

Polar Sciences

I have assumed that at the commencement of our imaginary Glacial period, the arctic productions were as uniform round the polar regions as they are at the present day... and it may be asked how I account for this degree of uniformity of the sub-arctic and temperate forms round the world, at the commencement of the real Glacial period." – On the Origin of Species



Illustration by Nicolle Rager Fuller, National Science Foundation

Charles Darwin remarks in "On the Origin of Species" that New Zealand possesses two bats found nowhere else in the world. He uses the example to discuss how natural selection adapted the bat for the Antarctic environment. He returns again and again to New Zealand, discussing its flowering plants, gigantic wingless birds and the existence of a mountain-bound frog. Darwin's writing foretells a truth about Earth's polar regions. They are a microcosm of evolutionary sciences providing biological, geological, geophysical, meteorological, glaciological and oceanographic researches. They even speak to theories of evolution on the edge of existence.