Geological Society of America

Structural Geology & Tectonics Division

2005
Best Paper Award

Presented to Chris Beaumont, Kip Hodges, and coauthors

Beaumont, C., Jamieson, R.A., Nguyen, M.H. & Lee, B. (2001) Himalayan tectonics explained by extrusion of a low-viscosity crustal channel coupled to focused surface denudation. Nature 414, 738-742.

Hodges, K.V., Hurtado J.M. & Whipple, K.X. (2001) Southward extrusion of Tibetan crust and its effect on Himalayan tectonics. Tectonics 20, 799-809.

Citation by Tracey Rushmer

Chris Beaumont with co-authors R.A. Jamieson, M.H. Nguyen, and B. Lee and Kip Hodges with coauthors J.M. Hurtado and K.X. Whipple are this year's co-awardees for the Structural Geology and Tectonics Division's Best Paper Award. These papers, published in the same month of 2001, address the nature of large scale deformation patterns in the continental crust in mountain belts. Both papers use the Himalaya as a "natural laboratory" with great success. The Structural Geology and Tectonics Division formally acknowledges the important influence of these two papers as they have brought growing national and international interest in the dynamics and kinematics of deformation in continental collision zones. This topic is currently at the forefront of research efforts in our community because of these exciting papers. The authors use well-developed innovative modeling and integration of surface geological studies with structural and metamorphic analyses to tackle the problem of continental crustal rheology during orogenesis. A Geological Society of London meeting, "Channel flow, ductile extension and exhumation of lower-mid crust in continental collision zones" in December 2004 focused solely on this topic. Also, much discussion at recent meetings has centered around whether the middle or lower crust acts as a ductile, partially molten channel flowing out from beneath areas of over-thickened crust like the Tibetan Plateau. As an example of how stimulating these papers are, the community is now looking at much broader implications such as how the channel flow model applies to other mountain belts and how microstructural fabric data reflect this crustal extrusion.

As a Community, we thank Chris and co-authors and Kip and co-authors for writing papers that bring formally disparate topics together in one approach to better understand zones of continental collision. Importantly, the assumptions, limits, and uncertainties in their approaches are presented with commendable clarity and integrity. For these contributions to our science, we enthusiastically co-award them the Geological Society of America Structural Geology and Tectonics Division's Best Paper Award for 2005 to these two groups of authors.