**Alpine Assumptions - or how to measure a myth**

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The ‘lost real estate’ model predicts that available habitats on mountains contract in response to climate warming and that organisms will 'track' appropriate conditions. While there have been several well documented cases of latitudinal range expansion with a warming climate, the case for upward tracking in alpine environments is possibly more assumed than true. In New Zealand the possibility of habitat tracking in mountainous lands is ambiguous. Since the late 1800s it was clear that paleo-climate changes had had a significant effect on the landscape via glaciation. Similarly, many plant ecologists have inferred vegetation patterns in response to glacial fluctuations. Direct measurement of range tracking within the alpine biota has proven to be very difficult and uncertain. This project tackles part of the problem by using a snap-shot sampling method of alpine invertebrates. Specific groups are recorded, at set elevations along a north/south axis of the alps. They are then correlated with end of summer snowlines (a proxy for climate), which can be measured across a 40 year data set. An important issue for conservation management in the high country is the incursion of pests and weeds into the alpine zone, and whether or not the alpine biota can survive. Preliminary work has shown changing assemblages of invertebrates with elevation and the presence of alpine taxa where the snowline once existed.