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Biodiversity loss is Earth's 'immense and hidden' tragedy, Darwin's 'natural heir' warns

Problem of biodiversity loss has been 'eased off centre stage' by focus on climate change, according to Prof Edward Wilson, the ecologist described as 'Darwin's natural heir'

James Randerson

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The diversity of life on Earth is undergoing an "immense and hidden" tragedy that requires the scale of global response now being deployed to tackle climate change, according to one of the world's most eminent biologists.

Prof Edward Wilson, an ecologist who has been described as "Darwin's natural heir" and hailed by novelist Ian McEwan as an "intellectual hero" and "inspirational" writer, told the Guardian that the threat was so grave he is pushing for the creation of an international body of experts modelled on the UN's Intergovernmental Panel on Climate Change (IPCC).

The IPCC, which is credited with convincing world leaders that the threat from climate change is real, includes about 2,500 scientific expert reviewers from more than 130 countries and was awarded the Nobel peace prize in 2007 along with Al Gore. Wilson's proposed organisation -

which he names the Barometer of Life - would report to governments on the threats posed to species around the world.

Wilson said the problem of biodiversity loss had been "eased off centre stage" because of the focus on climate change.

"We don't hear as much public concern, protestation and plans by political leaders to save the living environment. It doesn't get anything like the attention the physical environment has," he said.

Since the beginning of the last century, 183 species are known to have become extinct, including the Tasmanian tiger, the Caribbean monk seal and the toolache wallaby. But this number is a gross underestimate of the true number of extinctions, according to the International Union for Conservation of Nature species programme.

Wilson was speaking ahead of the 150th anniversary of the publication of the Origin of Species on Tuesday. The 80-year-old scientist will deliver a lecture via video link to an audience at London's Royal Institution on Darwin's legacy and "the future of biology".

The extent of scientific ignorance about the diversity of life on Earth is vast. Scientists have catalogued about 1.9 m species, but estimate there are about 20m-30m in total (excluding microbes).

Wilson said the scale of the mass extinction now under way was even harder to comprehend.

At the start of the Neolithic period - about 9500BC - scientists estimate that species were becoming extinct at a rate of 20-30 per year. Since the population explosion of modern humans, that is estimated to have increased to 20,000-30,000. Most have never been documented by scientists. And in a couple of decades, Wilson reckons this will have increased to 200,000-300,000. Wilson's proposed international initiative, which he has developed with Simon Stuart, the chairman of the Species Survival Commission, would document this species loss and work out how to tackle it.

"Darwin would be simply appalled by what humanity had done to the richness and diversity of natural life," said Randal Keynes, one of Darwin's great-great-grandsons, who is helping to coordinate the 150th anniversary with the British Council. "He would be in the lead of campaigning on the preservation of biodiversity."

Some of the species that played a central role in the formulation of Darwin's theory of evolution by natural selection are now either extinct or severely threatened. The Floreana mockingbird, that lives on the island of the same name in the Galapagos, was one of a handful of related species that first gave Darwin the idea that species could change (it is a myth that finches were the crucial group).

Reflecting on the similarities and differences between mockingbirds on different islands and on the mainland, Darwin gave the first vague hint of his later theory in his notes on the Beagle voyage that "such facts would undermine the stability of species".

Today, the Floreana mockingbird is classed as "critically endangered" and exists in two populations numbering 200 and 49. The giant tortoise that Darwin encountered on the same

island - *Geochelone elephantopus* - was driven extinct by hungry whalers who enjoyed eating its meat in soup.

Wilson said conservation efforts around the world were far from adequate. "Right now we are just piddling around with efforts here and there, some of them strong and dedicated, the aggregate of which is not even close to what we need." "The benefits for humanity [of a concerted international effort on biodiversity] would be enormous ... the discovery of the rest of life on Earth and fuller evaluation of it is going to result in all sorts of very valuable knowledge," said Wilson, pointing at new crops, products and biotechnology advances.

A year of celebration of Darwin's achievements (and his 200th birthday) is drawing to a close and will segue neatly into the International Year of Biodiversity in 2010.

"The public recognition of the importance of biodiversity as an issue is very poor, very low," said Kenyes, "I think Darwin would want everyone to pick up that agenda and give it all the support they can."

Topics

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