

## Sixth extinction now well under way on the planet

**A**N ARMAGEDDON is approaching at the beginning of the third millennium. But it is not the cosmic war and fiery collapse of mankind foretold in sacred scripture. It is the wreckage of the planet by an exuberantly plentiful and ingenious humanity."

That's the verdict of celebrated naturalist Prof EO Wilson of Harvard University.

In the history of Earth, there have been five great extinctions. The most recent occurred about 65 million years ago, most likely as a result of an asteroid strike and, as every schoolboy knows, this is the one that finished off the dinosaurs – and 50 per cent of all other species. It also cleared the path for the rise of our ancestors, the early mammals.

Though you wouldn't think it by looking out the window, or even flicking through the newspapers or TV channels, the sixth extinction is in full swing right now. And that's official.

According to the World Wildlife Fund (WWF): "The world is currently undergoing a very rapid loss of biodiversity comparable with the great mass extinction events that have previously occurred only five or six times in the Earth's history."

The WWF's Living Planet Index measures trends in the Earth's biological diversity and between 1970 and 2003, the index fell by some 30 per cent. "This global trend suggests we are degrading natural ecosystems at a rate unprecedented in human history," says the WWF. This analysis is supported by the United Nations Environment Programme, which adds: "The effects of human activities on biodiversity have increased so greatly that the rate of species extinctions is rising to hundreds or thousands of times the background level."

Life on Earth is astonishingly diverse. About 1.5 million species have so far been catalogued, but that is probably barely 10 per cent of the actual number of species on the planet. Tens of thousands of species are now

**You, me and the 6.7 billion other humans who now cover the face of the Earth are quite literally pushing our fellow creatures off the planet**

going extinct – in many cases, even before we've had the chance to identify or name them.

The web of life is unravelling, right before our eyes, in real time. How can this be happening? What's driving it? And can it be reversed? While estimates vary, it's likely that upwards of 50,000 species went extinct in 2007. To put it another way, an entire species disappeared every six minutes last year.

These hapless species have had the very bad luck to find themselves in the path of the most voracious predator since T Rex – the genus homo sapiens. That's you, me and the 6.7 billion other humans who now cover the face of the Earth. We are, quite literally, pushing our fellow creatures off the planet.

Today, at least one-fifth of all the productive land on Earth has been sequestered exclusively for human use. Every year, another 160,000sq km of tropical rainforest are destroyed. That's an area almost twice the size of Ireland. The recent biofuel boom has increased the rate of tropical forest destruction.

These forest areas are home to tens of thousands of species of animals and plants. Destruction of their habitat means their sure and certain extinction.

Destroying natural systems also involves shooting ourselves in the collective foot in a



**JOHN GIBBONS**

The folly of human activity bears heavily on nature and causes one species to die off every six minutes

variety of ways. Taxol, a powerful cancer treatment, was for instance discovered in the Pacific Yew tree. Bees and bats provide crucial pollination services to agriculture. Coastal wetlands protect against storm damage and flooding. It's hard to quantify just how much we stand to lose, as we rarely bother to tally the cost of what nature provides for free – until it's gone.

While the sheer weight of human numbers is bearing down on the natural world, matters are made worse by the massive international illegal trade in endangered animals. A single recent seizure in Taiwan comprised 5 per cent of the world's entire population of the critically endangered Sumatran tiger.

Illegal hunting and habitat destruction – on land and at sea – are just two of the hazards our fellow species face from human activity. Pollution and global warming are also intensifying pressure on many species.

As temperatures increase, species will naturally seek to migrate towards cooler climes, either by heading north or by seeking higher ground. Our roads, cities, farms and railway lines dissect these natural migratory escape routes and fragment habitats. That spells doom for those species which cannot cope with rising temperatures.

Meanwhile, waves of human movement are invariably accompanied by animals such as pigs, rabbits and rats. The effect of these alien species on new ecosystems is usually disastrous. In 1856, for example, an English emigrant, Thomas Austin, released 24 grey rabbits into the wild in Australia, with the intention of shooting them for sport.

A century and a half later, and the hundreds of millions of descendants of Austin's two dozen bunnies continue to wreak havoc across the continent. They have been responsible for the extinction of many native plants and animals, as well as extensive topsoil erosion. Here in Ireland, alien invaders such as the zebra mussel are also causing ecological chaos in our lakes, as well as blocking pipes and clogging up water treatment plants.

The World Conservation Union recently identified more than 16,600 species now facing extinction. "If everybody on the planet co-operated and adopted a sustainable way of living, a lot of these problems would go away," said a spokesman. He was quick to add that, in all of human history, that has never happened.

But what goes around, comes around. "I think human beings are a failed species – we're on the way out," says Prof Michael Boulter of the Natural History Museum in London. "Our lives are so artificial they can't possibly be sustained within the limits of our planet."

Looking ahead, he adds: "The planet would of course be delighted for humans to become extinct, and the sooner it happens, the better."

John Gibbons is founder of Climatechange.ie and the blog ThinkOrSwim.ie