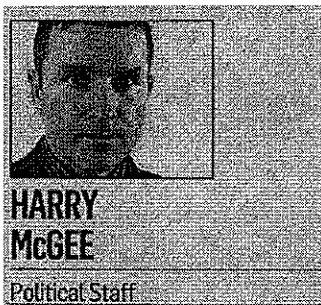




TRINITY CONFERENCE

Climate change a threat to plant species diversity



NOT MANY people outside the world of science would be able to offer an explanation of systematics. It's a botanical and biological specialism, the science of documenting and describing the diversity of living organisms.

Some of the world's leading authorities in this area, in addition to experts in biology, botany and climatology, are at Trinity College Dublin this week to discuss the impact of climate change on the world's biodiversity, such as changes in the distribution of species and threats of extinction.

The conference will hear that climate change will lead to "very large reductions" in the diversity of plant species across the globe. It will also lead to the extinction of plants and animals, and will shift habitats to cooler places, say some of the experts on botany and biology to speak at the conference.

The conference will draw together international experts in systematics who will discuss for the first time how global warming has affected biodiversity.

Speakers will include world authorities such as Dr Michael Donoghue of Yale University, Dr Stephen Hopper, director of the Royal Botanical Gardens in Kew, London and Dr Ian Woodward of the University of Sheffield.

For systemists, trying to document all the world's different life forms is a daunting task.

"We do not have a precise figure for how many species are

on earth," says Dr Trevor Hodkinson of the botany department at TCD, which is hosting this week's conference.

"There are perhaps four million different species of organism. Only between one million and two million have been described. With the rate of change brought by global warmth, some are disappearing. The whole pace of change has brought reductions in numbers, a shift in distribution. We will be looking at how species can adapt to those changes in an evolutionary sense," he says.

The conference will hear of trends such as threats of extinction, changes in habitat, changes in the distribution of species, and earlier seasonal changes.

Global warming will influence plant diversity directly, says Dr Woodward. "Analyses of endemic species and plant species in Europe clearly predict very large reductions in diversity over the next decades," he states in the abstract for his speech.

Other papers show: the high adaptability of grasses to changes - including rises in carbon - in the atmosphere; fossil records which show the contradictory fortunes of different organisms when CO₂ concentrations rose; and evidence that biological spring's arrival is advanced and winter delayed by about five days per decade.

Another paper examines how climate change will affect designated areas of environmental protection.

"There is growing concern that these [areas] may not be effective in conserving biodiversity in the face of projected climatic changes," says the group from the Institute of Ecosystem Science at Durham University in Britain.

However, the group's research indicates that important bird areas in sub-Saharan Africa have the potential to maintain most species throughout this century.