

Tracking rapid landscape change in Gros Morne National Park with time-lapse photography

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Parks and other protected areas can provide baselines for environmental monitoring, where the condition of landscapes and ecosystems away from direct human interference can be tracked in response to regional or global stresses, including climate change. However, despite efforts to maintain them in some static, pre-human “natural” state, parks, like landscapes everywhere, are subject to numerous non-human drivers of rapid change, involving physical, chemical and ecological processes. Within Gros Morne National Park in western Newfoundland, a personal project involving repeated (time-lapse) photography is helping to assess the current physical stability of certain coastal and inland sites. The result is a photographic record up to a century long, of slope failure by sagging, slumping, and rock falls, the development of stone rings and patterned ground, the formation of travertine deposits at sites of on-going serpentinization, the movement of rocks along intertidal platforms, changes to marine estuaries and to alluvial rivers and fans, and trends in late-lying snow beds along mountain tops. Other sites, where changes might have been expected, show little or none. The information derived from such studies can contribute to assessments of ecological integrity and general environmental “health”. In Gros Morne, and for the towns and villages within and adjacent to the Park, this can assist in the management of public safety (landslides, rock falls, large-scale sags and coastal slumps), ecological integrity reporting, the protection of special sites (e.g., the C/O boundary stratotype at Green Point), and visitor interpretation programs. Involving local residents and school kids in similar projects can help to give them a clearer sense of the abiotic components of landscapes and the nature of contemporary geological change.