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history of a fault zone. There was, for example, good agreement between the sequence of displacements as shown by cross-cutting relationships of the faults, and the dates obtained using ESR. These investigations are of great importance in view of the current need to identify stable ground for construction of nuclear power plants.

At the end of the meeting, the participants were taken on a field trip to the Akiyoshi Plateau, a karstic region close to Ube, where we visited a spectacular cave, from which Prof. Ikeya had previously obtained some of the first stalactites which he dated using the "revived" method of ESR. We then retired to a nearby hotel where we were revived by repeated immersions in the waters of a hot spring.

At the conclusion of the meeting, it appeared to most of the participants that ESR dating has been well established as a method of dating Quaternary secondary calcites and shows promise of becoming a good method for dating fault movements, at least as long as quartz is present in the fault gouge. Slower, but steady, progress has been made on the dating of bones and teeth, as well as on quartz, plagioclase and other minerals. Since ESR is in a very rapid stage of development, we expect to hear about many new applications at the next TL-ESR conference in Cambridge, as well as at the Second International Symposium on ESR Dating, which will hopefully be held in Munich in 1987 or 1988.

Proceedings of this symposium will be probably published in early 1986 by Ionics Press, and can be ordered from M. Ikeya (Technical College, Yamaguchi University, Tokiwadai, Ube 755, Japan).

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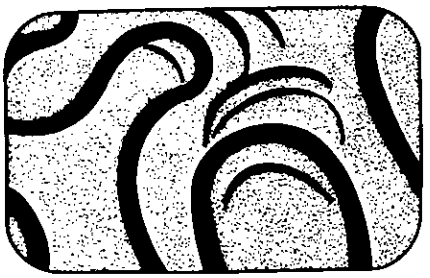

Third International Fluvial Sedimentology Conference

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Eight years after the First International Fluvial Sedimentology Symposium held in Calgary, 1977, the Third Conference held 7-9 August 1985, at the Colorado State University campus in Fort Collins, Colorado, became truly international. Participants represented 21 countries, with most (200 +) coming from the United States. Canada and the United Kingdom were well represented with 16 and 19 participants, respectively. Other countries represented were Guyana, Norway, Scotland, Germany, Poland, The Netherlands, France, Italy, Spain, Union of South Africa, Israel, Oman, India, Singapore, Australia, New Zealand, China and Japan, making this gathering the most international of the three meetings. Substantial new representation from southeast Asia, hopefully, will become a growth trend.

Superb organization by Frank Ethridge and Romeo Flores and their organization committee, Stan Schumm, Mike Harvey, Colin Thorne, Mary Kraus and Jean Weaver, resulted in a conference with 60 papers, 65 posters, 6 major field trips and a banquet. An abstract volume and field trip guide book are currently available. A special publication of conference papers, tentatively titled *Advances in Fluvial Sedimentology*, to be edited by Romeo Flores, Frank Ethridge and Mike Harvey, will be published by the Society of Economic Paleontologists and Mineralists,in the new large format, and should be available in late 1986 or early 1987.

Paper presentations and posters were divided into the following themes: sediment transport in modern rivers, facies models in coarse-grained fluvial deposits, facies models in fine-grained fluvial deposits, fluvial sediments and tectonics, and fluvial architecture and economic applications.

From the paper and poster sessions several trends and new ideas were presented. The brightest new idea by G. Smith and R. Shepard was an alternative hypothesis to explain the formation of horizontal or flat-bedding sedimentary structures in sand They suggest hyperconcentration flows (high in suspended and bed load) as an explanation; such conditions could easily be tested in experimental flume conditions. Fluvial architecture to explain the "big picture" continued as a "growth industry". Such an approach will be difficult to use by the applied oil and gas geologists who work at small scale with little data. Some papers stressed lateral facies changes as requiring more attention. Research on modern depositional systems continued to be in decline. There was even less mentioned about facies models, although two sessions were devoted to such themes. At this rate it is unlikely that facies models will be mentioned at the fourth symposium. Collinson and Lewin concluded from the second fluvial symposium that "the very complexity and variability of fluvial sedimentation will make general facies models so unrealistic as to be often worthless". With so little work in progress on modern fluvial systems, I am not optimistic about new advances or better explained facies models at the next symposium in Spain.

The conference offered six well-run field trips, which included the following: (1) The Catskill Magnafacies of New York State by J. Bridge and E. Grodon; (2) Upper Jurassic/Lower Cretaceous and Paleocene Alluvial Sediments of the Bighorn Basin, Northwest Wyoming by M. Kraus, T. Brown, E. Kuale and C. Vondra; (3) Field Guide to the Upper Salt Wash Alluvial Complex by F. Peterson and N. Tyler; (4) Guide to the Field Study of Alluvial Fan and Fan-Delta Deposits in the Fountain Formation (Pennsylvanian-Permian), Colorado by L. Suttner, R. Langford and G. Mack; (5) Holocene Braided Streams of Eastern Colorado and Sedimentological Effects of Lawn Lake Dam Failure, Rocky Mountain National Park by M. Harvey, S. Crews, J. Pitlick and T. Blair; (6) Hydraulics and Sedimentologic Processes in the Calamus (Nebraska Sand Hills): a field workshop by N. Smith and J. Bridge.

The highlight of the banquet was speaker John Costa who presented a wonderfully humorous slide show about pitfalls of field research. Perhaps the most important function of such a meeting is the good fellowship which occurs between colleagues, who rarely get together except at such meetings, and field trips in such relaxed physical settings.

The conference concluded with a near unanimous vote to accept the invitation by the Spaniards to host the Fourth International Fluvial Sedimentology Symposium at Barcelona, Spain, in 1989. Attendance at Spain will be high because of the field trip opportunities to the variety of well-exposed fluvial rocks in the nearby Ebro Basin, just west of the city.

Accepted 16 February 1986.