

Fungus bites oldest tree that can't 'do sex'

BERNARD LAGAN

Sydney, Aug. 11: It has been on earth for more than 43,000 years, surviving Ice Ages and everything else nature and man have thrown at it. Now, as the plant many believe is the world's oldest is threatened by fungus, scientists are making desperate efforts to preserve it.

There is just one cluster of the shrub left, clinging on to a secret patch of soil on the bleak southwestern tip of the island of Tasmania.

King's holly, *Lomatia tasmanica*, has a long, slender trunk, small, deep green leaves and a brilliant red flower. However, the ancient plant's capacity to regenerate is hampered by one important shortcoming, its brilliant red flowers notwithstanding: King's holly is incapable of sexual reproduction.

It is a triploid, instead of having two sets of chromosomes, it has three. It never produces seed and survives by growing up, falling over

and sprouting new roots.

Greg Jordan, of the School of Plant Science at the University of Tasmania, believes the holly is probably the world's oldest living plant.

"Definitely to date, it's probably the best candidate for oldest plant in the world," says Jordan who says it is still unknown how the holly survived the Ice Age and then adjusted to a temperate climate. "The King's holly doesn't do sex," he said.

Scientists, seeking an insurance against the end of the last cluster, have struggled to find reliable techniques to grow the plant, and fear that its last stand, about one kilometre wide, is potentially just a bush fire away from eradication. Its roots have already come under attack from a fungus.

The Royal Tasmanian Botanical Gardens, which even keeps King's holly out of public view, has had only partial success with an intensive breeding programme

it has run over the past decade.

Specimens grown from tissue culture have not survived for longer than eight months. Plants grown from cuttings have had a high failure rate with only two or three cuttings surviving out of 20 or 30.

Now scientists are attempting to graft the King's holly on to the sturdier rootstock of other plants. If successful, that could even allow the critically endangered plant to be propagated and sold in garden centres.

Natalie Tapson, of the Royal Tasmanian Botanical Gardens, who has worked with King's holly for 20 years, said that grafting it on to more robust roots could overcome the frequent blackening and dying of holly stems when they are cut.

"By putting it on to a root stock, it's hoped that when you plant it out, or transfer it, you're not going to have that loss because the root stock is stronger," she said.

THE TIMES, LONDON