Tenth International Congress on Rudist Bivalves

Bellaterra, June 22-27

Scientific Program and Abstracts

Edited by J.M. Pons and E. Vicens

UAB
Universitat Autònoma de Barcelona

CONGRESS SCHEDULE

Monday 23 of June morning

Inauguration of the Congress

Room: Sala Lluis Vives I, Hotel Campus

09.00 **Organising Committee:** welcome and introductory remarks

Session: Rudist facies, stratigraphy and biogeography

Room: Sala Lluis Vives I, Hotel Campus
Chair persons: *Robert W. Scott and Peter W. Skelton*

Oral presentations

09.30 Abu Khadrah, A.M., Abdel Gawad, G., Helba, A.A., and Badawy, S.M.
10.00 Glamuzina, G. and Korbar, T.
10.30 Moro, A., Horvat, A, Tomić, V., Sremak, J., and Bermanec, V.
11.00 Coffee break
11.30 Moro, A., Ruberti, D., Tarlao, A., and Tunis, G.
12.00 Negra, M.H., Boughalmi, S., Jaballah, J., Ben Alaya, S., and Bessais, H.Z.
12.30 Özer, S., Sari, B., and Görmüş, M.
13.00 Lunch break

Monday 23 of June afternoon

Session: Rudist facies, stratigraphy and biogeography (cont.)

Room: Sala Lluis Vives I, Hotel Campus
Chair person: *Richard Höfling*

Oral presentations

15.00 Scott, R.W., Wang, Y., and Lai, X.
15.30 Sha, J., Rao, X.
16.00 Skelton, P.W., Graziano, R., Raspini, A., and Spalluto, L.
16.30 Steuber, T. and Lohler, S.
17.00 Coffee break
17.30 **Poster session**

Poster Session: Rudist facies, stratigraphy and biogeography

Room: Sala Lluis Vives I, Hotel Campus
Chair person: *Allan Moro*

Poster presentations (17.30 – 19.00)

1 Boughalmi, S., Negra, M.H., Ben Alaya, S., and Bessais, H.Z.
2 Di Michele, P., Rusciadelli, G., Ricci, C., Carrea, N., and Cestari, R.
3 Frijia, G., Parente, M., and Mutti, M.
4 Jaballah, J. and Negra, M-H.
5 Khazaei, A.R., Mirab Shabestari, G.R.,and Seelpour Karamjavan, L.
6 Özer, S., Güngör, T., Seguier, E.K., Özkar-Örgen, I., Masse, J.-P., Fenerci-Masse, M., and Arc, I.
7 Salama, Y., Saber, S., Abdel-Gawad, G., and Grammer, M.

Tuesday 24 of June morning

Session: Rudist taxonomy and evolution

Room: Sala Lluis Vives I, Hotel Campus
Chair persons: *Thomas Steuber and Jean Pierre Masse*

Oral presentations

09.00 Masse, J.-P. and Fenerci-Masse, M.
09.30 Masse, J.-P., Fenerci-Masse, M., Arias, C., and Vilas, L.
10.00 Mitchell, S.F.
10.30 Özer, S. and Ahmad, F.
11.00 Coffee break
11.30 Özer, , S., Tarlao, A., Tunis, G.,and Skelton, P.W.
12.00 Pons, J.M., Gil Gil, J., Troya, L., Garcia Hidalgo, J., and Segura, M.
12.30 Pons, J.M., Vicens, E., and Garcia Barrera, P.
13.00 Lunch break

Tuesday 24 of June afternoon

Session: Rudist taxonomy and evolution (cont.)

Room: Sala Lluis Vives I, Hotel Campus
Chair person: *Simon F. Mitchell*

Oral presentations

15.00 Rao, X., Skelton, P.W., Sha, J., and Cai, H.
15.30 Schumann, D.
16.00 Skelton, P.W.
16.30 Tarlao, A., Tunis, G., Ozer, S., and Tentor, M.
17.00 Coffee break
17.30 **Poster session**

Poster Session: Rudist taxonomy and evolution

Room: Sala Lluis Vives I, Hotel Campus
Chair person: *Sacit Özer*

Poster presentations (17.30 – 19.00)

8 Alencaster Ybarra, G. and Garcia Pérez, F.
9 Bilotte, M. and Debrosse, E.J.
10 Čvorović, B., Jurkovšek, B., Kolar-Jurkovšek, T., Tunis, G., Tarlao, A., and Tentor, M.
11 Guggino Rivera, A.V.
12 Munujos, H., Vicens, E., and Pons, J.M.
13 Oviedo Garcia, A., Castro Garcia, J.A., and Franco-Rubio, M.
14 Sano, S.-I. and Masse, J.-P.
15 Sano, S.-I., Iba, Y., Skelton, P.W., Masse, J.-P., Aguilar, Y.M., and Kase, T.

Congress dinner

Room: Sala Martí i Franquès II , Hotel CAMPUS

21.00 Enjoy this Summer evening meal in casual ware

Wednesday 25 of June morning

Session: Pyrenean rudists

Room: Sala Lluis Vives I, Hotel Campus
Chair person: *Michel Bilotte*

Oral presentations and poster

10.00 Pons, J.M., Vicens, E., Troya, L., Lucena, G., and Gil Gil, J.
11.00 Coffee break

Final Discussion and Closure of the Congress

Room: Sala Lluis Vives I, Hotel Campus
Chair persons: *Scientific Committee*

11.30 Open discussion
Conclusions
For coming activities
Next venue
Closure
13.00 Lunch break

Wednesday 25 of June afternoon

Field trip: Upper Cretaceous rudists from the Noguera and the Pallars-Jussà

Field trip leaders: *Jose Maria Pons and Enric Vicens*

17.00 Vehicles leave from Hotel Campus
Arrival at Hotel Terradets, in the Montsec, expected at time for dinner, about 21.00h
Return at Hotel Campus, on Friday 27 June, expected around 20-00h

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RUDISTS 2014

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Organising Committee

Jose Maria Pons, Universitat Autònoma de Barcelona
Enric Vicens, Universitat Autònoma de Barcelona
Jaume Gallemí, Museu de Ciències Naturals de Barcelona
Luis Troya, Museu de Ciències Naturals de Barcelona (coc6)
Gerard Lucena, Universitat Autònoma de Barcelona

Organising Assistance

Heleni Munujos

Scientific Committee

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Michel Bilotte (Toulouse, France)
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Riccardo Cestari (Roma, Italy)

Organising Institutions

UAB
Universitat Autònoma de Barcelona
Departament de Geologia
Unitat de Paleontologia

nat museu de ciències naturals de Barcelona

ICHN
Institució Catalana d'Història Natural

Technical Assistance

Agència de Promoció d'Activitats i de Congressos

Hotel Campus

Reunions i Ciència SL

Department of Geography and Geology, The University of the West Indies, Mona, Kingston, Jamaica

ORAL

The Hippuritidae of the Americas represent migratory forms of European or African origin, and endemic radiations from unknown stocks. The earliest immigration invent is represented in the Upper Turonian of Mexico where forms identified as *Hippurites*? *resectus* occur.

From the early Coniacian to mid Santonian, hippuritids are unknown in the Americas, but diverse forms reappear in the late Santonian to early Campanian interval of Mexico, Curaçao and the Greater Antilles. These include Old World immigrant taxa (*Pseudovaccinites* and ?*Torreites*) and endemic forms of Barrettininae. *Pseudovaccinites* is represented by *P. macgillevryi*, *P. martini* and *P. vermunti* from the late Santonian-early Campanian. *Torreites* appears either in the late Santonian or early Campanian (*T. tschoppi* from Curaçao, Cuba and Jamaica) and ranges up into the Middle Campanian (*T. sanchezi* from Cuba, Puerto Rico, Jamaica and San Luis Potosi) where it is joined by *Polytorreites* (from Puerto Rico).

The Barrettinae, diagnosed by their distinctive dentition, show two major radiations. The *Barrettia*-clade, characterized by the presence of pallial canals in the inner shell layer of the left valve, appeared in the late Santonian and rapidly diversified in the early to mid Campanian of the Greater Antilles and Mexico, with the last forms occurring in the late Campanian to early Maastrichtian of the Greater Antilles, California and Mexico. *Barrettia* itself with a reticulate pore system, appeared in the late Santonian with forms having very simple rays and consists of at least three lineages each showing increasing size and complexity of the rays. *Whitfieldella*, characterized by a modified dentition and distinctive pore system appeared in the early Campanian, also has three lineages and involved into giant forms in the mid Campanian to late Campanian. *Parastroma*, with reticulate pores and reduced rays, appeared in the mid Campanian (*P. sanchezi* and *P. trechmanni* Chubb) and extended up into the early Maastrichtian (*P. guitarti*).

The *Practorretia*-clade (no pallial canals in the left valve) probably appeared in the late Santonian-early Campanian, but becomes dominant in the early to late Maastrichtian of northern South America, the Greater Antilles and Mexico. The earliest forms appear to be *Laluzia coralliodea* from the late Santonian or early Campanian of Cuba, and *Laluzia* sp. may also be present in the mid Campanian of St. Croix, otherwise *Laluzia peruviana* is widespread in the early Maastrichtian of Cuba, Puerto Rico, Mexico and Peru. A single Lineage of *Practarretia*, characterized by a different dentition from *Laluzia*, ranges through the Maastrichtian (*P. porosa* and *P. sparsilirata*) of Jamaica, Cuba, Puerto Rico and Mexico where it shows a progressive seze increase. *Caribbea* forms an interesting plexus of morphologies from the early to late Maastrichtian. In the early Maastrichtian *C. muellerreidi* shows three distinctive shell ornamentations (smooth, coarsely ribbed and finely ribbed), two of which (smooth and coarsely ribbed) are also seen in the mid Maastrichtian *C. maldonensis* (Chubb); a third giant species also occurs in the late Maastrichtian of Jamaica.

UPPER CRETACEOUS TRANSGRESSIVE SEDIMENTS WITH RUDISTS AND CORALS FORM NORTHERN CROATIA, SLOVENIA AND BOSNIA

Alan Moro, Aleksander Horvat, Vladimir Tomic, Jasenka Sremac, and Vladimir Bermanec

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ORAL

At localities in northern Croatia (Donje Orešje, Gornje Orešje, Brašljevica and Sv. Martin) Slovenia (Stranice) and Bosnia (Bešpelj) successions of shallow water Upper Cretaceous deposits occur, represented by alternating clastic and carbonate sediments with rudist and coral communities, which transgressively overlay Triassic, Jurassic or Upper Cretaceous basement rocks.

Transgressive succession for investigated localities with diverse facies could be vertically divided into a lower clastic sediments with corals, middle mixed clastic-carbonate sediments with corals and rudists and upper carbonate sediments with rudists. Third facies could pass into pelagic limestones or marls with nannofossils. The lower clastic facies consists of sediments with corals. In middle facies both, corals and rudists are present, later through highly abundant paucispecific community. Upper facies comprises carbonate sediments where corals are completely absent or appears at the

beginning of the facies only. Rudist community of the carbonate facies could range from mixed assemblage with individuals of radiolitids and hippuritids to relatively low-abundant, monospecific assemblage with individuals of hippuritids and sporadically present other genera.

Different abundance of rudists and corals within different facies could be dependable upon sediment type and paleorelief conditions.

The depositional setting of the investigated transgressive successions presumably variate due to the more or less pronounced basement topography. In places with low paleorelief, transgressive succession starts with clastic facies, while on steeper one with carbonate facies.

UPPER CRETACEOUS RUDISTS ARCHITECTURE IN SHALLOW-WATER ENVIRONMENTS - EXAMPLES FROM ISTRIA (CROATIA) AND SOUTHERN APENNINES (ITALY)

Alan Moro, Daniela Ruberti, Alceo Tarlao, and Giorgio Turis

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ORAL

Upper Cretaceous rudists lithosomes within shallow water environments of southern Istria and Southern Apennines show overview of lateral and vertical evolution of rudists congregations. The lithofacies of investigated profiles are mostly mud-supported limestones with agglutinated and porcelaneous benthic foraminifers. Rudists are characterised by different radiolitid genera (mostly *Radiolites* and *Durania*) that thrived within subtidal environments through different types of mono- or polispecific congregations, ranging from few tens to few hundreds of individuals.

The outcrop exposure allows two and three-dimensional approach for reconstruction of rudist architecture and facies. The leitmotif of the rudist congregations consists of densely-packed individuals in growth position laterally passing to toppled ones. Other rudist bodies are characterised by shell fragments which constitute floatstone. Rudists fragments are the result of bioerosion and less mechanical breakdown. The rudist rich bodies laterally pass to foraminiferal wackestone/packstone.

The reconstructed arragment of rudists bodies shows few meter-to-decameter scale lenscidal bodies which corresponds to in situ settlment of individuals. They are characterised by upright growing in situ shells that become generally toppled towards the outer part of the bodies. These meter scale bodies are patchly arranged between floatstone/rudstone, in which the rudists are fragmented beyond any taxonomic recognition.

The depositional setting inferred on the basis of facies analysis may be considered of dominantly low energy. The gross lenticular geometry of the rudist bodies and the gradual passage to floatstone/rudstone could be related to pattern of weak currents pathways. The overall occurrence of muddy sediments suggests a low angle, gently dipping depositional environment.

PIRONAEA MILOVANOVICI FROM SOUTH-EASTERN SPAIN

Helena Munujos, Enric Vicens, and Josep Maria Pons

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POSTER

Abundant, well preserved, and matrix-free specimens of *Pironaea milovanovici* Kuhn collected from the surroundings of Tabernes de la Valldigna, Valencia province, Spain, allowed a fairly complete observation and description of the internal and external shell characters of the species, as well as of their variability both ontogenetic and intra-specific.

Particularly, understanding the morpho-constructional patterns of the outer shell layer infolds in the right valve, of the pore-canal system of the outer shell layer of the left valve, and the relation between them both may, in our opinion, shed some light to understand the development