

GEOSCIENCE *and Development*



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Information for Contributors

The international journal *Geoscience and Development* has a worldwide circulation and is a valuable forum for information and ideas of all geoscience topics in an international developmental context.

The Editors welcome *Geoscientific Feature Articles*, *Geoscience News Items*, reports on *Geoscience Development Projects*, including work by students supported by AGID scholarships, items on *Geological Hazards and the Global Environment*, *Reports of Conferences, Workshops and Training Sessions*, *Profiles of organisations* involved in development, and *Book Reviews* of relevant publications.

Articles and reports will be accepted in any form, though type-written double-spaced manuscripts are preferred, 500-3000 words long (2-12 pages of typescript). Conference reports should not exceed 750 words (3 pages). Contributions are welcome on computer

floppy disks (any size, IBM compatible for preference): these will be returned to authors.

Diagrams, maps and photographs illustrating articles are especially welcome, and other photographs (with or without accompanying text) will also be very much appreciated.

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Geological transect of ophiolites in Northern Venezuela and Central Cuba

La Habana, Cuba, and Venezuela
January 9-17, 1995

A geological transect of the northern and southern margins of the Caribbean Plate was undertaken by 18 geologists from Italy, Venezuela, USA and Cuba as part of the IGCP Project 364 "Caribbean Ophiolites and Volcanic Arcs"

In Venezuela the transect began at the sea shore near Caracas and went up to the Serranía del Interior, crossing several tectonic units including the Piemontine flysch. Then in Cuba a north-south transect was covered, and in both countries igneous and metamorphic rocks were sampled in order to investigate the petrology and geochemistry of the various units, and observations made to evaluate similarities between the geological units that outcrop on the plate margins.

A general meeting was held on January 17th in the Museo Nacional de Historia Natural, in La Habana, to evaluate the results of the geological transects and explore future lines of research. The transects were evaluated, unit by unit, from the mainland towards the Caribbean Sea.

The **Cuban-Bahamian Deposits** can be considered a rough equivalent to the **Piemontine Flysch** on the Venezuelan margin of the plate. In both areas the Paleocene-Eocene deposits are syn-orogenic and related to the emplacement of the allochthonous ocean thrust sheets. But there are marked differences in lithology and sediment type, because in Cuba the continental source is a carbonate platform and in Venezuela the Guyana Shield.

In Venezuela the first allochthon on top of the flysch is the **Dos Hermanas unit**, represented by Mid- to Late-Cretaceous(?) basaltic-andesitic lava-breccias and other volcanoclastics, metamorphosed in the prehnite-pumpellyite facies. This unit rests partially also on top of the **Villa de Cura unit**, represented by latest-Jurassic(?)-Cretaceous metalavas, metatuffs and other metavolcanoclastic and sedimentary deposits including siltites and cherts.

This section has been interpreted as a volcanic arc partially incorporated into a subduction complex, but the absence of serpentine melanges within the unit and no complex accretionary-type structures do not support such a view. In central Cuba, the Dos Hermanas-Villa de Cura allochthon has no counterparts; only in eastern Cuba are there HP/LT Cretaceous metavolcanic and meta-sedimentary rocks (the Purial Complex) similar to these, resting tectonically on the Cuban-Bahamian Deposits, and overlain by the Northern Ophiolites.

The **Loma de Hierro ophiolitic unit** is tectonically overlain by the Dos Hermanas/Villa de Cura units in Venezuela. In Cuba, the Northern Ophiolites display many similarities with the former, so probably represent the same oceanic crust. The Loma de Hierro ophiolite unit is overlain by latest Cretaceous metasedimentary rocks (Paracotos Formation) not known in central Cuba. Only in eastern Cuba are the Northern Ophiolites partially imbricated with non-metamorphosed Maastrichtian-Paleocene olistostromes and wildflysch. Nevertheless, the tectonic position of both ophiolites is different.

The Coastal Belt of Venezuela has no counterpart in Cuba. It is represented by HP/LT metasedimentary and metavolcanic rocks with slivers of strongly deformed serpentinites, amphibolites and eclogites. It outcrops along the Southern Caribbean transform boundary, and may represent rocks genetically related to the Caucagua-El Tinaco/Cordiller de la Costa units, but subsequently deformed by dextral strike-slip displacements. Only in northern Hispaniola (Puerto Plata-Samana area) is there a complex of rocks with similar composition and metamorphism along the present-day

northern Caribbean transform boundary.

The participants in the geological transect agreed that the northern and southern margins of the Caribbean Plate are not mirror images of each other. Distinct tectonic events took place on each margin, as suggested by the different types and degree of metamorphism of the tectonic units involved in both fold-belts. The Group will continue research and comparison of both margins, which is a key problem in improving our understanding of the origin and evolution of the Caribbean Plate.

In order to achieve this goal, the participants agreed during the meeting to continue the geochemical and petrologic research on the Caribbean ophiolites, so that relationships and eventual differences in origin can be revealed, and subsequent transformations. Dr Beccaluva of the Institute of Mineralogy at the University of Ferrara, Italy, offered the facilities of the Institute to study additional Cuban samples. It was also stated that the journal *Ophioliti* will publish a synthesis of the field guide to the Venezuelan-Cuban transect.

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10th Himalayan-Karakoram-Tibet Workshop

Centro Stefano Franscini (The ETH Conference Center),
Monte Verità, Ascona, Ticino, Switzerland.
4-8 April, 1995

The Himalaya-Karakoram-Tibet Workshops are annual meetings that are held for the exchange and dissemination of current research ideas relating to the geology of the Himalayan countries (Nepal, Himalayan districts of India, Bhutan, Tibet, mountain districts of Pakistan and Afghanistan).

The Workshop was organised by David A. Spencer, Jean-Pierre Burg and Cinzia Spencer-Cervato from the Swiss Federal Institute of Technology and University of Maine, USA. It was one of the largest workshops that has been held, with some 144 participants. Delegates came from 17 different countries (Afghanistan, Austria, Belgium, Canada, China, Denmark, France, Germany, India, Italy, Japan, Nepal, Norway, Pakistan, Switzerland, UK and USA). The fact that some 25 of the participants came from the Himalayan countries themselves is mainly a direct result of the generosity of the sponsors of the Workshop, including AGID. Many of these participants would not have attended the meeting without this financial support.

Some 150 abstracts were submitted to the workshop and 125 were accepted for the 10th Himalaya-Karakoram-Tibet Workshop Abstract Volume, published as a *Mitteilungen aus dem Geologischen Institut der Eidgenössischen Technischen Hochschule und der Universität Zürich* (edited by Spencer, D.A., Burg, J.-P., Spencer-Cervato, C., 1995, *Neue Folge*, nr. 298, pp. 349).

The technical sessions of the Workshop over the three days were subdivided into two Special Sessions with ten lectures (20 minutes each), 10 Lecture Sessions with 48 lectures (15 minutes each), three Discussion Meetings (one hour each at the end of the day, generally following on the theme of the previous lectures sessions) and a poster session. The poster session included an optional three-minute oral introduction, allowing for a summary of the main results which were presented in the poster. Some 52 posters (out of the 66 posters listed) were displayed and 41 oral poster introductions were given.