

HGS INTERNATIONAL EXPLORATIONISTS ANNOUNCEMENT

The Geological Society of America South Central Section meeting will be held on February 23-25, 1992 at Rice University. Please note the program and abstracts of the following symposium:

COMPARISON OF NORTH AMERICAN AND EASTERN EUROPEAN FOLDED BELTS

(Sponsored by the International Division of the G.S.A. and the International Explorationists Group of the H.G.S.)

Monday, February 24, 1992
Start 8:00 a.m. End 5:00 p.m.
Hamman Hall, Rice University

Session Chairpeople:

A. W. Bally, M. A. Schupbach, P. O. Yilmaz

8:00-8:25 a.m.	.....	Burchfiel, B. Clark
8:25-8:50	.....	Schupbach, Martin A.
8:50-9:15	.....	Bokov, P.
9:15-9:40	.....	Nockov, Radoslav A.
9:40-10:00	.....	BREAK
10:00-10:25	.....	Emery, Martin
10:25-10:50	.....	Weir, G. M.
10:50-11:15	.....	Sadekaj, I.
11:15-11:40	.....	Royden, Leigh H.
11:40-1:30	.....	LUNCH
1:30-1:55 p.m.	.....	Muehlberger, William R.
1:55-2:20	.....	Thomas, William A.
2:20-2:45	.....	Nielsen, Kent C.
2:45-3:00	.....	BREAK
3:00-3:30	.....	Sandulescu, Mircea
3:30-3:55	.....	Morley, Christopher K.
3:55-4:20	.....	Picha, Frank J.
4:20-4:45	.....	Csontos, Laszlo
4:45-5:00	.....	Tari, Gabor

LATE CENOZOIC OROGENIC BELTS OF THE MEDITERRANEAN REGION AND THEIR NORTH AMERICAN COUNTERPARTS

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Cenozoic orogenic belts of the Mediterranean region are dominated by deformation related to synthetic subduction and can be subdivided into two end members based on the presence or absence of contemporaneous back arc extension. Dynamic interpretations of these two end members indicate that those belts formed contemporaneously with back arc extension developed in a tectonic environment dominated by slab pull within the subduction zone and those belts without back arc extension formed in an environment dominated by plate convergence driven by large scale plate motions external to the orogenic belt. These two dynamic environments are expressed in the characteristics of the two types of orogenic belts. Those belts dominated by slab pull (such as the Apennines, Hellenides and Carpathians) have low topography, marginal thrust belts dominated by flysch, low grade metamorphism, lack significant involvement of continental crystalline base-

ment, and lack antithetic thrust belts, whereas those dominated by convergence due to external plate motions (such as the western Alps, Pyrenees, and Caucasus) have high topography, marginal thrust belts consisting of shallow water passive margin sediments and molasse, cores of high-grade metamorphic rocks, significant involvement of crystalline basement, and often develop antithetic thrust belts.

North America contains rare Cenozoic convergent orogenic belts, but pre-Cenozoic orogens contain several examples of belts developed in these two different dynamic settings. The Paleozoic Ouachita and Antler belts and parts of the Precambrian Wopmay belt are best interpreted to have formed in a tectonic environment dominated by slab pull, whereas the late Paleozoic Southern Appalachians, and the Precambrian Thelon orogens are best interpreted as dominated by large scale plate motions. This subdivision of orogenic environments can be extended to non-collisional belts where oceanic lithosphere is subducted. For example, the early Mesozoic evolution of the US Cordilleran orogen may have been dominated by a slab pull tectonic environment whereas the late Mesozoic evolution may have been dominated by a tectonic environment of rapid large-scale plate convergence.