

Christmas tree's genome hasn't changed since dinosaur era

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conifers exist today, while more than 400,000 species of flowering plants, or angiosperms, dot the Earth. Researchers led by Professor Jean Bousquet from the Universite' Laval in Canada came to this conclusion after analysing the genome of conifers and comparing it to that of flowering plants.



Both plant groups stem from the same ancestor but diverged some 300 million years ago.

Researchers compared the genome macrostructure for 157 gene families present both in conifers and flowering plants.

They observed that the genome of conifers has remained particularly stable for at least 100 million years, while that of flowering plants has undergone major changes in the same period.

"That doesn't mean there haven't been smaller scale modifications such as genetic mutations. However, the macrostructure of the conifer genome has been remarkably stable over the ages," said Bousquet in a statement.

"Conifers appear to have achieved a balance with their environment very early," said Bousquet.

"Still today, without artifice, these plants thrive over much of the globe, particularly in cold climates. In contrast, flowering plants are under intense evolutionary pressure as they battle for survival and reproduction," he said. The study finding was published in the journal BMC Biology.

The genome of conifers such as spruce, pine, and fir – widely used as Christmas trees – has remained very much the same for over 100 million years when dinosaurs roamed the Earth.

This stability means there are far fewer species within the taxonomic group today, compared with other types of plants that have splintered off into thousands of different species.

Consider, for example, just 600 species of