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Empirical measurements in demographic studies often include continuous traits (e.g. size, pathogen load) of individuals. Using classical statistical methods (e.g. generalized linear models), one can use this continuous trait data to parameterize integral operators (aka Integral Projection Models - IPMs) to describe year to year changes in demography. Coupling these demographic models with climate data allows one to make inferences about the effect of climate on population growth and extinction risk. In this study, IPMs were used to assess the roles of climate and a pathogen on the demography of the endangered plant species Menzies' wallflower (*Erysimum menziesii*). Data came from a decadal USFWS study following nearly 12 thousand individuals from germination to death, and a century's worth of NOAA weather data. These models suggest that decadal oscillations about a century trend in warming temperatures and interactions with a fungal-like pathogen may have resulted in a short-term climatic rescue of this endangered species. (Received September 01, 2015)