

Measuring the effects of temperature increases in the Antarctic fauna

June 30 2009

Researchers from the British Antarctic Survey subjected species found in Antarctic waters to increasing levels of water temperature to learn how well they would cope with a warmer ocean. The study, to be presented at the Society for Experimental Biology meeting on Tuesday, June 30, shows that several of these species are already living really close to their upper temperature range, and that further increases could easily provoke serious ecological imbalances in this region.

A group of researchers from the [British Antarctic Survey](#) have collected individuals from a wide range of species commonly found in [Antarctic waters](#) and subjected them to increasing levels of water temperature to learn how each species is prepared to cope with the conditions that they are likely to experience in the future. The study showed that several of these species are already living really close to their upper temperature range, and that further increases caused by global warming could easily provoke serious ecological imbalances in this region. These results will be presented by Dr. Lloyd S. Peck at the Society of Experimental Biology Annual Meeting in Glasgow on Tuesday 30th June 2009.

The researchers found that, for a given species, smaller individuals were able to tolerate higher temperatures compared to larger ones. Since larger individuals are the ones more likely to have reached sexual maturity, their vulnerability to temperature change could seriously damage population levels within a few generations. In addition, since active species such as predators fared better than sessile ones when dealing with temperature increase, a disruption in the [food chain](#) could

add up to the direct effect of [global warming](#) to cause disruptions earlier and to greater extents in the Antarctic marine ecosystem.

Source: Society for Experimental Biology

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