

# InterRidge News

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InterRidge: Update 1993

Fall/Winter 1993

The past year has been an eventful one for the InterRidge Initiative. Throughout 1993, meetings and workshops have been held, scientific ideas exchanged and information shared as InterRidge evolves towards the completion of its first, general planning phase. There has also been progress towards establishing the constitution of InterRidge as a group of Principal and Associate member nations, and in reviewing ways and means to organize an effective science program.

The United States, France, the United Kingdom, Japan, Spain and Portugal have confirmed their membership. Germany, Australia, Canada and Iceland have indicated that they hope to be able to do so soon. The InterRidge Steering Committee and the InterRidge Office will continue to maintain or initiate contacts with other nations interested in mid-oceanic research. The recommendation made at the 1992 General InterRidge Meeting that the research objectives of InterRidge be pursued under three principal themes or integrated projects with corresponding working groups and workshops, has proved fruitful.

The Global Studies Workshop was held in April 1993 [see InterRidge News vol. 2, n. 1] to develop a strategy to achieve a first order characterization of the entire Mid-Ocean Ridge system within a decade. The workshop focused on exploration of the long, unexplored sections of the Pacific-Antarctic Ridge, the Southwest Indian Ridge and the Southeast

Indian Ridge. Approaches to the investigation of Arctic ridges will be discussed in a future workshop.

The three workshops organized this year by the Meso-scale Working Group centered around the themes of ridge segmentation, the quantification of fluxes associated with mid-oceanic ridges and accretionary processes in back-arc basins. The Segmentation and Fluxes Workshops, held in the University of Durham in the UK on September 24 & 25, was preceded by a 2-day Symposium on "Ridge segmentation processes: progress towards predictive models." At the Back-arc basin Workshop, held in the University of Washington, Seattle, USA on October 11-13, discussion centered around the influence of subduction on accretion in back-arc basins [see summaries, page 2].

Reports of the Global Workshop and of the Meso-scale Symposium and Workshops are currently in preparation and will be published in early 1994. The Active Processes Working Group is preparing a preliminary aims and planning document intended to serve as a basis for a workshop to be convened in spring 1994. Finally, consideration is being given to forming a standing committee for Biology with an initial objective of holding a workshop particularly devoted to ridge related biological research.

In addition to organizing workshops and meetings, InterRidge has been preparing its first rotation of the InterRidge Office to a new host country. As

of January 1, 1994, the Office will be located in the University of Durham under the responsibility of Roger Searle, who will at that time also take over the InterRidge Chairmanship. In October of 1993, Trileigh Stroh resigned from her post as InterRidge Coordinator. We owe her our appreciation for her many and imaginative contributions to the InterRidge initiative since its creation. Heather Sloan has been acting as InterRidge Coordinator in the University of Washington, and will move to the University of Durham in December 1993.

With the relocation of the Office, InterRidge will act to consolidate scientific planning, to strengthen links with other international projects and organizations, such as ODP and ICSU and to build on initial efforts to improve information exchange by compiling an easily accessible information data base of recent and current ridge cruises. Scientific priorities and problems identified in the 1993 workshop discussions and reports provide an excellent framework for initiating and developing community endorsed InterRidge projects. The next steps will be to hone plans for specific projects in the coming years through focused discussion among member nations.

A short, updated [Dec, 1993] version of the Initial Program Plan will be available from the InterRidge Office in early 1994. The next General InterRidge Meeting is planned for 1995.

*J.R. Delaney and H.D. Needham*

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## Meso-scale Working Group Symposium & Workshop Summaries

- H. Sloan, InterRidge Coordinator

### Segmentation and Fluxes at Mid-Ocean Ridges Symposium and Workshops

The InterRidge Meso-Scale Working Group Symposium and Workshops entitled Segmentation and Fluxes at Mid-Ocean Ridges were convened in Durham, England, September 22-25 by Roger Searle, Jian Lin and John Sinton (Segmentation) and by Harry Elderfield and Catherine Mével (Fluxes). The objectives set out by the Working Group for this meeting were to define the types of projects and experiments, geographic areas, international collaboration, and the role of the InterRidge Initiative in ensuring rapid progress in understanding ridge segmentation. The two day Symposium consisted of a series of invited keynote presentations aimed at summarizing the recent progress and current work in the field of ridge segmentation. Divided into the broad categories of tectonics and petrology, keynote presentations focused on

morphological and tectonic segmentation at slow, intermediate and fast spreading ridges; large-scale segmentation; mantle dynamics; crustal melt transport; time scales of magmatic processes; petrological, geochemical, gravity and seismic constraints on segmentation and the interaction between magmatism and tectonic segmentation. The innovative scheduling of keynote presentations left ample time for animated and stimulating discussion following each talk. There were over 110 participants from 7 countries and more than 70 contributed presentations, mostly in the form of posters. The symposium provided a representative overview of current ridge segmentation investigations.

The Workshops, held during the two days following the Symposium, provided the opportunity for investigators with

diverse interests to work together towards an enhanced knowledge of ridge segmentation and improved solutions to the problems posed by its study. Subdivided into three sub-groups, the Segmentation Workshop tackled the questions of dimensionality of mantle flow and melt delivery, 4-D architecture of the lithosphere, and temporal variability. The Fluxes Workshop concentrated on methods to quantify all fluxes and their spatial variability occurring within a volume of the ridge modeled by a box extending from the mantle to the water column and appropriate distances along and across strike of the ridge. Recommendations made by the workshops converged particularly on international cooperation on a segment scale experiments which would quantify the fluxes and reveal the spatial and temporal variability of a spreading segment.

### Back-arc Basin Workshop

The Back-arc Basin Workshop was convened by Julian Pearce and Kensaku Tamaki on October 11-13 1993 at the University of Washington, Seattle, USA. The focus of the workshop was on the influence of subduction on crustal formation in back-arc basin settings and the recognition that both ophiolites and currently important economic ore bodies are more closely associated with closed back-arc basin systems than the open system of the Mid-Ocean Ridge. The workshop was organized around the presentation of general summaries of current knowledge of marginal basins and of activity reports, followed by

separate and joint working group meetings on spreading processes, melt generation and biogeochemical fluxes. The workshop was attended by twenty five people from half a dozen countries.

One recommendation coming out of the workshop was that an index of existing and planned databases from back-arc basins be compiled, administrated, and distributed by the InterRidge Office. In addition it was suggested that geophysical and geochemical database archives be compiled by scientists working in back-arc basins and be administrated through the InterRidge Office. The participants agreed

that InterRidge could effectively aid in the quantification of along segment variations by encouraging swath bathymetric, gravity and seismic refraction studies and additional tomo-graphic investigations as well as rock sampling for geochemical work in back-arc basins. These efforts would be coupled with long-term monitoring of mass and energy fluxes, including hydrothermal fluxes and seismic activity, particularly using abandoned sea-floor communication cables. It was recommended at the workshop that InterRidge studies of marginal basin accretion be linked as much as possible with ODP. (2)

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# Announcement:

As of January 1st 1994  
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