

Antarctic Fish

Are new predators set to invade Antarctic waters?

By David Alderton

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Icefish © Uwe Kils. The South Polar Ocean, which surrounds Antarctica, is one of few areas where fish are scarce, because the water is simply too cold for them. Only the icefish, which form the family Channichthyidae and possess a natural antifreeze in their bodies, are able to live in this bitterly-cold environment. The sea bed in the region is dominated by soft-bodied invertebrates, reflecting how life may have been in the oceans before the emergence of powerful predators.

Yet all this may be set to change as a result of climate change, according to a team of scientists from the University of Rhode Island (URI). Their research suggests that it would take only a further slight increase of a few degrees, in Celsius terms, for sharks and other predatory fish to be able to invade the region.

“The water only needs to remain above freezing year round for it to become habitable to some sharks, and at the rate we’re going, that could happen this century,” Professor Cheryl Wilga said.

It is not just fish that are likely to move into Antarctic again. Predatory species of crab are being found nearer to the Antarctic shelf again, after an absence of millions of years.

The URI findings do not suggest that the arrival of such predators in these waters will lead to mass extinctions. There are, however, likely to be significant declines in the populations of a number of species. The scientists believe that brittle stars, ribbon worms and shrimp will be particularly at risk. In addition though, the icefish themselves could be under threat. They are currently hunted by penguins and seals, but could be now be harmed by rising sea temperatures and an increasing number of predators.