## For change to happen, sometimes continents must move

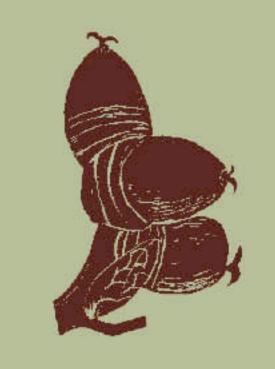
## Quercus garryana

western North America

## Did you know that many related plants grow on the North American and Eurasian continents?

Many trees are found all over the northern hemisphere, such as maple, pine, oak, dogwood, alder, cherry, and hemlock. A diversity of shrubs, such as, kinnikinnick, rhododendron, elderberry and devil's club also grow on both continents. There

are also many herbs, like foam flower, lily, saxifrage, trillium, bleeding heart, ginger, bedstraw and skunk cabbage that grow across the northern hemisphere.



Japanese Evergreen Oal Asia





Quercus robur English Oak Eurasia

Roughly, 250 million years ago (mya), all the world's present day continents formed a super continent called Pangea. Roughly, 180 mya, Pangea split into a single northern continent Laurasia, and a southern continent Gondwana. During this time, ferns, conifers, cycads and ginkgos developed. Flowering plants appeared 130 mya. About 50 mya, Laurasia broke apart into the North American and Eurasian continents. Through geographic isolation, ancestral forms of ferns, conifers, cycads, and flowering plants evolved into a myriad of species

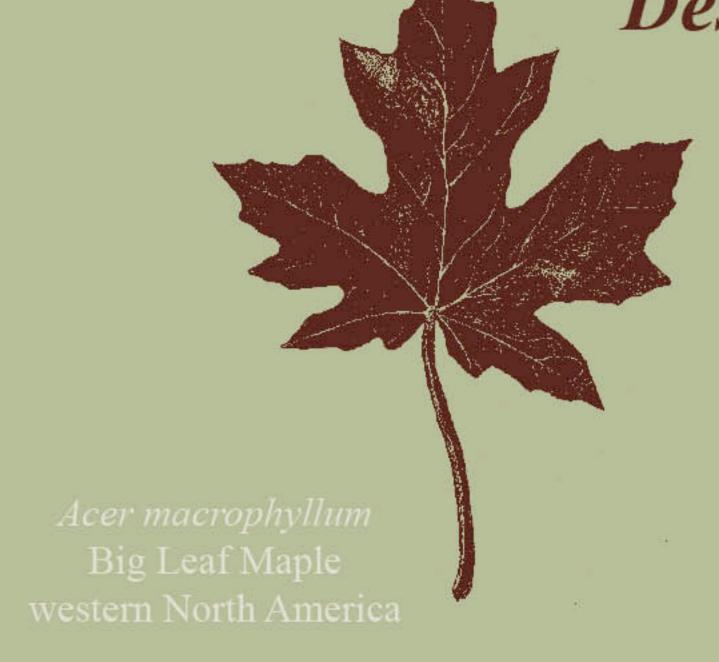
In response to global climate change, plants moved across continents based on their necessary growing conditions. During

warmer periods, plants also spread across the Atlantic and Bering land bridges. Through evolution, plants adapted to changing environmental conditions. Maples probably evolved in China in the late Mesozoic. From China, they spread to Europe and North America between 67 mya and 48 mya. Today there are 250 species of maples worldwide, including northwest natives such as the big leaf maple and the vine maple. Plants adapt to new environments, and cultures adapt to plants. For example, indigenous North American and Eurasian peoples use acorns for food from oaks growing in their region.



Quercus ilex Holly Oak Eurasia

Despite our differences, we are rooted to the same family tree.





Acer palmatum Coral Bark Japanese Maple Asia



Acer platanoides
Norway Maple
Furasia

