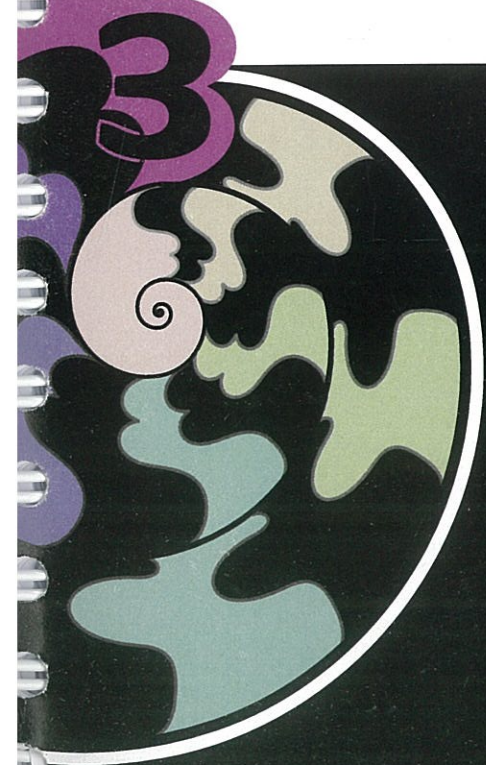


PROGRAMME & ABSTRACTS

INTERNATIONAL PALAEOONTOLOGICAL CONGRESS



LONDON

2010

June 28 - July 3

S27B - TERTIARY ROOTS IN THE RECENT MOLLUSCAN FAUNAS OF THE SOUTHWESTERN ATLANTIC OCEAN

del Río, Claudia¹, Martínez, Sergio² and Orensanz, José María³

¹Museo Argentino de Ciencias Naturales. Gallardo 470, (C1405DJR) Buenos Aires, Argentina

²Facultad de Ciencias. Igua 4225, (11400) Montevideo, Uruguay

³Centro Nacional Patagónico. Blvd Brown 2825, (9120) Puerto Madryn, Chubut, Argentina

e-mail: claudiajdelrio@gmail.com

The species composition of the Recent Southwestern Atlantic (SWA) molluscan biota (Argentine and Magallanic Provinces) has its roots mostly in post-Late Miocene times. Among the more than 1300 species that form the modern regional assemblage, only 37 are survivor species and 25 are long-term survivors going back to Miocene times: *Leionucula puelcha*, *Nucula semiornata*, *Adrana electa*, *Crassostrea rizhophorae*, *Felaniella villardeboana*, *Tivela isabelleana*, *Amiantis purpurata*, *Macra isabelleana*, *M.janeiroensis*, *Tellina gibber*, *Cyrtopleura lanceolata*, *Caryocorbula pulchella*, *C.caribaea*, *Tegula patagonica* and *Halystilus columna*. An additional 13 species have closely related congeneric counterparts of that age: *Lamellinucula semiornata*, *Glycymeris longior*, *Psychochlamys patagonica*, *Aequipecten tehuelchus*, *Trachycardium muricatum*, *Anomalocardia brasiliana*, *Pitar rostrata*, *Ameghinomya antiqua*, *Retrotapes exalbida*, *Tagelus plebeius*, *Trophon geversianus*, *Adelomelon beckii* and *Pachycymbiola brasiliana*. However, when upper levels of the taxonomic hierarchy are considered, Tertiary Patagonian faunas appear to have played an important role in the genesis, composition and biogeography of the living regional faunas. Almost 80% of the Tertiary families and 42% of the genera survived in the SWA. Yet, in spite of the high percentage of surviving families, generic diversity declined considerably in many of them, as is exemplified specially by the Struthiolariidae, Muricidae, Buccinidae, Veneridae, Ostreidae and Pectinidae. Among all surviving Tertiary genera, 10% were already present in the area in Paleocene times, 31% in the Eocene, 29% in the Oligocene- Middle Miocene, and 30% in the Late Miocene. Endemic taxa such as *Trophon*, *Miomelon*, *Adelomelon*, *Odontocymbiola* and *Zygochlamys*, have been present in the area since Eocene times, and *Pachycymbiola*, *Retrotapes* and *Ameghinomya* since the early Miocene.

W10 - HIRNANTIAN ACROTARCHS FROM ANTICOSTI, CANADA (LAURENTIA) AND VALGA, ESTONIA (BALTICA): BIOSTRATIGRAPHIC IMPLICATIONS

Delabroye, Aurélien ¹, Vecoli, Marco ¹, Hints, Olle ² and Servais, Thomas ¹

¹Université de Lille 1, FRE 3298 du CNRS Géosystèmes, SN5, Cité Scientifique, 59655 Villeneuve d'Ascq, France

²Institute of Geology at Tallinn University of Technology, Ehitajate 5, 19086 Tallinn, Estonia

e-mail: aurelien.delabroye@etudiant.univ-lille1.fr

Palynological investigations of key Ordovician-Silurian boundary sections from Anticosti, Canada (Laurentia) and Valga, Estonia (Baltica) revealed several acritarch species that show high potential for local as well as long-distance biostratigraphic correlations. Due to facies differences on Anticosti, the correlations of the Hirnantian Ellis Bay Formation between the more offshore carbonate-dominated sections in the west and nearshore siliciclastic-dominated sections in the east have been problematic. However, definition of seven local acritarch biozones in the upper Vauréal, Ellis Bay and lower Becscie formations (uppermost Katian to lowermost Rhuddanian), suggests that the upper Ellis Bay Formation *sensu* Long & Copper (1987) in eastern Anticosti (Prinsta and Lousy Cove members) correlates with the upper Vauréal Formation (member 5) and the Ellis Bay Formation (members 1 to 6) *sensu* Petryk (1981) in western Anticosti. The acritarch-based biozonation largely confirms the recent correlations based on chitinozoans and indicates that the base of the Hirnantian as identified at the Vauréal-Ellis Bay transition in western Anticosti should be drawn in the mid-Ellis Bay Formation in eastern Anticosti. Additionally, comparative taxonomical study of the palynoflora of Anticosti and that of the Pirgu-Porkuni strata (Jelgava, Kuldiga and Saldus formations) of the Valga drill core, Estonia, revealed new acritarch species that are common to Laurentia and Baltica. This updates the potential of acritarchs for Upper Ordovician long-distance correlations between the two palaeocontinents. Noteworthy species belong to the genera *Oppilatala*, *Evittia*, *Ammonidium* and *Helosphaeridium*. Future acritarch investigations from Estonian sections should considerably improve these first observations and consequently refine low-latitude Hirnantian acritarch biostratigraphy.