

## 2008 MEDALS & AWARDS

### LAURENCE L. SLOSS AWARD

Presented to Peter G. DeCelles



Peter G. DeCelles  
University of Arizona

#### *Citation by Stephan A. Graham*

Dr. Peter DeCelles is imbued with the same passion for regional- to sub-global scale sedimentary geology as was Larry Sloss, and is richly deserving of the award named in his honor. Consistent with the Sloss legacy, an overarching aspect of Pete's career is his ever-broadening view of sedimentary systems as he focuses on important problems in earth sciences, such as the origins and evolution of orogenic plateaus as reflected in the sedimentary record. Pete is especially identified with his major contributions to regional sedimentary geology and sedimentary tectonics in western North America, southern Asia, and Andean South America. These geographic concentrations reflect Pete's career focus on foreland basin and fold-thrust systems (although he also has worked in rift and strike-slip basin systems). For a broad group of geoscientists, including structural geologists/tectonicians, Pete's name is synonymous with foreland systems. Viewed either topically or geographically, it is impossible to conduct a literature search on foreland basins of South America, western North America or southern Asia without encountering the name of Peter DeCelles.

His studies in Asia, in particular, have a holistic feel to them. In that work, he has explored the linkages between deep crustal processes; upper crustal structure; surface uplift, geomorphology and elevation; weathering processes and products; denudation and sediment accumulation.

Accordingly, he has variously employed, through development of new personal skills or through collaboration, a wide variety of investigative methodologies that go well beyond the 'normal' sedimentary approaches of facies analysis and sedimentary petrology, including light stable isotope geochemistry, detrital grain geochronology, structural geology, and paleomagnetism. In the course of his general studies of foreland systems, Pete has contributed to development of methodologies in sedimentary geology ranging in scale from measurements of cross-bedding in outcrop, to linked sedimentary-structural response in creation of retro-deformable balanced structure sections.

In addition to these readily identifiable, direct contributions to sedimentary geology, Peter DeCelles has made and continues to make an even more important contribution to the future of the science in the legacy of graduate advisees advanced to the professoriate. His former students occupy faculty positions in sedimentary geology at colleges and universities across the U.S. and internationally, including a number of prestigious institutions. These former students will impart the DeCelles rigor and work ethic (integrated with their own personal styles) to successive generations of sedimentary geology students.

Many career awards are made retrospectively. In Peter DeCelles' case, it is appropriate to recognize his past contributions, but in fact, his career contributions are notably forward-looking. Most sedimentary geologists realize that an important future path for our science lies in better understanding the linkages between sediment production, transport and sedimentation, and the rest of the earth system. Peter DeCelles' career contributions provide a wonderful example for young sedimentary geologists of how to view sedimentary systems in a larger earth context. He is an exemplary recipient of the Sloss Award.

#### *Response by Peter G. DeCelles*

I am thankful to the Geological Society of America and to my colleagues and peers for this recognition, which I feel so fortunate to receive, and to you Steve, for this kind and generous citation.

My story is one of teachers and collaborators who have guided me and opened doors to new problems and opportunities. I met Larry Sloss at a field conference in Montana back in 1981, at the

end of my first dissertation field season. My advisor Lee Suttner had been unable to attend the meeting, so he kindly asked me to give his presentation. The talk was a sweeping synthesis of the Montana Cretaceous foreland system, so I was forced to learn Lee's broader view; at the same time I could pretend that I had somehow been partly responsible for the content of the presentation. Larry undoubtedly saw through my thinly veiled delivery, but still made a point of striking up a conversation afterward, highlighting for me the importance of reactivation of ancient basement structures in the Montana foreland. Having been trained as an undergraduate by Ray Gutschick, I knew who Larry was, and was astonished that a person of his stature would bother to talk with me.

That, and the two summers that followed, were a magical time for me as I scoured the countryside of western Montana for outcrops and burrowed into the then-burgeoning literature on fluvial sedimentology. What made that time so exciting were the breakthroughs resulting from cross-pollination between geomorphologists and 'hard-rock' sedimentologists, linking processes with preservation. It seemed obvious that the only way to go in geology was to cross train. Throughout my graduate school years, I was encouraged to transgress discipline boundaries by my teachers at Indiana University—mainly Lee, Enrique Merino, Abhijit "Indiana" Basu, and Gordon Fraser. Working with Bob Schwartz in the field was a non-stop intellectual adventure. A chance meeting with Steve Graham and Ray Ingersoll in 1983, again in Montana, landed me a postdoc at Stanford with Steve and provided the opportunity to learn about California tectonics and basins. A couple years later, Asish Basu hired me at Rochester and began to gently nudge me toward recognition that isotope geochemistry was something in which I could actually get involved, despite being a self-proclaimed field sedimentologist. At the same time Gautam Mitra and his graduate students took me under their collective wing and started to teach me the wonders of thrust belt geology.

A few years after starting at Rochester, my wife Jill informed me that we were going to live in Italy for a year, so I had better find something to work on over there. Fortunately, my old friend William Cavazza was there with open arms to instruct me in the proper Italian manner of doing fieldwork on a variety of remarkable Mediterranean-style tectonics problems.

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By the time I arrived in Tucson in 1993 I was anxious to get involved in some of the numerous strands of tectonics-related research going on in the Geosciences department. Jay Quade, George Gehrels, Bob Butler, Jon Patchett and Paul Kapp have been particularly instrumental in involving me in diverse projects around the world, opening my eyes to all sorts of new approaches as

well as fascinating questions. Bill Dickinson has provided consistent encouragement and healthy skepticism throughout my career, virtually from the time I tracked him down in a restroom at the IU field station in 1979 until today. At both Arizona and Rochester I have been blessed with gifted, hard-working graduate students who stubbornly retain me as their undeserving Ph.D. advisor in spite of

the appalling lack of attention they receive from me. The most valuable lessons have come from my family—Paul and Jeanne, Jill, Naomi and Clare—and I thank them for their long-suffering patience with my lengthy absences in far-flung places.

To all these people, and the many more who I cannot thank individually in such a short space, I say thank you.