

By 1990, says Ms. Caufield, lowland rainforests of peninsular Malaysia, Thailand, the Philippines, Guatemala, Panama, Sierra Leone and the Ivory Coast, will have been reduced to a few remnant patches.

Mainland India, Haiti and Sri Lanka have already lost all their primary rainforests.

Indonesia will lose 10 per cent of the forests it had remaining in 1981 by the year 2000. The Philippines will lose 20 per cent, Malaysia will lose 24 per cent, and Thailand will lose 60 per cent by 2000. In Africa, Nigeria will be completely deforested by 2000, Guinea will lose one third, Madagascar 30 per cent, and Ghana 26 per cent of their few remaining rainforests. In Latin America, Costa Rica will lose 80 per cent of its 1981 rainforests.

Honduras, Nicaragua and Ecuador will lose more than one half; and Guatemala, Columbia and Mexico will lose one third of their last rainforests by the end of the century.

Although rainforest fertility is strictly limited, water and light are abundant: a West African rainforest receives as much rain in an hour as London does in four months, and the Amazon is so vast that it flows fresh into the Atlantic for over a hundred miles.

Species which take a year to mature in the USA, do so in the rainforest in only 23 days.

This high-speed cycle of life and death has produced most of the world's species: Ms Caufield describes a rainforest lake the size of a tennis court which has more fish species than all of Europe.

Four hundred unique animal species, she says, are estimated to rely on each rainforest tree species.



Destructive logging in the tropical rainforests of the South Pacific could see the end of lowland forests in our lifetime. Our Pacific Forest Conservation Coalition is developing a strategy to prevent such a tragedy, using funds from our recent appeal. Photo: Guy Salmon

Native people's knowledge of rainforest plants and animals as foods and medicines is now becoming celebrated. The author reports that Indonesian natives can find 4,000 wild food plants in the forest.

Similarly, malaria is only effectively treated with quinine bark of the cinchona tree of Peruvian rainforests. It took explor-

ers from 1935 to 1944 to obtain and grow viable seed of the right strain, and synthetic substitutes are now losing their efficacy.

Yet it is engineers, development planners, generals, accountants, politicians and economists who are now in charge of the rainforests and not native people with knowledge of how to use them sustainably.

As *In The Rainforest* makes plain, almost everything that developing countries do to rainforests is heavily influenced by aid from the North, loans from the North, and the strings attached.

It is still mainly the North which owns large logging concerns and the North, notably Japan, which consumes an enormous amount of rainforests, is safe from development pressures.

"About 2 per cent of the world's rainforests have been declared nature reserves or national parks. The vast majority of these are completely unprotected, and some are leased for logging or other disturbing activities," notes Ms. Caufield.

What the ultimate consequence of rainforest destruction will be, nobody knows but, although they may include dangerous changes to our climate and the loss of life-saving drugs or crops, the first that many people will know is likely to be when their Christmas supply of brazil nuts disappears.

For brazil nuts, it seems, are typical rainforests products. Faced with a trade already worth US\$16M a year in exports to the US alone, Brazilian businessmen have tried to industrialize production by creating nut plantations.

This is how Catherine Caufield describes the outcome:

"The trees were planted, they grew well, and in due course they flowered. But they produced no nuts.

"No one knows how brazil nuts are pollinated but they are visited regularly by euglossine bees, the same ones whose mating rituals depend on certain chemicals available only from a few species of epiphytic orchids.

"The plantation had none of these orchids, nor did it have the other plants on which bees depended for food. No bees, no brazil nuts.

"Brazil nut trees must grow in a mixed forest, one big enough to encompass all the other species in the life-cycle of the trees.

"Exactly what they are is still unclear, but they include not only the euglossine bees and the insects they may need (such as those which pollinate the epiphytic orchids) but also the rabbit-sized rodents called agoutis, which are the only creatures that crack open the hard fruit case that contains the valuable brazil nut.

"The seeds need agoutis to free them from their outer coverings. As yet no one knows what plants and animals the agoutis depend upon."

So it looks as if we will go on having brazil nuts only just so long as there are intact forests left in which to gather them. We may yet find a way to exploit the rainforests as well as to admire them, if only we can learn to gather the genes which create drugs, enzymes, food plants and even timber crops, in nuts, by keeping rainforests as rainforests, and not dismantling them. 🦋