

Table S1: List of taxa triplets

Thuja occidentalis, Cathaya argyrophylla, Pinus contorta¹
Juniperus monosperma, Abies religiosa, Keteleeria davidiana
Agathis dammara, Picea abies, Cedrus deodara
Taxodium distichum, Pseudolarix amabilis, Nothotsuga longibracteata
Sequoia sempervirens, Pseudotsuga sinensis, Larix decidua
Cathaya argyrophylla, Taxodium distichum, Glyptostrobus pensilis
Wollemia nobilis, Chamaecyparis formosensis, Chamaecyparis hodginsii
Cathaya argyrophylla, Sequoia sempervirens, Metasequoia glyptostroides
Pseudotsuga sinensis, Thuja plicata, Thuja occidentalis
Taxodium distichum, Juniperus monosperma, Cupressus torulosa
Pinus contorta, Hesperocyparis benthamii, Callitropsis nookatensis
Sequoia sempervirens, Wollemia nobilis, Agathis dammara
Metasequoia glyptostroides, Araucaria bidwillii, Araucaria araucana
Agathis dammara, Ephedra sinica, Ephedra foeminea
Sequoia sempervirens, Juniperus monosperma, Chamaecyparis hodginsii
Pinus contorta, Wollemia nobilis, Araucaria bidwillii
Taxodium distichum, Hesperocyparis benthamii, Callitropsis nookatensis

1. Triplets listed as Outgroup, Ingroup 1, Ingroup 2