny: Room D 016
- 13:00 Vorstands- und Beiratssitzung der Paläontologischen Gesellschaft (PalGes Board Meeting) Room C 202
- 16:00 Registration starts, Room D 116
- 17:00 Icebreaker, Room D 105

### Monday 16<sup>th</sup> September, Morning

- 8:00 Registration Room D 116

#### Opening & Plenary Talks Room C 106

- 9:00–9:30 Opening Ceremony
- 9:30–10:10 Per E. Ahlberg: What, if anything, is a placoderm? New discoveries and insights from the gnathostome stem group (ID: 234)
- 10:10–10:40 Coffee Break
- 10:40–11:20 Donald E. Canfield: Life at Low Oxygen (ID: 235)
- 11:20–12:00 Jakob Vinther: Fossils, molecules, development and morphology suggest that comb jellies (Ctenophora) are coelenterate diploblasts (ID: 152)
- 12:00–13:00 Lunch Break
- 13:00–13:40 Gloria Arratia: Fishes in a temporal dimension: Origins, radiations, and extinctions (ID: 177)
- 13:40–14:20 Wolfgang Kießling: Do reefs evolve? (ID: 148)
- 14:20–14:50 Coffee Break

#### Fossil fishes in the context of evolution, environments and biogeography Room C 106

Chairs: G. Arratia & T. Přikryl

- 14:50–15:00 Reichenbacher, Přikryl & Arratia: Welcome and opening of fish session
- 15:00–15:20 Giuseppe Marramà, Giorgio Carnevale, Luca Giusberti, Gavin J. P. Naylor & Jürgen Kriwet: A new Eocene batoid fish (Elasmobranchii, Myliobatiformes) from Monte Bolca (Italy) reveals an extinct body plan for stingrays (ID: 237, **Young Scientist Award**)
- 15:20–15:40 Martin Rücklin, Benedict King, John A. Cunningham, Louk Seton, Aidan Couzens & Philip C. J. Donoghue: Dental development and complexity in stem Chondrichthyes (ID: 172)
- 15:40–16:00 Sebastian Stumpf, Faviel A. López-Romero, René Kindlimann & Jürgen Kriwet: Of teeth and spines: The riddle of *Strophodus* (Hybodontiformes, Chondrichthyes) validity (ID: 140)
- 16:00–16:20 Gilles Cuny, Varavudh Suteethorn, Uthumporn Deesri, Suravech Suteethorn, Kathleen Lachat, Christophe Lecuyer & Romain Amiot: A new freshwater hybodont from the Upper Jurassic of Thailand (ID: 117)
- 16:20–16:40 Friedrich Pfeil: Insights *Mesiteia emiliae* GORJANOVIĆ-KRAMBERGER, 1884 (ID: 134)

### Monday 16<sup>th</sup> September, Afternoon Molecular Geobiology and Paleobiology Room D 006

Chair: Dirk Erpenbeck

- 15:00–15:20 Kenneth R. De Baets, Paula Dentzien-Dias, Timothy Littlewood & Luke Parry: Divergence time estimates of helminths: host constraints versus parasite fossils (ID: 222)
- 15:20–15:40 Allison Yi Hsiang & Fredrik Ronquist: A probabilistic model of correlated discrete morphological character evolution for phylogenetic inference (ID: 242, **Young Scientist Award**)
- 15:40–16:00 Ömer K. Coşkun, Florence Schubotz, Aurèle Vuillemin, Frieder Klein & William D. Orsi: Quantifying population-specific carbon utilization in serpentinite-hosted microbial communities at the Mid-Atlantic ridge (ID: 139, **Young Scientist Award**)
- 16:00–16:20 Nicola Conci, Gert Wörheide & Sergio Vargas: Tracing the evolution of the coral skeleton (ID: 175, **Young Scientist Award**)
- 16:20–16:40 Adrian Galitz & Dirk Erpenbeck: Tracing the evolution of secondary metabolite evolution in sponges (Porifera) (ID: 249, **Young Scientist Award**)

### Monday 16<sup>th</sup> September, Afternoon

- 16:40–17:20 Ismene Seeberg-Elverfeldt: Fragen und Antworten zur **DFG-Förderung** (questions and answers about funding of the DFG (in German)), Room C 106
- 17:20 **Poster Session**, Room D 118
- 18:30 **Mitgliederversammlung der Paläontologischen Gesellschaft** (General Assembly PalGes), Room C 106

### Tuesday 17<sup>th</sup> September, Morning Late Paleozoic and Mesozoic Plants and Floras Room C 106

Chairs: M. Krings & C. Pott

- 9:00–9:40 William A. DiMichele, Arden R. Bashforth, Howard J. Falcon-Lang & Spencer G. Lucas: Late Paleozoic xeromorphic floral elements as upland, extrabasinal, and/or paleoclimatic indicators (ID: 121, **Plenary Talk**)
- 9:40–10:10 Carla J. Harper, Edith L. Taylor & Michael Krings: *Palaeolyngbya* (Cyanobacteria, Oscillatoriales) from the Triassic of Antarctica (ID: 107, **Keynote Talk**)
- 10:10–10:30 Hans Kerp & Hendrik Bödige: A late Permian mesoflora from Trebnitz near Gera (Thuringia, Germany) (ID: 227)
- 10:30–11:00 Coffee Break
- 11:00–11:20 Anne-Laure Decombeix, Brigitte Meyer-Berthaud & Jean Galtier: Secondary vascular growth in Paleozoic plants: some advances and future directions (ID: 195)
- 11:20–11:40 Steffen Trümper, Ronny Rößler, Michael Krings, Carla J. Harper, Jens Götze & Manfred Barthel(†): Deciphering the formation of a unique fossil window into early Permian microworlds at the birthplace of palaeobotany (ID: 155)
- 11:40–12:00 Giuseppa Forte, Roberta Branz, Nereo Preto & Evelyn Kustatscher: Morphometric and  $\delta^{13}C$  ranges of the of the Lopingian (Late Permian) conifers of the Bletterbach flora (Dolomites, NE Italy) (ID: 170, **Young Scientist Award**)
- 12:00–12:20 Manfred Heynck, Hendrik Nowak, Evelyn Kustatscher: Palynology of the Lopingian (late Permian) Bletterbach Gorge succession (N-Italy) (ID: 183, **Young Scientist Award**)
- 12:20–13:20 Lunch Break

**Tuesday 17<sup>th</sup> September, Morning****Fossil fishes in the context of evolution, environments and biogeography****Room C 006**

Chairs: B. Reichenbacher &amp; G. Carnevale

- 9:40–10:10 Olga Otero: Fish fossils and the reconstruction of continental paleoenvironments, **Keynote** (ID: 245)
- 10:10–10:30 Manuel G. Dussán Villanueva & Oliver W. M. Rauhut: Paleoenvironments and taphonomy of the fish-rich marls of the Cañadón Calcáreo Formation in Central Patagonia (ID: 228, **Young Scientist Award**)
- 10:30–11:00 Coffee Break
- 11:00–11:20 Melanie Altner, Bernhard Ruthensteiner & Bettina Reichenbacher: First record of a fossil predatory Haplochromini (Cichlidae) from the upper Miocene of Kenya (ID: 226, **Young Scientist Award**)
- 11:20–11:40 Charalampos Kevrekidis, Bernhard Ruthensteiner & Bettina Reichenbacher: Evidence for a new extinct group of African cichlid fish (ID: 203, **Young Scientist Award**)
- 11:40–12:00 Jorge D. Carrillo-Briceño, Orangel Aguilera & Marcelo R. Sánchez-Villagra: Neotropical freshwater fish fauna in “deep time”: a perspective from the Caribbean basins of Colombia and Venezuela (ID: 108)
- 12:00–12:20 Christoph Gierl, Martin Dohrmann & Bettina Reichenbacher: Phylogenetic placement of fossil gobioids: a total-evidence approach (ID: 241)
- 12:20–13:20 Lunch Break

**Tuesday 17<sup>th</sup> September, Morning****Physiology in Deep Time****Room D 016**

Chair: K. De Baets

- 9:40–10:10 Alexander M. Dunhill: Community structure and ecosystem collapse across major extinction events (ID: 126, **Keynote Talk**, **Young Scientist Award**)
- 10:10–10:30 Uwe Balthasar: Brachiopod Shell Thickness links Environment and Evolution (ID: 104)
- 10:30–11:00 Coffee Break
- 11:00–11:20 Carl J. Reddin, Paulina S. Nätscher, Ádám T. Kocsis, Hans-Otto Pörtner & Wolfgang Kießling: From short-term experiments to ancient hyperthermal events: marine clade sensitivities to climate change conform across time scales (ID: 158, **Young Scientist Award**)
- 11:20–11:40 Kilian Eichenseer, Uwe Balthasar, Christopher W. Smart, Julian Stander, Kristian A. Haaga & Wolfgang Kießling: Jurassic decline in abiotic controls on marine ecological success (ID: 157, **Young Scientist Award**)
- 11:40–12:00 Manja Hethke, Stephen C. Weeks & Veronika Schöttle: Environmental effects on clam shrimp size and shape: Implications for palaeontological studies (ID: 218)
- 12:00–12:20 Aleksandr A. Mironenko: Unusual structure of the upper jaw of Jurassic and Cretaceous ammonites (ID: 163)
- 12:20–13:20 Lunch Break

**Tuesday 17<sup>th</sup> September****9:40–16:30 Sebastian Höhna, Workshop: Total Evidence****Room D 114****Tuesday 17<sup>th</sup> September, Afternoon****Late Paleozoic and Mesozoic Plants and Floras****Room C106**

Chairs: M. Krings &amp; C. Pott

- 13:20–13:40 Patrick Blumenkemper, Hans Kerp, Abdalla Abu Hamad & Benjamin Bomfleur: Reconstructing late Permian *Dicroidium* plants from the Dead Sea Region, Jordan (ID: 202)
- 13:40–14:00 Hendrik Nowak & Evelyn Kustatscher: Palaeogeographical distribution of terrestrial floras from the Lopingian to the Middle Triassic and implications for biodiversity (ID: 211, **Young Scientist Award**)
- 14:00–14:20 Jan Unverfärth, Thomas Mörs, Benjamin Bomfleur & Andreas Läufer: GANOVEX XIII: New plant-fossil sites in the Permian to Jurassic Victoria Group (Beacon Super-group) in Victoria Land, Antarctica (ID: 204, **Young Scientist Award**)
- 14:20–14:40 Evelyn Kustatscher, Henk Visscher & Johanna H. A. van Konijnenburg-van Cittert: Did the Czekanowskiales already exist in the late Permian? (ID: 124)
- 14:40–15:10 Coffee Break

**Tuesday 17<sup>th</sup> September, Afternoon****Open Session****Room C 106**

Chair: J. Haug

- 15:10–15:30 Andreas Lang, Thomas Engler & Thomas Martin: Carnassial crown curvature as a possible indicator for functional reduction in dentitions of carnivorous mammals (ID: 201, **Young Scientist Award**)
- 15:30–15:50 Anneke H. van Heteren: Description of a *Machairodus* (Mammalia, Carnivora, Felidae) skull from Rhodos (Greece) with some palaeoecological notes on the *M. aphanistus-giganteustransition* (ID: 223)
- 15:50–16:10 Wighart Von Koenigswald & Ursula B. Göhlich: Biogeography of Mammutidae (Proboscidea) or What’s your name again? Mammut? (ID: 119)
- 16:10–16:30 Rico Schellhorn: What was first: knob or facet on the Carpale 4 of *Prosantorhinus germanicus* from Sandelzhausen? (ID: 182)

**Tuesday 17<sup>th</sup> September, Afternoon****Fossil fishes in the context of evolution, environments and biogeography****Room C 006**

Chair: M. Rücklin

- 13:20–13:40 Tanja Schulz-Mirbach, Alberto Mittone, Margie Olbinado, Christian Schlepütz, Friedrich Ladich, Isabelle P. Maiditsch, Petr Krysl, Roland R. Melzer & Martin Heß: How do fish otoliths and ancillary hearing structures move in a sound field? – Insights from synchrotron radiation-based imaging (ID: 105)
- 13:40–14:00 Werner Schwarzhans & Giorgio Carnevale: The rise to dominance of lanternfishes (Myctophidae; Teleostei): a paleontological perspective (ID: 103)
- 14:00–14:20 Malgorzata Bieńkowska-Wasiluk: Lower Oligocene fishes from the Dynów Marls (Paratethys, Poland) and their paleobiogeographic implications (ID: 106)
- 14:20–14:40 Giorgio Carnevale & Tomáš Píkrýl: A tubeshoulder (Platytroutidae) from the early Oligocene of Czech Republic, and the fossil record of the Alepocephaliformes (ID: 128)
- 14:40–15:10 Coffee Break

**Tuesday 17<sup>th</sup> September, Afternoon****Fossil fishes in the context of evolution, environments and biogeography****Room C 006**

Chair: J. Kriwet

- 15:10–15:30 Heinz Furrer: Environment and biogeography of a Middle Triassic fish fauna near Davos (Canton Graubünden, Eastern Swiss Alps) (ID: 178)
- 15:30–15:50 Ilja Kogan & Alexandr Bakaev: Permian and Triassic scanilepiforms (Actinopterygii) of Eastern Europe and Northern Asia and their polypterid affinity (ID: 194)
- 15:50–16:10 Erin Maxwell, Adriana López-Arbarelo, Paul Lambers & Günter Schweigert: Revision of the pachycormiform fishes from the Upper Jurassic of Nusplingen (Baden-Württemberg, Germany) (ID: 111)
- 16:10–16:30 Gloria Arratia: Adding to the understanding of the so-called pholidophoriform fishes: News from the Jurassic of Nusplingen, Germany (ID: 176)

**Tuesday 17<sup>th</sup> September, Afternoon****Physiology in Deep Time****Room D 016**

Chair: K. De Baets

- 13:20–13:40 Kenneth R. De Baets, Patrícia Rita, Luís V. Duarte, José C. García-Ramos, Pascal Neige, Laura Piñuela & Robert Weis: The impact of the Pliensbachian-Toarcian crisis on belemnite distribution (ID: 214)

**Tuesday 17<sup>th</sup> September, Afternoon****Evolving Ecosystems****Room D 016**

Chair: K. De Baets

- 13:40–14:00 Joachim Reitner, Jan-Peter Duda, Cui Luo & Xingliang Zhang: Precambrian–Cambrian phosphorites & cherts – novel windows into early sponge evolution (ID: 149)
- 14:00–14:20 Jan-Peter Duda, Gordon D. Love, Joachim Reitner, Maoyan Zhu & Dmitriy V. Grazhdankin: On mysterious creatures and their enigmatic habitats – exploring carbonate ecosystems with Ediacara-type organisms (ID: 167)
- 14:20–14:40 Ralph Thomas Becker & Zhor Sarah Aboussalam: Impact of Emsian/Eifelian (Devonian) global events on faunas and biofacies in the Moroccan Meseta (ID: 205)
- 14:40–15:10 Coffee Break
- 15:10–15:30 Marie K. Hörnig, Joachim T. Haug & Carolin Haug: The evolution of raptorial morphological adaptations within dictyopteran insects (ID: 159)
- 15:30–15:50 Baran Karapunar & Alexander Nützel: The life history traits of five common pleurotomariid (Gastropoda) taxa from the Pennsylvanian of Texas (ID: 114, **Young Scientist Award**)
- 15:50–16:10 Chatchalerm Ketwetsuriya & Alexander Nützel: Diversity of Middle Permian gastropods from Central Thailand (ID: 113, **Young Scientist Award**)
- 16:10–16:30 Evelyn Kustatscher, Roberta Branz, Manfred Heynck, Hendrik Nowak, Guido Roghi, Giuseppa Forte & Matthias Franz: High resolution record of a sea-level shift during the Wuchiapingian (late Permian) in the tropics and its effects on floral composition and fossil preservation (ID: 141)

**Tuesday 17<sup>th</sup> September, Evening**

- 17:00 Busses for transport to the public lecture and conference dinner depart from the entrance of the Geologisches Museum at Luisenstraße 37
- 18:00–19:15 **Öffentlicher Abendvortrag (public lecture) Harald Lesch: Die frühe Erde und ihre Bewohner** (in German); **Location:** Theater (Great Lecture Hall), Botanische Staatssammlung, Menzinger Straße 67, 80638 München (ground floor, entrance Menzinger Str. 67)
- 19:30 **Conference Dinner**  
**Location:** Cafe in the Botanischer Garten Menzingerstraße 65, 80638 München in a walking distance from the location above

**Wednesday 18<sup>th</sup> September, Morning****Open Session****Room C 106**

Chair: M. R. W. Amler

- 9:00–9:20 Alexander Pohle & Christian Klug: Pairwise clustering of Devonian oncocerids (Cephalopoda) suggests semelparity (ID: 122, **Young Scientist Award**)
- 9:20–9:40 Till Söte, Ralph Thomas Becker & Karl Josef Herd: Upper Frasnian tornoceratids (Goniatitida) from the Sand Formation of the Bergisch Gladbach-Paffrath Syncline (Rhenish Massif, Germany) (ID: 197, **Young Scientist Award**)
- 9:40–10:00 Michael R. W. Amler & Kai Pfenning: Quo vadis *Conocardium*? – the archetype of Rostroconchia lost in the systematic jungle (ID: 154)
- 10:00–10:20 Barbara Seuß, Vanessa Julie Roden, Ádám T. Kocsis & Wolfgang Kießling: The Late Paleozoic Ice Age (LPIA) – Turnover rates during a phase of major climatic changes (ID: 150)
- 10:20–10:50 Coffee Break

**Wednesday 18<sup>th</sup> September, Morning****Open Session****Room C 106**

Chair: O. W. M. Rauhut

- 10:50–11:10 Simon Schneider, Simon R. A. Kelly, Jens O. Herrle, Peter Hülse, Stephen Ingrams, David W. Jolley, Jörg Mutterlose, Claudia Schröder-Adams & Berta López-Mir: Cretaceous cold start: the Jurassic–Cretaceous transition in the Rollrock Section, Sverdrup Basin, Canadian Arctic Archipelago (ID: 192)
- 11:10–11:30 Eberhard Schindler, Rainer Brocke, Achim Wehrmann & Volker Wilde: A vendobiont from the Lower Devonian of Germany? (ID: 174)
- 11:30–11:50 Frederik Spindler: Live Birth in a Jurassic Marine Crocodile (ID: 102)
- 11:50–12:10 M. Jorge V. C. Guimarães: Discovery of non-rigid eggs and hatchlings in two *Archaeopteryx* fossils (ID: 162)
- 12:10–13:30 Lunch Break

**Wednesday 18<sup>th</sup> September, Morning****Fossil fishes in the context of evolution, environments and biogeography****Room C 006**

Chair: O. Otero

- 9:00–9:20 [Jürgen Kriwet](#), Giuseppe Marramà, Giorgio Carnevale & John J. Cawley: Success and demise of pycnodont fishes (Neopterygii, †Pycnodontiformes) (ID: 166)
- 9:20–9:40 [Detlev Thies](#), Kevin Stevens & Sebastian Stumpf: Stomach Contents of the Early Jurassic Fish †*Lepidotes* AGASSIZ, 1832 (Actinopterygii, Lepisosteiformes) (ID: 181)
- 9:40–10:00 [Ruzena Gregorová](#) & Chris Duffin: The pre-scientific history of *Lepidotes* Agassiz, 1832 (ID: 153)
- 10:00–10:20 Fish symposium final discussion
- 10:20–10:50 Coffee Break

**Wednesday 18<sup>th</sup> September, Morning****Open Session****Room C 106**

Chair: H. Kerp

- 10:50–11:10 [Paula G. Pazinato](#), Joachim T. Haug & Carolin Haug: Advances on reconstructing the evolutionary history of peracaridan crustaceans (ID: 188, [Young Scientist Award](#))
- 11:10–11:30 [Viktor A. Baranov](#) & Joachim T. Haug: Fly palaeo-evo-devo: reconstructing ontogeny and growth of fossil window gnats (Diptera: Anisopodidae) (ID: 200, [Young Scientist Award](#))
- 11:30–11:50 [Philipp Wagner](#), Joachim T. Haug & Carolin Haug: Scorpions in “space” - morphometric approach to the diversity of scorpion shape (ID: 208, [Young Scientist Award](#))
- 11:50–12:10 [Mario Schädel](#), Matúš Hyžný & Joachim T. Haug: How to dispose a systematic waste basket - Revision of the fossil isopod form genus “*Palaega*” (ID: 210, [Young Scientist Award](#))
- 12:10–13:10 Lunch Break

**Wednesday 18<sup>th</sup> September, Morning****Evolving Ecosystems****Room D 016**

Chair: C. Haug

- 9:00–9:20 [Eva Alexandra Bischof](#) & Jens Lehmann: Maximum resilience after the P/T event - the ammonoid diversity peak of the Anisian (ID: 132, [Young Scientist Award](#))
- 9:20–9:40 [Evelyn Friesenbichler](#), Michael Hautmann & Hugo Bucher: Palaeoecology of benthic faunas from three Middle Triassic carbonate platforms (ID: 116, [Young Scientist Award](#))
- 9:40–10:00 [Vanessa Julie Roden](#), Imelda M. Hausmann & Wolfgang Kießling: Drivers of beta diversity in Triassic reefs and reef basins (ID: 112, [Young Scientist Award](#))
- 10:00–10:20 [Imelda M. Hausmann](#) & Vanessa Julie Roden: Mesh size effects on diversity and palaeoecological estimations of Late Triassic marine invertebrate assemblages (ID: 225, [Young Scientist Award](#))
- 10:20–10:50 Coffee Break

**Wednesday 18<sup>th</sup> September, Morning****Evolving Ecosystems****Room D 016**

Chair: C. J. Harper

- 10:50–11:10 Surya Eldo Virma Roza: Paleocology of the Late Triassic Marine Biota from the Cassian Formation (ID: 213, [Young Scientist Award](#))

- 11:10–11:30 [Nussaibah B. Raja Schoob](#) & Wolfgang Kießling: Origination and dispersal dynamics of Cenozoic marine plankton (ID: 199, [Young Scientist Award](#))
- 11:30–11:50 Julia Knobloch & [Theresa Nohl](#): Brackish water algal reefs - facies development in the Miocene deposits in Mainz-Weisenau (ID: 142, [Young Scientist Award](#))
- 11:50–12:10 [Theresa Nohl](#), Jannick Wetterich & Axel Munnecke: The lithological dependence of *Hydrobia* (gastropod) preservation in monospecific deposits of the Miocene Mainz Basin (ID: 209, [Young Scientist Award](#))
- 12:10–13:10 Lunch Break

**Wednesday 18<sup>th</sup> September****9:00–14:10 Workshop: Open Data (Kenneth R. de Baets & Emilia Jarochovska****Room D 114**

- 9:00–9:20 Kenneth R. De Baets: Introduction
- 9:20–10:00 Melanie J. Hopkins: Using the Paleobiology Database and MorphoBank to facilitate collaborative research and data archival (ID: 147)
- 10:00–10:20 [Emilia Jarochovska](#), Oskar Bremer & Thomas Mörs: Save the conodonts! Archiving museum collections of Swedish Silurian conodonts in the Paleobiology Database (ID: 207)
- 10:20–10:50 Coffee Break
- 10:50–11:10 [Robert Huber](#), Markus Stocker, Uwe Schindler & Michael Diepenbroek: Reproducible data analysis of data archived in PANGAEA with pangaeapy and Jupyter notebooks (ID: 138)
- 11:10–11:30 [Fiona Pye](#), Nussaibah Begum Raja Schoob, Bryan Shirley, Adam Kocsis, Nick Hohmann, Duncan Murdock & Emilia Jarochovska: ImageJ and 3D Slicer: Open Source 2/3D Morphometric Software (ID: 219, [Young Scientist Award](#))
- 11:30–11:50 Stephan Lautenschlager: Best practices and approaches for open data sharing and publication (ID: 246)
- 11:50–12:10 Melanie J. Hopkins: New approaches to peer review in the age of online, open-access publishing (ID: 145)
- 12:10–13:10 Lunch Break
- 13:10–13:30 Poster activity
- 13:30–13:50 Open discussion
- 13:50–14:10 Final words

**Wednesday 18<sup>th</sup> September, Afternoon****Open Session****Room C 106**

Chair: M. Nose

- 13:10–13:30 [Joshua Gauweiler](#) & Joachim Haug: How to recognise a species – quantifying a case in horned dinosaurs (ID: 193, [Young Scientist Award](#))
- 13:30–13:50 [Marco Schade](#) & Oliver Rauhut: Within a dinosaur’s head - Braincase morphology in spinosaurid theropods (Dinosauria: Theropoda) (ID: 120, [Young Scientist Award](#))
- 13:50–14:10 Julia B. Desojo, M. Belén von Baczko & [Oliver W. M. Rauhut](#): Revision of the type material of *Prestosuchus chiniquensis* (Archosauria, Pseudosuchia): implications for pseudosuchian phylogeny and diversity (ID: 244)

### Wednesday 18<sup>th</sup> September, Afternoon

#### Open Session Room C 006

Chair T. Schulz-Mirbach

- 13:10–13:30 Carolin Haug: Getting a grasp on the concept of convergence - evolution of prehensile appendages in the group Euarthropoda (ID: 185)
- 13:30–13:50 Joachim T. Haug: Diversity beyond taxonomy - what the fossil record of larvae can contribute (ID: 184)
- 13:50–14:10 [Andrés F. Herrera Flórez](#) & Joachim T. Haug: Morphological diversity of myrmeleontiformian larvae through time (ID: 238, [Young Scientist Award](#))

### Wednesday 18<sup>th</sup> September, Afternoon

#### Evolving Ecosystems Room D 016

Chair: A. Nützel

- 13:10–13:30 [Michael W. Rasser](#) & Alan P. Covich: Die Evolution der Schnecken im Steinheimer Becken (Mittelmiozän, SW-Deutschland): Prädation als Steuerungsfaktor? (ID: 206)
- 13:30–13:50 [Giovanni Pasinetti](#), Bernd Schöne & Thomas Tütken: Stable isotopes sclerochronology on freshwater gastropods from the Steinheim Basin (ID: 196, [Young Scientist Award](#))
- 13:50–14:10 Alexander Nützel: Gastropods as parasites and carnivorous grazers – a major guild in marine ecosystems (ID: 127)

### Wednesday 18<sup>th</sup> September, Afternoon

#### 14:30 Closing ceremony & Young Scientist Award, Room C 106

### Thursday 19<sup>th</sup> September

- 8:00– ca 16:00 Field trip 3: Paleontology und geology of the Miocene Ries meteor crater, Nördlingen (includes visit of the Rieskrater-Museum); Meeting point with Martin Nose : Richard-Wagner-Str. 10, in front of main entrance of the Paläontologisches Museum

#### Posters

Poster-session is on Monday at 17:20 in Room D 118;

Posters remain on display for the whole meeting

#### Posters, Fossil fishes in the context of evolution, environments and biogeography

- Jorge D. Carrillo-Briceño & Torsten M. Scheyer: A historical freshwater fish collection from the Neogene of the Peruvian Amazon (ID: 109)
- Eleni A. Charnpila, Azad Teimori, Anton Weissenbacher, Jörg Freyhof & Bettina Reichenbacher: An actualistic case study on the caudal skeleton of three closely related killifish species from the Middle East (ID: 189)
- Martin Ebert & Martina Kölbl-Ebert: Enlarging the Phylogeny of Pycnodontiformes - New genera from the Upper Jurassic and Cretaceous (ID: 146)
- Fabian M. Gäb, Chris Ballhaus, Eva S. Stinnesbeck, Anna G. Kral, Kathrin Janssen, Tina Menneken & Gabriele Bierbaum: Experimental fossilisation of fishes (ID: 164)
- Ionuț Grădianu, Marian Bordeianu & Vlad Codrea: Revision of *Morone major* (Agassiz) from the Oligocene formations of Piatra Neamț (Eastern Carpathians) - the first record of a Sea Bass (Perciformes, Moronidae) skeleton from the Oligocene of Romania (ID: 115)
- Carolin Gut, Christoph Gierl & Bettina Reichenbacher: A fresh look on the Fossil Record of Gobioid Fish Otoliths from the Vienna Basin (ID: 236)

- Martina Kölbl-Ebert, Martin Ebert, David Bellwood & Christian Schulbert: Reef Fish Beware! Aggressive Mimicry in a Pycnodontid? (ID: 144)
- Stefanie B. R. Penk & Bettina Reichenbacher: Evaluating the phylogenetic potential of cichlid scales (ID: 191)
- Friedrich Pfeil: First fossil teeth of the etmopterid deepwater lanternshark genus *Miroscyllium* (Squaliformes), new taxonomic classification of teeth erroneously attributed to *Miroscyllium* and new genera attributed to Etmopteridae (ID: 243)
- Tomáš Příkryl: Articulated fossils of the deep-sea smelt (Bathylagidae) from the Oligo–Miocene of the Czech Republic (ID: 137)
- Stanislav Štamberg: Teeth of actinopterygians from the Permo-Carboniferous of the Bohemian Massif have an important taxonomic value (ID: 118)

#### Posters, Evolving Ecosystems

- Pascal Abel, Daisuke Koyabu & Ingmar Werneburg: Evolution of the temporal region in the early amniote skull (ID: 123)
- Raimund Albersdörfer & Frederik Spindler: When Bavaria was the Ancient Caribbean – Plattenkalk Fossil Treasures from Painten (ID: 110)
- Isobel Fortune, Bethany J. Allen & Alexander M. Dunhill: Trophic community structure of the Late Jurassic Kimmeridge Clay Formation (ID: 129)
- Julia C. Friedel, Michael R. W. Amler & Barbara Seuß: Bivalves from the Finis Shale (Virgilian) of North Central Texas – analysis of life habits and palaeoecology (ID: 131)
- Hans-Georg Herbig, Jessica Fabritius & Deborah Roth: Middle Viséan (Mississippian) monospecific biostromes from eastern Belgium – corals at their limits (ID: 233)
- Baran Karapınar, Winfried Werner & Franz Fürsich: Diversity and palaeoecology of the bivalve fauna from the Pliensbachian (Lower Jurassic) of Buttenheim, Franconia (ID: 160)
- Chatchalerm Ketwetsuriya, Martin Nose, Thasinee Charoentitirat & Alexander Nützel: Microbial-, fusulinid limestones with large gastropods - an unusual facies from the Middle Permian of central Thailand (Khao Khad Formation, Saraburi Group) (ID: 143)
- Volkan Özen, Gabrielle Rodrigues de Faria, Gayané Asatryan, Johan Renaudie & David B. Lazarus: Investigating the role of Southern Ocean phytoplankton in the end-Eocene climatic events (ID: 151)
- Ana C. Rebelo, Michael W. Rasser, Markes E. Johnson, Ricardo S. Ramalho, Rui Quartau & Sérgio P. Ávila: Formation, transport and deposition of rhodoliths on reefless insular shelves of the Azores volcanic Archipelago (ID: 215)
- Mario Schädel & Thomas Lechner: Schaßbach - A new locality for abundant and well preserved fossil insects from the Miocene of Carinthia (Austria) (ID: 212)
- Sebastian Voigt, Jan Fischer, Frederik Spindler, Rainer Schoch, Ralf Werneburg, Larry Rinehart, Elena Peter & Thomas Schindler: A unique tetrapod fauna from the late Paleozoic Saar-Nahe Basin, SW Germany (ID: 230)

#### Posters, Late Paleozoic and Mesozoic Plants and Floras

- Robert Bäumer, Malte Backer & Hans Kerp: Cuticular analysis of a diverse Upper Permian Flora from Shanxi, China (ID: 240)
- Rainer Butzmann, Mike Reich, Michael Krings, Thilo Fischer, Martin Röper, Monika Rothgaenger & Klaus Rothgaenger: Late Kimmeridgian fossil plants from the Lagerstätte Brunn in the Lower Solnhofen Archipelago (Bavaria, Germany) (ID: 161)
- Giuseppa Forte, Evelyn Kustatscher, Cindy Looy & Nereo Preto: The Kungurian (Cisuralian, early Permian) flora of Tregiovo (NE Italy) – palaeobotany, palaeoenvironment and organic geochemical proxies (ID: 171)
- Philipp Hiller, Benjamin Bomfleur & Ray Jackson: The Jurassic Osmundales of Curio Bay, New Zealand – an overview of diversity and systematics (ID: 239)
- Evelyn Kustatscher, Helmut Martin, Guido Roghi & Michael Krings: First record of a complete *Pterigophycos* from the Eocene of Bolca (Veneto, N-Italy) (ID: 125)
- Stanislav Opluštil, Josef Pšenička, Zbyněk Šimůnek, Luca Simonetto, Evelyn Kustatscher & Jana Votočková Frojdová: The Pennsylvanian flora of the Italian Carnic Alps (ID: 169)

#### Posters, Open Session & Micropaleontology

- Cristiana Agostinis, Sara Bensi, Daniela De Prato, Fabrizio Fattor, Evelyn Kustatscher, Lara Magri, Giuseppe Muscio, Gerlinde Ortner, Chiara Piano, Cristina Picili, Gaetano Simonetti & Luca Simonetto: GEOTRAC – INTERREG V-A Italy-Austria, 2014-2020 Project for The Transboundary Geopark of The Carnic Alps (ID: 168)
- Fenja I. Haug, Gideon T. Haug, Joachim T. Haug & Carolin Haug: Stiff lower lip - the shape of the seventh appendage of sword tails, sea scorpions and scorpions (ID: 186)
- Gideon T. Haug, Carolin Haug & Joachim T. Haug: Immatures of silky lacewings through the ages - an attempt to be quantitative and holistic (ID: 187)

- Felix Hofmayer: The microfauna (Foraminifera, Ostracoda) of the Eggenburgian (Lower Miocene) stratotype section and its associated deposits (ID: 165)
- Stephan Lautenschlager, Borja Figueirido, Thomas Stubbs & Eva-Maria Bendel: Widespread functional diversity in morphologically convergent sabre-tooth vertebrates (ID: 156)
- Julius Lindenbauer & Doris Nagel: Food preferences of mustelids from Göriach (Early-Middle Miocene) (Styria, Austria) (ID: 180)
- Yingyan Mao, Manfred Kutscher, Yue Li & Mike Reich: Filling gaps: Devonian echinoids, holothurians, and cyclocystoids (Echinodermata) from China (ID: 229)
- Christoph Mayr, Philipp Stojakowits, Lars Hedenäs, Renate Matzke-Karasz, Sarah Eckert, David Hauth, Elena Ilyashuk, Boris Ilyashuk, Gertrud Rößner, Volker Diersche & Bernhard Lempe: Fauna and flora in the Alps before the Last Glacial Maximum evidenced by the Nesselstalgraben fossil record (ID: 179)
- Alexander Nützel, Heinz Kollmann, Christian Schulbert & Andrzej Kaim: A rare find: protoconchs in Cretaceous nerineid “gastropod dinosaurs” (ID: 217)
- Alexander Nützel & Simon Schneider: The oldest cowrie – an early African immigrant to Italy? (ID: 130)
- Paula G. Pazinato, Carolin Haug, Angelika Leipner & Joachim T. Haug: A pygocephalomorph crustacean from the Piesberg quarry highlights the resemblance of European and North American Coal Measures faunas (ID: 190)
- Wyatt S. Petryshen & Charles M. Henderson: Preliminary work on the evolutionary history of *Sweetognathus* through morphometrics (ID: 232)
- Anna Pint, Heike Schneider & Peter Frenzel: A microfossil study of a Late Glacial and Holocene section of the Siebleber Senke (Gotha, Thuringia) (ID: 221)
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- Mike Reich, Tanja R. Stegemann & Alexander Nützel: New insights into early evolution of modern myriotrochid holothurians (Echinodermata) (ID: 224)
- Paula Rodríguez, Ömer K. Coskun, Aurèle Vuillemin, William D. Orsi: Linking microbial diversity to carbon cycling in subseafloor sediments from Namibian Continental Shelf through Quantitative Stable isotope probing (qSIP) (ID: 248)
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- Simon Schneider & Ulrich Linse: The Pleistocene Bivalvia of Rhodes (ID: 136)
- Simon Schneider & Winfried Werner: Where the *Diceras* dwells ...: The hippuritid fauna of the ‘Kelheimer *Diceras*-Kalk’ (ID: 135)
- Aurèle Vuillemin, Tobias Magritsch, Ömer K. Coskun, Sergio Vargas, Robert Pockalny, Richard W. Murray, David C. Smith, Arthur Spivack, Steven D’Hondt & William D. Orsi: Metabolic potential and gene expression of the deep biosphere in oxic and anoxic abyssal clays from the North Atlantic Ocean (ID: 133)
- Bernd J. Wilmer & Michael W. Rasser: Microbialites from the Sylvana Limestone (Middle Miocene, SW Germany): precipitation patterns and actualistic comparisons (ID: 216)