



2nd Palaeontological
Virtual Congress

May 1st–15th, 2020



Book of Abstracts

Palaeontology in the virtual era

<http://palaeovc.uv.es/>



A new way to make science

2nd Palaeontological Virtual Congress

Book of Abstracts

Palaeontology in the virtual era

From an original idea of Vicente D. Crespo

Published by Evangelos Vlachos, Esther Manzanares, Vicente D. Crespo, Carlos Martínez-Pérez, Humberto G. Ferrón, José Luis Herráiz, Arturo Gamonal, Fernando Antonio M. Arnal, Francesc Gascó, and Paolo Citton

Layout Evangelos Vlachos

Conference logo Hugo Salais

Contact palaeovc@gmail.com

ISBN 978-84-09-20283-6

Copyright © 2020 Palaeontological Virtual Congress

Presentation

After the great success of the 1st **Palaeontological Virtual Congress (PVC)** organised in December 2018, we are back with the 2nd edition of the first Palaeontological meeting completely developed in a virtual environment. The original idea of implementing this format in our discipline was the natural consequence of the emergence of new technologies, which allow the wider range of communication possibilities. The importance of this kind of initiatives, that allow communication among peers without being physically present, is even more evident with the dramatic changes and exceptional situation that our society has been experiencing in the last few months. Within this context, the origin of the PVC represented the first attempt in palaeontology to take advantage of these new possibilities, becoming nowadays the most important international palaeontological congress developed in the net. This online meeting offers an exclusively virtual-developed environment to researchers all around the globe. The novelty of this project is its simplicity, and one of our main goals is to give international projection to the palaeontological research carried out by groups with limited economic resources; allowing to save expensive registration fees, travel, accommodation and maintenance expenses.

The soul of our congress has not changed, and that is trying to combine the benefits of traditional meetings (i.e., providing a forum for discussion, including guest lectures, field trips or the production of an abstract book) with the advantages of online platforms. These allow reaching a high number of researchers along the world, promoting the participation of palaeontologists from developing countries and providing a comprehensive forum for the exchange of ideas and discussion with specialists in the target field. This abstract book is the best evidence of the success of the initiative, whose figures are increasing edition after edition.

At the moment of publishing this abstract book, more than **363** researchers on palaeontology from **44** different nationalities, and **six** continents (Europe, Africa, North and Central America, South America, Asia, and Oceania), have taken part in this initiative. It is important to highlight the numerous contributions from South America, Africa, Asia, Middle East and Eastern European Countries strengthening our main goal of a palaeontological congress without barriers.

The 2nd PVC is organised in four general theme sessions (**Palaeozoic, Mesozoic, Cenozoic and General Palaeontology**), trying to span the whole variety of potential contributions. However, taking advantage of the flexibility that virtual platforms offer, **five** specific thematic sessions, encompassing topics such as **evolution and palaeobiodiversity in islands, fossil insects, palynology, outreach** and an specific session for palaeontologists in their **early career Stage** to present their works in an completely friendly environment. In total, **161** contributions are compiled in this Abstract Book, including **four key-notes** presented by Dr. **Michael J. Benton** "*Identifying the drivers of macroevolution - methods and pitfalls*"; Dr. **Anne-Laure Decombeix** "*Reconstructing the biology of Palaeozoic trees*"; Dr. **James Kirkland** and Dr. **Don DeBlieux** "*Constraining the Jurassic - Cretaceous terrestrial biota: new data from Utah helps close the gap across the atlantic basin*" and Dr. **Jesús Lozano-Fernández** "*The conquest of land by arthropods*". All those contributions presented in this volume, somehow, summarize the good health and multidisciplinary nature of our science.

Finally, we would like to thank all our colleagues for organising and coordinating the different workshops. We also want to thank all the authors for submitting their contributions and the numerous reviewers that have made this volume and congress possible. We would also like to give special thanks to all Palaeontological and Geological Societies, Editorials, Museums, and Universities, that have supported this initiative.

Thank you all,



The Organising Committee of the 2nd PVC

MAIN MENU



Clicking on the logo anywhere will return you to this Main Menu

PRESENTATION

3

SUPPORT

5

**ORGANIZING
COMMITTEE**

6

**SCIENTIFIC
COMMITTEE**

7

**KEYNOTE
PRESENTATIONS**

12

THEMATIC SESSION

**Evolution and
Palaeobiodiversity
in Neogene and
Quaternary
Islands**

20

THEMATIC SESSION

**Fossil insects,
their record,
ecology and
evolution**

29

THEMATIC SESSION

**Palynology
as a tool in
stratigraphic and
paleoenvironmental
research**

41

THEMATIC SESSION

**PalaeoVC
Early
career
session**

48

THEMATIC SESSION

**Paleontology
in Education
and Society**

66

GENERAL SESSION

**GENERAL
PALAEONTOLOGY**

92

GENERAL SESSION

PALAEOZOIC

103

GENERAL SESSION

MESOZOIC

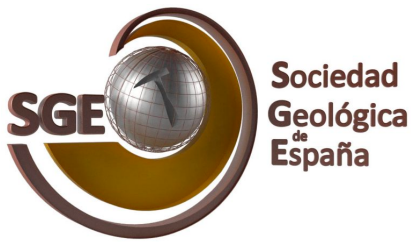
113

GENERAL SESSION

CENOZOIC

144

Palaeontological Societies



Universities and Museums



Others



Organizing Committee

Chair

Dr. Vicente D. Crespo

(Museo de la Plata (UNLP, CONICET), Museu Valencià d'Història Natural, Museo Paleontológico de Alpuente and Departament de Botànica i Geologia, Universitat de València) vidacres@gmail.com

Esther Manzanares

(Department of Botany and Geology and Institut Cavanilles de Biodiversitat i Biologia Evolutiva, Universitat de València) Esther.Manzanares@uv.es

Secretary

Dr. Carlos Martínez-Pérez

(Department of Botany and Geology and Institut Cavanilles de Biodiversitat i Biologia Evolutiva, Universitat de València and University of Bristol) Carlos.Martinez-Perez@uv.es

Humberto G. Ferrón

(University of Bristol) humberto.ferron@bristol.ac.uk

Bursar

José Luis Herráiz

(Department of Botany and Geology and Institut Cavanilles de Biodiversitat i Biologia Evolutiva, Universitat de València) joheca@alumni.uv.es

Social networks

Fernando Antonio M. Arnal

(University of Bath) fama25@bath.ac.uk

Arturo Gamonal

(Museo Paleontológico de Alpuente) arturo-gamonal@hotmail.com

Francesc Gascó

(Universidad Nacional de Educación a Distancia) francisco.gasco@gmail.com

Other Members

Paolo Citton

(CONICET and Instituto de Investigaciones en Paleobiología y Geología, IIPPG); Argentina pcitton@unrn.edu.ar

Evangelos Vlachos

(CONICET and Museo Paleontológico Egidio Feruglio, Argentina and School of Geology, Aristotle University of Thessaloniki, Greece) evlacho@gmail.com



Scientific Committee

- Dr. **Abdalla Abu Hamad**, Department of Geology, University of Jordan, Amman, Jordan.
- Dr. **Adan Pérez García**, Department of Physics Mathematics and Fluids, National Distance Education University (UNED), Spain.
- Dr. **Adele Bertini**, Department of Earth Sciences, University of Florence, Florence, Italy.
- Agata Pielowska-Ceranowska**, Department of Invertebrate Zoology and Parasitology, University of Gdańsk, Gdańsk, Poland.
- Dr. **Alberto Valenciano**, University of Cape Town, South Africa.
- Dr. **Alberto Collareta**, Department of Earth Sciences, University of Pisa, Pisa, Italy.
- Dr. **Alexander K. Hastings**, Virginia Museum of Natural History, Virginia, USA.
- Dr. **Alexey Solodovnikov**, Department of Biosystematics, Natural History Museum of Denmark, Copenhagen, Denmark.
- Dr. **Alexis M. Mychajliw**, Laboratories of Molecular Anthropology and Microbiome research, University of Oklahoma, Norman, USA.
- Dr. **Alison M. Murray**, Department of Biological Sciences, University of Alberta, USA.
- Dr. **Amalia Spina**, Department of Physics and Geology, University of Perugia, Perugia, Italy.
- Dr. **Ana García Vázquez**, ArchaeoScience#RO Platform, Research Institute of the University of Bucharest, Romania.
- Dr. **Andrea Villa**, Bayerische Staatssammlung für Paläontologi und Geologie.
- Dr. **Andrej Spiridonov**, Department of Geology and Mineralogy, Vilnius University, Vilnius, Lithuania.
- Dr. **Ángela Delgado Buscalioni**, Department of Biology, University Autónoma of Madrid, Madrid, Spain.
- Dr. **Angelo Cipriani**, Department of Earth Sciences, Sapienza University of Rome, Rome, Italy.
- Dr. **Àngel Galobart**, Mesozoic Research Group, Catalanian Institute of Palaeontology Miquel Crusafont, Barcelona, Spain.
- Dr. **Anna Żylińska**, Department of Historical and Regional Geology, University of Warsaw, Poland.
- Dr. **Antonio Briguglio**, Department of Earth Sciences, Environment and Life, University of Genova, Genova, Italy.
- Dr. **Antonio García-Alix**, Department of Stratigraphy and Palaeontology, University of Granada, Granada, Spain.
- Dr. **Arnau Bolet**, School of Earth Sciences, University of Bristol, Bristol, UK.
- Dr. **Athanassios Athanassiou**, Ephorate of Palaeoanthropology-Speleology, Greek Ministry of Culture, Athens, Greece.
- Dr. **Attila Ósi**, Department of Palaeontology, Eötvös Loránd University, Budapest, Hungary.
- Dr. **Bastien Menecart**, Department of Geology, Natural History Museum Basel, Basel, Switzerland.
- Dr. **Benjamin Kear**, Museum of Evolution, Uppsala University, Sweden.
- Dr. **Bodil Wesenberg Lauridsen**, Department of Reservoir Geology, GEUS and Natural History Museum of Denmark, University of Copenhagen, Copenhagen, Denmark.
- Dr. **Brooke Erin Crowley**, Department of Geology and Anthropology, University of Cincinnati, Cincinnati, USA.
- Dr. **Bushra Majeed Issa**, Department of Geological Science, Bashra University, Iraq.
- Dr. **Carlos Cónsole-Gonella**, INSUGEO, National University of Tucumán, Argentina.
- Dr. **Carmen Nacarino-Meneses**, Department of Biological Sciences, University of Cape Town, Cape Town, South Africa.
- Dr. **Carmen Núñez Lahuerta**, University Nova of Lisboa, Portugal.
- Dr. **César Laplana**, Regional Archaeological Museum of Madrid, Madrid, Spain.
- Dr. **Carlos Castañeda Posadas**, Department of Palaeontology, Benemérita University Autónoma de Puebla, México.
- Dr. **Carolina Acosta Hospitaleche**, Department of Vertebrate Palaeontology, National University of La Plata, La Plata, Argentina.
- Dr. **Cesare Andrea Papazzoni**, Department of Chemical and Geological Sciences, University of Modena and Reggio, Modena, Italy.
- Dr. **Chiara Angelone**, Department of Science, University of Rome Tre, Rome, Italy.
- Dr. **Christine Böhmer**, CNRS, National Museum of Natural History of Paris, France.
- Dr. **Christian Klug**, Institute of Palaeontology and Palaeontological Museums, University of Zurich, Zurich, Switzerland.
- Dr. **Corentin Bochaton**, UMR 5199 PACEA, Université de Bordeaux, Pessac, France.
- Dr. **Corwin Sullivan**, Key Laboratory of Vertebrate Evolution and Human Origins, Institute of Vertebrate Paleontology and Paleoanthropology, Beijing, China.

continues >

Scientific Committee

- Dr. **Damián E. Pérez**, Patagonic Institute of Geology and Palaeontology, IPGP CCT CONICET-CENPAT, Argentina.
- Dr. **Dany Azar**, Faculty of Sciences, Lebanese University, Beirut, Lebanon.
- Dr. **Darin A. Croft**, Department of Anatomy, Case Western Reserve University, Cleveland, USA.
- Dr. **Diego Castanera**, Àngel Galobart's Lab, Catalan Institute of Palaeontology Miquel Crusafont, Barcelona, Spain.
- Dr. **Diego García Bellido**, Faculty of Sciences-School of Biological Sciences University of Adelaide, Australia.
- Dr. **Dongxun Yuan**, Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences, Beijing, China.
- Dr. **Dores Marin Monfort**, Department of Palaeobiology, Natural Museum of Natural Sciences, Madrid, Spain.
- Dr. **Eduardo Jesús Mayoral Alfaro**, Department of Geology, University of Huelva, Huelva, Spain.
- Dr. **Eduardo Jiménez Hidalgo**, University del Mar, Puerto Escondido, Mexico.
- Dr. **Elena Cuesta Fidalgo**, Institute of Dinosaur Research, Fukui Prefectural University, Japan.
- Dr. **Elena V. Syromyatnikova**, Borissiak Paleontological Institute of the Russian Academy of Sciences, Moscow, Russia.
- Dr. **Eli Amson**, Department of Evolution and Geoprocesses, Museum für Naturkunde, Berlin, Germany.
- Dr. **Elisa Luzi**, Catalanian Institute of Human Palaeoecology and Social Evolution, Tarragona, Spain.
- Dr. **Elsa Panciroli**, Department of Earth Sciences, University of Oxford, Oxford, UK.
- Dr. **Enrique Peñalver**, Department of Geoscience Research and Prospective, Spanish Geological and Miner Institute, Madrid, Spain.
- Dr. **Esperanza Cerdeño**, CONICET-IANGLA, Buenos Aires, Argentina.
- Dr. **Eudald Mujal Grané**, Department of Palaeontology, State Museum of Natural History, Stuttgart, Germany.
- Dr. **Evangelos Vlachos**, CONICET, Palaeontological Museum Egidio Feruglio, Argentina.
- Dr. **Fabio Massimo Petti**, Department of Geology, Museum of Science, Trento, Italy.
- Felisa Josefina Aguiar Arellano**, Department of Palaeontology, INAH Coahuila Center, Monterrey, Mexico.
- Dr. **Fernando J. Fernández**, Department of Chemistry, CONICET, Buenos Aires, Argentina.
- Dr. **Francisco J. Vega**, Geology Institute UNAM, Madrid, Spain.
- Dr. **Frank Scholze**, Hessian State Museum Darmstadt, Darmstadt, Germany.
- Dr. **Fresia Ricardi-Branco**, Institute of Geosciences, University of Campinas, Campinas, Brazil.
- Dr. **Gale A. Bishop**, Department of Geology and Geography, Georgian Southern University, USA.
- Dr. **Georgios Georgalis**, Department of Earth Science, University of Torino, Turin, Italy.
- Dr. **Giovanni Coletti**, Department of Earth and Environmental Sciences, University of Milano Bicocca, Milan, Italy.
- Dr. **Giuseppe Marramà**, Department of Earth Science, University of Torino, Turin, Italy.
- Dr. **Greg P. Wilson**, Curator of Vertebrate Paleontology, University of Washington, USA.
- Dr. **Hermínio Ismael de Araújo Júnior**, Department of Stratigraphy and Paleontology, Rio de Janeiro State University, Rio de Janeiro, Brazil.
- Dr. **Hugo Salais**, Independent researcher.
- Dr. **Hugues-Alexandre Blain**, Catalanian Institute of Human Palaeoecology and Social Evolution, Tarragona, Spain.
- Dr. **Humberto G. Ferrón**, School of Earth Sciences, University of Bristol, Bristol, UK.
- Dr. **Ignacio Díaz Martínez**, Research Institute of Palaeobiology and Geology, National University of Río Negro, Viedma, Argentina.
- Dr. **Imran A. Rahman**, Oxford University Museum of Natural History, Oxford, UK.
- Dr. **Izabela Poprawa**, Institute of Biology Biotechnology and Environmental Protection, University of Silesia, Katowice, Poland.
- Dr. **Iván Narváez**, Department of Physics Mathematics and Fluids, National Distance Education University (UNED), Spain.
- Dr. **James H. Nebelsick**, Department of Geosciences, University of Tuebingen, Tuebingen, Germany.
- Dr. **Jan van der Made**, Department of Palaeobiology, Spanish National Research Council, Madrid, Spain.
- Dr. **Jeremy E. Martin**, CNRS researcher at ENS Lyon and University of Lyon 1, Lyon, France.
- Dr. **Joan Madurell**, Department of Neogene and Quaternary Faunas, Catalanian Institute of Palaeontology Miquel Crusafont, Barcelona, Spain.
- Dr. **John Rowan**, Department of Biology, University of Massachusetts Amherst, Amherst Center, USA.
- Dr. **John W. M. Jagt**, Curator of Cretaceous Collections, Natural History Museum Maastricht, Maastricht, Netherlands.
- Dr. **Jon Tennant**, Open Science MOOC, Germany.
- Dr. **Jose Ignacio Canudo**, Faculty of Sciences, University of Zaragoza, Zaragoza, Spain.

continues >

Scientific Committee

- Dr. **Pascal Godefroit**, Department of Palaeontology, Royal Belgian Institute of Natural Sciences, Brussels, Belgium.
- Dr. **Pavel Gol'din**, I. I. Schmalhausen Institute of Zoology, National Academy of Science of Ukraine, Kyiv, Ukraine.
- Dr. **Pavel P. Skutchas**, Faculty of Biology, Saint Petersburg State University, Saint Petersburg, Russia.
- Dr. **Pedro Piñero García**, La Plata Museum, CONICET, Buenos Aires, Argentina.
- Dr. **Penélope Cruzado Caballero**, CONICET, National University of Río Negro, Argentina.
- Dr. **Peter Alsen**, Department of Stratigraphy, The Geological Survey of Denmark and Greenland, Copenhagen, Denmark.
- Dr. **Peter Ozsvart**, MTA-MTM-ELTE, Research Group for Paleontology, Hungarian Academy of Sciences, Budapest, Hungary.
- Dr. **Pierre-Oliver Antoine**, Institut of Evolutionary Sciences, University of Montpellier, Montpellier, France.
- Dr. **Piotr Wegierek**, Aleksander Herczek's Lab, University of Silesia, Katowice, Poland.
- Dr. **Raef Minwer-Barakat**, Catalanian Institute of Palaeontology Miquel Crusafont, Barcelona, Spain.
- Dr. **Raquel Moya Costa**, Department of Earth Science, University of Zaragoza, Zaragoza, Spain.
- Dr. **Ricardo Pérez de la Fuente**, Oxford University Museum of Natural History, Oxford, UK.
- Dr. **Rich Mooi**, Department of Invertebrate Zoology and Geology, California Academy of Sciences, San Francisco, USA.
- Dr. **Rodrigo Brincalepe Salvador**, Department of Natural History, Museum of New Zealand Te Papa Tongarewa, Wellington, New Zealand.
- Dr. **Richard A. Fariña**, Faculty of Sciences, University of the Republic, Montevideo, Uruguay.
- Dr. **Romala Govender**, Department of Research and Exhibitions, Iziko South African Museum, Cape Town, South Africa.
- Dr. **Rosalía Guerrero Arenas**, University del Mar, Puerto Escondido, Mexico.
- Russell D. C. Bicknell**, University of New England, Armidale, Australia.
- Dr. **Ryan N. Felice**, Department of Cell and Developmental Biology, University College London, London, UK.
- Dr. **Salvador Bailón**, Institute of Ecology and Environment, French National Centre for Scientific Research, Paris, France.
- Dr. **Samuel Zamora**, Spanish Geological and Miner Institute, Madrid, Spain.
- Dr. **Scott D. Evans**, Department of Paleobiology, Smithsonian Institution, Washington D.C., USA.
- Dr. **Serdar Mayda**, Department of Biology, Ege University, Izmir, Turkey.
- Dr. **Sergio Martínez**, Department of Palaeontology, University of the Republic, Uruguay.
- Dr. **Séverine Fauquette**, Institute of Evolutionary Sciences, University of Montpellier, Montpellier, France.
- Dr. **Soledad Gouric-Cavalli**, Department of Vertebrate Palaeontology, National University of La Plata, La Plata, Argentina.
- Dr. **Sonia Ros**, Faculty of Natural Sciences, National University of La Plata, La Plata, Argentina.
- Dr. **Stanislava Vodrážková**, Czech Geological Survey, Prague, Czech Republic.
- Dr. **Steffen Kiel**, Department of Palaeobiology, Swedish Museum of Natural History, Stockholm, Sweden.
- Dr. **Stephanie Drumheller**, Department of Earth and Planetary Sciences, University of Tennessee, Knoxville, USA.
- Dr. **Susanne Cote**, Department of Anthropology, University of Calgary, Calgary, Canada.
- Dr. **Suzanne Hand**, Department of Earth and Environmental Sciences, University of New South Wales, Kensington, Australia.
- Sven Sachs**, Department of GeoSciences, Naturkunde-Museum Bielefeld, Bielefeld, Germany.
- Dr. **Tanja Wintrich**, Paul Martin Sander's Lab, University of Bonn, Bonn, Germany.
- Dr. **Telm Bover-Arnal**, Department of Geochemistry, Petrology and Geological Prospecting, University of Barcelona, Barcelona, Spain.
- Dr. **Tomáš Kočí**, Palaeontological Department, Natural History Museum, Prague, Czech Republic.
- Dr. **Thodoris Argyriou**, Department of Origins and Evolution, National Museum of Natural History, Paris France.
- Dr. **Thomas A. Neubauer**, Justus Liebig University, Gießen, Germany.
- Dr. **Ünal Akkemik**, Department of Forest Botany, Istanbul University, Istanbul, Turkey.
- Dr. **Victor Manuel Bravo Cuevas**, Curator, autonomous University of Hidalgo, Pachuca de Soto, Mexico.
- Dr. **Xabier Pereda Suberbiola**, Department of Stratigraphy and Palaeontology, University of the Vasque Country, Leioa, Spain.
- Dr. **Zhijie Jack Tseng**, Department of Pathology and Anatomical Science, University of Buffalo, Buffalo, USA.

Contributions



Upper Jurassic caryophyllids from condensed pelagic deposits of the Umbria-Marche Apennine (Central Italy)

A. Cipriani[®]

Sapienza University of Rome –
Department of Earth Sciences,
Rome, Italy

S. Fabbi

Sapienza University of Rome –
Department of Earth Sciences,
Rome, Italy

B. Lathuilière

Université de Lorraine,
CNRS – Lab. GeoRessources,
Vandoeuvre-lès-Nancy Cedex,
France

P. Citton

Instituto de Investigación
en Paleobiología y Geología
(IIPG), CONICET - Universidad
Nacional de Río Negro, General
Roca, Río Negro, Argentina

M. Romano

Sapienza University of Rome –
Department of Earth Sciences,
Rome, Italy

Here we report newly collected corals from Kimmeridgian–Tithonian pelagites of Central and Northern Apennines. They grew on intrabasinal structural highs (Pelagic Carbonate Platforms or PCPs). The highs originated from dismembering and drowning of a vast peritidal carbonate platform during the Early Jurassic Western Tethys rifting stage. The drowning was followed by condensed pelagic sedimentation on the top of PCPs. Findings of both zooxanthellate and probably azooxanthellate corals in these facies shed new light on the Jurassic-Early Cretaceous paleogeography, paleoenvironment and paleoecology of PCPs. The occurrence of zooxanthellate corals in PCP-top condensed successions recently allowed to constrain the bathymetry of these depositional systems to the photic zone (40 – 150 m). The studied material is mostly represented by solitary, probably azooxanthellate corals, associated with light dependent organisms. These specimens usually display elliptical to circular calices and have ceratoid attached morphologies, finely granulated costosepta with a clear crown of palis. Pending a more detailed study of their microstructure, these features suggest an assignation to the scleractinian extant family Caryophyllidae. The collected azooxanthellate fauna is oligotypic but abundant, as a possible result of very slow sedimentation rates and extreme condensation. Most of the corals do not display in-life position, being detached from the substrate and randomly arranged within the pelagic deposits; others are attached on ammonites pseudoshells or on other corals. The new occurrence improves the Late Jurassic record of caryophyllids, providing additional constraints on their paleoecology and on the paleoenvironmental evolution of this sector of Western Tethys.



Caryophyllidae
Upper Jurassic
Tethys
Corals
Umbria-Marche
Apennine



angelo.cipriani@uniroma1.it

