

Hidden Garden of Eden wilts as Earth warms

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Lost World?

A PARADISE world of undiscovered species and tropical glaciers in the mountains of New Guinea is disappearing faster than it can be explored. So says a climate scientist who has discovered that global warming there is happening 20 times faster than previously thought.

The highlands of the giant Asian island are among the most isolated places on the planet. They are rarely visited by local tribes and are virtually invisible to satellites because they are constantly shrouded in cloud.

Last week, researchers from the Royal Botanic Gardens Kew, in west London, announced the discovery of an entirely new genus of palm trees in the Wondiwoi mountains in the west of the island, which is part of Indonesia. And in February, the US group Conservation International unveiled a host of new species of butterflies, frogs, birds, plants and a tree kangaroo (pictured) found in the mist-shrouded Foja mountains.

All of this might be threatened, says Michael Prentice of Plymouth State University, New Hampshire. On recent visits to the island he uncovered a mass of previously unpublished meteorological data among the records of mission stations, coffee plantations and the mining companies that have recently moved into the highlands. "We have seven or eight good sets covering the period after the early 1970s. They show a real step change, with warming of 0.3 °C every decade," he says. This is five times the previous estimated warming for the region, and among the fastest in the world.

The warming appears to be particularly severe at the highest altitudes. The glaciers around 5030-metre Mount Jaya, which are among the last remaining in tropical Asia, have been in retreat for almost a century. From aerial photographs taken by the mining company Freeport, Prentice calculates that the glaciers' snouts are now more than 300 metres higher than when last fully mapped, in the 1970s. That rate of retreat is an order of magnitude faster than before, he says.

Prentice is now working with Lonnie Thompson of Ohio State University, an expert on tropical glaciers, to extract an ice core from the Carstensz glacier on Mount Jaya. This should reveal a detailed history of local climate going back thousands of years. "New Guinea is one of the most critical places for getting climate history, because these glaciers are in the heart of the El Niño region," Thompson says. "They can tell us so much about the way the climate system

works, but only if we get to them in time."

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