



Chemical & Physical Sciences
UNIVERSITY OF TORONTO
MISSISSAUGA

COLLOQUIUM
TUESDAY, 07 APRIL 2015
11:00 AM - 12:00 NOON
KN132

Dr. Noel P. James, F.R.S.C., CM

Queen's University
Department of Geological Sciences and
Geological Engineering



UNLIKELY CARBONATES: THEY ARE SO COOL!

The most improbable carbonate sediments and rocks are those that form in the cold, frigid, and freezing ocean well outside the soft, warm, sunlit, waters of the tropics. Until recently such deposits were barely mentioned – all limestones were obviously tropical! Now temperate and polar limestones are an integral part of mainstream sedimentology. At the largest scale our evolving knowledge of carbonates has taken two totally different intellectual pathways. First, understanding of carbonate sedimentation evolved differently in the two hemispheres. Acceptance of cool-water carbonates came largely from the southern hemisphere because there were no vast cool-water systems in the northern hemisphere. Second, limestones were so fossiliferous and so intuitively tropical, thus research focused on the tropical seafloors - the rock record drove research on modern sediments. By contrast cool-water carbonate sediments were long known but not equivalent limestones - modern sediments drove research into ancient rocks. We are students of the earth but we should never forget that we are also prisoners of our personal experience.

