INTERNATIONAL ASSOCIATION OF SEDIMENTOLOGISTS

Aug 1973 No.15

NEWS LETTER

ASSOCIATION NEWS

NATIONAL CORRESPONDENTS

Carmina Virgili has asked to resign from the post of National Correspondent in Spain. Don Juan Rosell, Universidad Autónoma de Barcelona, Bellaterra, Barcelona, who is also Secretary of the Spanish Sedimentological Group, has taken her place.

SEDIMENTOLOGY

The first two parts of Volume 20 were despatched about 3-4 weeks late. We hope that a rescheduling of the editorial process will eliminate this delay. Owing to errors in despatch some members did not receive one or other of the first two parts of Volume 20 and a few members received more than one copy. I have also learnt that a few members did not receive either issue of Volume 19 (the last Elsevier one). I apologize to those who have been inconvenienced by these mistakes and will anyone else please tell me at once if they have not received an issue within a reasonable time. Remember though, that if you have paid your subscription late or just joined it may take up to 2 months for the bank to clear your cheque and your name to be received by the despatch department of Blackwell.

WORLD NEWS

CANADA (from Gerry Middleton)

The Geological Association of Canada sponsored two major symposia at its annual meeting, held in May 1973, at Saskatoon, Saskatchewan. One symposium, the proceedings of which will appear as a Special Paper, edited by W.G.E. Caldwell, was on the Cretaceous System of the Western Interior of North America. It included papers on the sedimentology as well as on the stratigraphy and palaeontology of this widespread group of rocks. The other symposium, jointly sponsored by the Alberta Society of Petroleum Geologists, was on the Geology of the Arctic.

For its 1974 meeting, to be held in St John's Newfoundland, the G.A.C. is planning several symposia that may be of interest to sedimentologists: Eastern margins of the Appalachians, Offshore Geology and Plate Tectonics and Metallogeny. The Mineralogical Association of Canada, which meets annually with the G.A.C., is planning a symposium in St John's on Low grade (burial) metamorphism.

Another symposium, attended by more than 500 delegates, was held in February in Vancouver and sponsored by the Cordilleran Section of the G.A.C. The title, Sedimentary Geology and Mineral Deposits of the Canadian Cordillera, reflects the growing awareness among economic geologists of the importance of sediments in metallogeny. Is this awareness matched by an awareness among sedimentologists of economic applications outside the petroleum industry?

Petroleum geologists in Canada continue to be leaders in sedimentological activities and research. The Alberta Society of Petroleum Geologists has now become the Canadian Society of Petroleum Geologists and it continues to publish the Bulletin of Canadian Petroleum Geology and many occasional publications of interest to sedimentologists. The latest two publications are Memoir 1: Future Petroleum Provinces of Canada and Memoir 2: Permian-Triassic Systems and their Mutual Boundary.

The 1973 National Conference on Earth Science (jointly sponsored by C.S.P.G. and the University of Alberta) was held in Banff on The Geology of Fluids and Organic Matter in Sediments. Drs F. Berry (Berkeley), Prof. D. Welte (Aachen) and Dr B.P. Tissot (Paris) were the speakers. Some sedimentologists may not realize that the recent book on Sands and Sandstones by Pettijohn, Potter and Siever originated when these three workers were invited to give one of the early Banff conferences. From the 1972 Banff conference a volume of notes entitled Arenaceous Deposits: Sedimentation and Diagenesis, based on lectures by S.M. Gagliano, P. Allen and H. Füchtbauer is available (see under Books and Journals).

LIBYA (from George Tappan)

The Petroleum Exploration Society of Libya conducted a most interesting and successful field trip through the Jabal al Akhdar of Northern Cyrenaica (North-eastern Libya) the last week of March. Trip Chairman Salah Kaabar of Oasis Oil Co. of Libya, and Field Leaders Don Baird of Oasis and Paul Rohlich and Bedric Zert of Geoindustria, a Czechoslovakian group who are currently

re-mapping the area under contract with the Libyan Government, are to be complimented for their "clockwork" organization and unusually fine presentations on outcrop. Emphasis was on the Eo-Oligocene carbonates and the litho-stratigraphic problems encountered in the field. Total observed sequence ranged from Upper Cretaceous to Plio-Pleistocene littoral deposits and recent geomorphological features.

NEW ZEALAND (from Peter Ballance)

Sedimentology is practised in four Geology Departments of traditional design (Universities of Auckland, Wellington, Canterbury and Otago), one Department of Earth Sciences where equal emphasis is laid on pedology, geomorphology, and geology (University of Waikato), one Geography Department (University of Canterbury), one section of the Geological Survey (Sedimentation Laboratory, Christchurch) and the Oceanographic Institute of the D.S.I.R. (Wellington).

Research

(1) Auckland University: Clastic sediments of the Waitemata Group, a lower Miocene volcanic arc/flysch trough association (P.F. Ballance, L.L. Wakefield, B.W. Hayward, R. High). Modern, shallow-marine, sediments in the northern harbours (M.R. Gregory). Sediments of the N.Z. Geosyncline (Mesozoic) (P.F. Ballance, M.R. Gregory and students).

(2) Waikato University, Hamilton: Quaternary sediments, largely volcanic-derived, in shallow-marine, fluviatile, and lacustrine environments, and also in terrestrial ash-falls (C.S. Nelson, J.D. McCraw, M. Selby, T.R. Healy). Studies of fossil sediments include Oligocene shelf carbonates/quartzarenites of the Te Kuiti Group; and clay mineral studies (C.S. Nelson). A continuing research project in Antarctica includes studies of debris slopes, regolith morphology, salt in soils, lake bathymetry and sediments, in the dry valley region of Victoria Land (M. Selby, C.S. Nelson).

(3) Victoria University of Wellington: Tertiary sedimentation in mobile basins in the transcurrent fault zone in northern South Island and eastern North Island (P.J. Barrett, P. Vella). Beacon Group continental sediments (Devonian - Triassic) in Victoria Land, Antarctica (P.J. Barrett, V. Neal).

(4) Canterbury University, Christchurch: Debris flows, both sub-aerial and sub-marine, Tertiary and Quaternary (D.W. Lewis, G. Warren). Aspects of glacial and sub-glacial deposits in the N.Z. Alps (M. Gage, and visitors I.A. Brookes, E.H. Muller, S.C. Porter). Upper Cretaceous and Lower Tertiary marine and freshwater sediments on the West Coast; and basement (Permian-Jurassic) metagreywacke suite (D.W. Lewis and students). Canterbury Geography Department is carrying out coastal studies, particularly: sediment budgets and beach dynamics; river inputs; surf and run-up processes (R.M. Kirk and students). Inland high-country erosion and soil movements (Jane M. Soons and students).

(5) Geological Survey, Christchurch: Research on fossil sediments in N.Z. includes early Palaeozoic (? Pre-Cambrian) Greenland Group on the West

Coast (M.G. Laird); mid-Cretaceous terrestrial deposits (M.G. Laird); late Cretaceous novaculites, east coast of North Island (Whangai Formation, J.T. Kingma); early Tertiary intertidal and subtidal sands, South Island (G.J. van der Lingen); late Tertiary flysch, Makara Basin, east coast North Island (G.J. van der Lingen); Mesozoic geosynclinal (? deltaic) metagreywackes (P.B. Andrews). On marine sediments: Otago continental shelf (P.B. Andrews); Glomar Challenger Legs 21 and 30 (G.J. van der Lingen), and Leg 29 (P.B. Andrews). On Antarctic sediments: the first sedimentological study of pre-Beacon Group rocks, the late-Cambrian Bowers Group, Northern Victoria Land (M.G. Laird and P.B. Andrews).

(6) Otago University, Dunedin: Work on the shelf ("miogeosyncline") facies of the New Zealand Geosyncline (Permian - Jurassic) (C.A. Landis, J.D. Campbell).

(7) Oceanographic Institute, D.S.I.R., Wellington: Continental Shelf Sediments around New Zealand and the Pacific Islands (J. Brodies, D.J. Cullen, W.I. McDougall).

SOUTH AFRICA (from Dave Hobday)

Professor Fred Phleger of the Scripps Institute spent 3 weeks during May investigating ecological problems, including Lake St Lucia in Zululand. The fauna in this 380 square kilometre lagoon, enclosed by a barrier complex capped by coastal dunes almost 200 metres high, are periodically endangered by marked salinity fluctuations and by accelerated sedimentation. Prof. Phleger was accompanied during part of his field studies by Prof. I.H. Rust of the University of Port Elizabeth. Most of their investigations were based on shallow cores, with particular emphasis on the foraminiferal content. This study is to be extended by members of the University of Natal Geology Department. During July they are to obtain seismic profiles, whereby certain areas are to be selected for deep coring to the Cretaceous bedrock. Foraminifera from the core samples are to be studied at Scripps, and the sedimentological properties and diatom content will be investigated at the University of Natal.

SPAIN (from Carmina Virgili)

A special meeting of the Spanish Sedimentological Group was held in Madrid on 20th February 1973 to discuss Spanish participation in the organization and direction of the excursions in Spain which will be held in connection with the IX International Sedimentological Congress at Nice in 1975. The President of the Group, Professor Don Juan Antonio Vera, the Secretary, Prof. Dr J. Rosell and 17 members attended.

At the meeting application forms were distributed and the correspondent of the Association in Spain said that it was in the interests of all members of the Spanish Group that they join the International Association.

It was agreed to hold the First Colloquium on the Stratigraphy and Palaeogeography of the Spanish Cretaceous in the Pyrenees from 5th to 9th November 1973. The organizer will be Dr J. Rosell. For details see under Meetings.

SWITZERLAND (from Daniel Bernoulli)

At present there is no formal group of Swiss sedimentologists and exchange of information and cooperation is taking place through informal and personal contacts between working groups. Small conventions with lectures and demonstrations are planned for the winter semester. At present sedimentological activities in Switzerland are primarily directed to the following fields:

(1) Limnogeology: During the last few years, investigation of the Swiss Lakes has been very much activated. Long piston coring (up to 16 m) is carried out by the Laboratory of experimental Geology at the Swiss Institute of Technology (E.T.H., Zürich) under the guidance of K.J. Hsü in the lakes of southern and eastern Switzerland and by A. Matter and his coworkers (Geological Institute of Bern) on the Lakes of Thun, Brienz and Biel. In addition the Zürich group carries out heat flow measurements in connection with investigations on Alpine geothermal history, and attempts to date the sediments by correlation with secular magnetic variations; these studies are combined with studies of the magnetic field during short period variations. Furthermore, dating of the sediment is attempted by pollen analysis and, where possible, by C^{14} radiometric dating. Particular interest is paid to detailed coring of underwater slides and their subsequent turbidity deposits, and to bottom current and transmission measurements to "catch" an underwater turbidity flow. All these investigations are combined with classical sedimentological analysis and with continuous seismic investigations with air gun by both the Zürich and the Bern groups. Field investigations on turbidity deposits are complemented by laboratory experiments with a new flume (5 m).

Research of the Sedimentological and Limnogeological Laboratory of the Department of Earth Sciences at Geneva University concentrates on geochemistry and pollution problems, particularly by mercury, of the lake sediments of western Switzerland (lakes of Geneva, Mauvoisin, Joux and Morat).

(2) Carbonate Rocks: Lithostratigraphic microfacies and environmental studies on Mesozoic sequences of the Jura Mountains and Helvetic Alps are carried out by several groups. They include lithofacies and faunistic studies in the Upper Jurassic to Lower Cretaceous of western Switzerland and adjacent regions by A. Lombard (Geneva) and his students; on transitional facies from platform to deeper water in the Lower Cretaceous in the Helvetic Alps of central Switzerland by A. Matter (Bern) and of the Jurassic and Cretaceous sequences of the Jura Mountains by groups from Basel and Neuchâtel Universities. Work of the Basel and Neuchâtel groups is focussed on carbonates of Middle Jurassic age in the central Jura Mountains; the Neuchâtel group (B. Kübler, F. Persoz, J. Remane) further combines carbonate petrology with investigations on the geochemical evolution and on clay mineral assemblages in the Upper Jurassic to Lower Cretaceous sequences of the Jura Mountains (carbonate platform) and of the Vocontian trough in the French Alps. A similar study on sedimentology and diagenesis in marly limestones of Barremian age in the French Alps is carried out jointly by F. Persoz (Neuchâtel) and P.Ch. de Graciansky (Ecole des Mines, Paris). Exoscopy and endoscopy of quartz in relation to microfacies in the Jura Mountains is being examined by L. le Ribault, F. Persoz and J. Remane. Research on pedology of carbonate soils and on geochemistry of ground waters and development of Karst in the Jura Mountains is carried out by M. Pochon and M. Miserez (Neuchâtel).

M. Massad (Mineralogical Institute, Lausanne) analyses carbonate and pyrite concretions in black shales of Middle Jurassic age from the Prealps.

Shallow-water sequences of the Alpine Triassic in the Prealpine Nappes and in the Briançonnais are explored by A. Baud (Lausanne) who also jointly with H. Masson (Lausanne) works on gypsum-anhydrite relationships and origin of "Rauhwacke" in the same region. Shallow-water carbonates of the Alpine Triassic in the Austro-Alpine Nappes are also the topic of a group of the Swiss Institute of Technology in Zürich (R. Trümpy and co-workers).

The early evolution of the Southern Tethys is studied by groups from the Swiss Institute of Technology in Zürich (R. Trümpy and co-workers) and the University of Basel (D. Bernoulli). The Zürich group is working on the problem of Jurassic scarp breccias in the Lower Austro-Alpine Nappes of the Grisons in order to obtain a better understanding of the margin between the Austro-Alpine platform and the Penninic ocean basin. A joint enterprise of both groups concerns sedimentological studies in Jurassic and Cretaceous formations in the Southern Alps between Lago Maggiore and Lake Lugano. Pelagic sequences both of continental margin and oceanic origin of the southern Tethys are studied by D. Bernoulli in the Southern Alps, in the Apennines and in Greece; by comparison with underformed oceanic sediments he is trying to establish actualistic models for the sedimentation in the Mesozoic Tethys.

(3) Flysch and Molasse: Sedimentological work on Cretaceous and Early Tertiary flysch of the Niesen and Meilleret Nappes is done by P. Homewood (Lausanne). M. Weidmann (Lausanne) has initiated the study of megabreccias and "reconstituted rocks" (cf. Lemoine 1967) in the Breccia nappe. Research on mineral composition, sedimentary structures and environment of deposition in continental and marine molasse deposits of the Swiss plateau is carried out by W. Nabholz (Geological Institute of the University of Bern) and D. Kissling (Geneva).

(4) Diagenesis and metamorphism: Studies on progressive metamorphism in the range from late diagenesis to low-grade and medium-grade metamorphism are carried out by M. Frey (Mineralogical-Petrographical Institute of the University of Bern). Previous investigations followed clay mineral composition and mineral reactions in Upper Triassic and Lower Jurassic pelitic rocks from the Alpine foreland (Jura Mountains) into the central Alps (Frey, 1969, 1970). Recent work deals with progressive low-grade metamorphism in glauconite-bearing Cretaceous rocks (Frey et al., 1972), in Permian clastic sequences (Verrucano) and in Early Tertiary volcaniclastic flysch (Tavayannaz Sandstone) in the Helvetic zone; in the last example a correlation between mineral facies and illite-crystallinity can be established.

FUTURE MEETINGS

5 - 9 November 1973 — Bellaterra-Tremp, Spain

Upper Cretaceous of the Pyrenees

Sponsored by the Spanish Mesozoic Group as their 1st Colloquium on the Stratigraphy and Palaeogeography of the Cretaceous of Spain. Details from Prof. Dr J. Rosell, Departamento de Geología, Universidad Autonoma de Barcelona, Bellaterra, Barcelona.

2 - 10 December 1973 — Christchurch, New Zealand

IX Congress of INQUA

The Congress will include symposia on loess, tropical vegetation in the Pleistocene, Pleistocene extinctions, etc. A special issue of the N.Z. Journal of Geology and Geophysics to commemorate the Congress will be published later in 1973. It may be ordered from the Information Office, D.S.I.R., Private Bag, Wellington, N.Z. for the price of N.Z. $ 2.00 (approx. £1.00).

28 February - 2 March 1974 — Bochum, Germany

64th Annual Meeting of the "Geologische Vereinigung"
Continental Sediments (Terrestrische Sedimente)

New aspects of sedimentation and diagenesis of the following continental deposits will be treated: (1) Fluvial sediments; (2) limnic sediments; (3) aeolian sediments; (4) pyroclastic sediments; (5) biogene sediments; (6) caliche and continental dolomites; (7) syn-sedimentary weathering or early diagenesis of continental deposits (red beds); (8) late diagenesis of continental deposits.

The main talks will be by German Müller (Heidelberg), H.-U.Schmincke (Bochum) and T.R. Walker (Boulder/Colorado). Although the main language will be German, English talks are welcome.

Those who plan to present a paper are asked to send an abstract to Prof. Dr H. Füchtbauer, 463 Bochum, Ruhr-Universität, Bochum, Geologisches Institut, before 15 October 1973.

Fees for the meeting, for members and non-members, are DM.15 (students DM.5).

26 - 28 October 1973

British Geomorphological Research Group
Near-shore Sediment Dynamics and Sedimentation

Details from Dr John Hails, Institute of Oceanographic Sciences, Beadon Road, Taunton, Somerset.

BOOKS AND JOURNALS

1972 National Conference on Earth Sciences

CRAWFORD, F.D. (ed. & compiler) Arenaceous Deposits : Sedimentation and Diagenesis. 286 p. Notes based on lectures by S.M. Gagliano, P. Allen, and H. Füchtbauer, Department of Extension, University of Alberta, Edmonton, Alberta, $10.00.

SEPM Pacific Section, Short Course, Anaheim 1973

Turbidites and Deep Water Sedimentation. 158 p. Pt. I, Mechanics of flow and deposition by G.V. Middleton and M.A. Hampton: Pt. II, Submarine fans and channels by C.H. Nelson and V. Kulm: Pt.III, Deep ocean basin sedimentation by A.H. Bouma and C.D. Hollister: Pt. IV, Turbidite Facies and Facies Associations by R.G. Walker and E. Mutti.

Order from Dr John R. Castano, Shell Oil Company, 1008 West Sixth St, Los Angeles, California 90051. US $5.00 payable to SEPM Pacific Section.

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