

## The Tree of Life

**T**he Kiwai of New Guinea, like many preliterate groups, have a great respect for trees. In the late nineteenth century, when they were first given iron axes by the British, they were reluctant to use them; there were certain trees in particular that they refused to cut down. They believed, it was learned, that trees were inhabited by *etengena*, or spirit beings who were somehow connected with the soul of the tree. Before any tree could be felled, the axman would have to request that the *etengena* move to another tree, and if his arms felt heavy while cutting, or if the work seemed particularly hard, it was a clear sign that the *etengena* had not yet deserted the tree, and it was perhaps best left standing.

The Kiwai were not alone in their reverence for trees. Closer to home, our own European ancestors practiced various forms of tree worship, the best-known example of which is perhaps the religion of the Druids, who so revered the ancient oaks of the British Isles. But there were also sacred groves in what is now Uppsala in Sweden. The Slavs maintained holy forests where no tree could be cut; there were sacred groves throughout pre-Christian Germany, and perhaps most significant of all, according to Norse mythology, the very pivot of the earth was the Yggdrasil, the world ash. Its limbs spread over the world and stood above the heavens, and its roots penetrated into the abyss of hell.

Tree worship endured in Europe until the fourteenth century. The Lithuanians, the last converted to Christianity, had sacred groves around their villages; it was considered a sin to so much as break a twig from one of the trees there.

It is little wonder that trees and forests play such an important role in the spiritual life of pre-Christian Europe. In Roman times, all of Britain was forested; Germany was blanketed with dark, impenetrable woods; northern Italy was treed with chestnuts, elms, and oaks; and the dark and fearsome Ciminian Forest rolled south along the Italian peninsula all the way to Rome. Even the stark, light-flooded hills of Greece were once treed with oak and pine, although as early as the fifth century BCE Plato lamented the deforestation of the archipelago. Nor was Europe alone; in fact, until some ten thousand years ago, when agriculture began



to take hold as a way of life, most of the earth was covered with a green sheltering mantle of trees. It is estimated that there were 15 or 16 billion acres of woods on the planet. Less than one-third of the great overarching forest remains.

But quite apart from the fact that the human race must have grown up under the shade of the tree, there is something innately nurturing or good or beautiful about trees. There is no way that our prescientific ancestors could have known in a rational way, but trees and the existence of higher forms of life on this planet are inextricably connected.

A single, good-sized maple may contain several thousand green leaves, which can expose some two thousand square yards—about half an acre—to the sky and the sun. These leaves take carbon dioxide from the air and hydrogen from the waters of the soil, combine the two with sunlight, and produce carbohydrates, which are capable of sustaining other forms of life. A growing tree uses carbon dioxide at a rate of about forty-eight pounds per year, which comes to about ten tons for every acre of forest. Every ton of new wood extracts about one and a half tons of carbon dioxide and produces in return a little more than a ton of oxygen. If you consider that there are still about ten billion acres of forest on earth, that means that some one hundred billion tons of carbon dioxide are being used up each year by the forests of the world.

Carbon dioxide has become a problem in our time. Because of the destruction of the world forest, because of the human use of fossil fuels and the increase in other gases associated with industrial activity, the dynamics of the earth's atmosphere and its plant life are changing, and there is now too much carbon dioxide in the earth's atmosphere. The result is a phenomenon popularly known as the greenhouse effect.

But as is often the case in world events, it is perhaps important to relearn what was known by our forebears. Trees are life, more than we may know, and as the Kiwai made clear, we should perhaps be more careful when we go into the forest.

*September 1989*