

Acta geológica lilloana

Volumen **21**

— *Suplemento* —

Abstracts of the
9th International Conference on Fluvial Sedimentology



Fundación Miguel Lillo

— 2009 —

Acta geológica lilloana

Serie publicada por la Fundación Miguel Lillo, que tiene como objetivo divulgar trabajos originales sobre ciencias geológicas y afines. Los trabajos son evaluados por árbitros externos e internos.
Correo electrónico: actageologicalilloana@gmail.com

I S S N 0 5 6 7 – 7 5 1 3

© 2009, **Fundación Miguel Lillo**. Todos los derechos reservados.

Fundación Miguel Lillo
Miguel Lillo 251
(4000) San Miguel de Tucumán
Argentina
Telefax +54 381 433 0868
www.lillo.org.ar

Editora de *Acta geológica lilloana*: Ana Fogliata
Secretaria editorial: Lucía Ibañez
Secretaria del Área Geología: Rosa Molina
Editor gráfico: Gustavo Sánchez

Comité editorial:

Dra. Ana S. Fogliata (Coordinadora) (Fundación Miguel Lillo, Facultad de Cs. Naturales, UNT)
Dra. Lucía Ibañez (Secretaria) (Fundación Miguel Lillo, Facultad de Cs. Naturales, UNT)
Dra. Judith Babot (Prosecretaria) (Fundación Miguel Lillo, Facultad de Cs. Naturales, UNT)
Dr. Pablo Grosse (Fundación Miguel Lillo, CONICET)
Dr. Hugo A. Carrizo (Fundación Miguel Lillo)
Dr. Sergio Georgieff (Facultad de Cs. Naturales, UNT, CONICET)

Editores asociados:

Dr. Carlos L. Azcuy (CONICET)
Dr. Eduardo Piovano (CONICET, Universidad Nacional de Córdoba)
Dr. Franco M. Tortello (CONICET, Universidad Nacional de La Plata)

Publicación indexada en las siguientes bases de datos:

Bulletin Signalétique, Biosis Previews, Latindex, Periodica, Referativnyi Zhurnal

Canjes:

Centro de Información Geo-Biológico del Noroeste Argentino,
Fundación Miguel Lillo, Miguel Lillo 251, (4000) San Miguel de Tucumán, Argentina.
Correo electrónico: biblioteca@lillo.org.ar

Ref. bibliográfica: *Acta geol. lilloana* 21, Suplemento, 2009.

Periodicidad: un volumen anual en dos números.

Impresión: Artes Gráficas Crivelli.
Propiedad intelectual N° 315450.
Prohibida su reproducción total o parcial.
Impreso en la Argentina.
Printed in Argentina.

Abstracts of the
9th International Conference on Fluvial Sedimentology



24-28 August, 2009
San Miguel de Tucumán, Argentina

Organization:
Universidad Nacional de Tucumán
Fundación Miguel Lillo

ORGANISING COMMITTEE

Sergio M. Georgieff
— *Convenor* —

Sebastián Moyano
— *Secretary* —

María Soledad Bustos
— *Finance* —

Gerardo E. Bossi
— *Scientific Coordinator* —

Lucía M. Ibañez
— *Publication Coordinator* —

María Eugenia Vides
— *Scientific Programme Organizer* —

Guillermo F. Aceñolaza
— *Excursion Coordinator* —

iments indicate that during the Quaternary (Pleistocene) torrential activities in the Eastern Desert together with Nile flooding led to the deposition of the studied rock units.

HIGH-FREQUENCY VARIATIONS IN ACCOMMODATION SPACE IN PUNTA SAN ANDRÉS ALLOFORMATION (PLIO-PLEISTOCENE), BUENOS AIRES PROVINCE, ARGENTINA

Elisa Beilinson

Centro de Investigaciones Geológicas – 1 #644, La Plata (B1900TAC), Argentina.

beilinson@cig.museo.unlp.edu.ar

The continental deposits of the Punta San Andrés Alloformation (Plio-Pleistocene) crop-out in the marine cliffs of south-eastern Buenos Aires Province (Mar del Plata City, Argentina). Deposits of this unit have been assigned to different sub-environments such as floodplains, fluvial channels and temporary water bodies according to their facies association and geometry (tabular, wedge-shaped or lenticular). Their lateral and vertical arrangement allows to identify three different sections, each of which represents a different sedimentary sub-environment and different accommodational conditions.

The first and lower section is characterized by floodplain deposits (crevasse-splay deposits and paleosoils). The few channel bodies found in this lower section have a simple geometry, with width/length ratio < 10 in all cases and monoepisodic filling. This lower section is considered to represent an area distal from the heads, where paleotopography, fluctuating climate and drainage design lead to the development of extensive floodplains cut by episodic, short-lived straight or low sinuosity channels associated to food events or storms. Regarding the paleosoils, a cyclic alternation was found between calcic paleosoils and hydromorphic paleosoils which was interpreted as cyclicity between dry and humid climates. Accommodation during this period was positive, but high-frequency fluctuations were defined between hydromorphic paleosoils – higher ac-

commodation space- and calcic paleosoils – less accommodation space.

It's worth saying that channels in this lower section are amalgamated vertically with channels developed in the upper sections, constituting multistorey channels. Because of this, some areas are dominated by tabular geometries of floodplain deposits and others by channelized geometries which reflect areas that remained preferentially incised during Plio-Pleistocene times.

The middle section is characterized by coarser floodplain deposits and is much more dissected by channels, which have multi-episodic filling and a complex geometry. This section is interpreted as a floodplain proximal to the heads. Paleosoils in this section are represented by hydromorphic horizons with little participation of calcic facies. Accommodation during this period is interpreted to have been positive but reduced when compared to the lower section.

The upper section is characterized by deposits of mobile, high-sinuosity channels. Floodplain deposits are barely represented and highly dissected. Development of fluvial channels is related to periods of diminishing accommodation space, probably due to a drop in local base level and/or an increase in precipitations. Filling of the channels indicates a subsequent raise in local base level and re-establishment of positive accommodation space.

To summarize, the geometric and facial analysis of Punta San Andrés Alloformation deposits allowed to identify depositional environments which vertical and lateral distribution show a progressive change in accommodation and palaeoclimatic conditions. Dry and arid periods related to little accommodation space alternate with wetter periods related to higher accommodation space and finally to a more important drop in local base level leading to general fluvial incision and negative accommodation space.