

Plaeoecology in the Okanagan Highlands



Explore the climate of the Okanagan Highlands in the Early Eocene by examining the current climate conditions of the nearest living relatives of fossilized flora from that region and period.



Look at the fossil picture cards and the fossils that go along with them, where included. Use the ID guide one the nearest living relatives to identify the genus of each card.

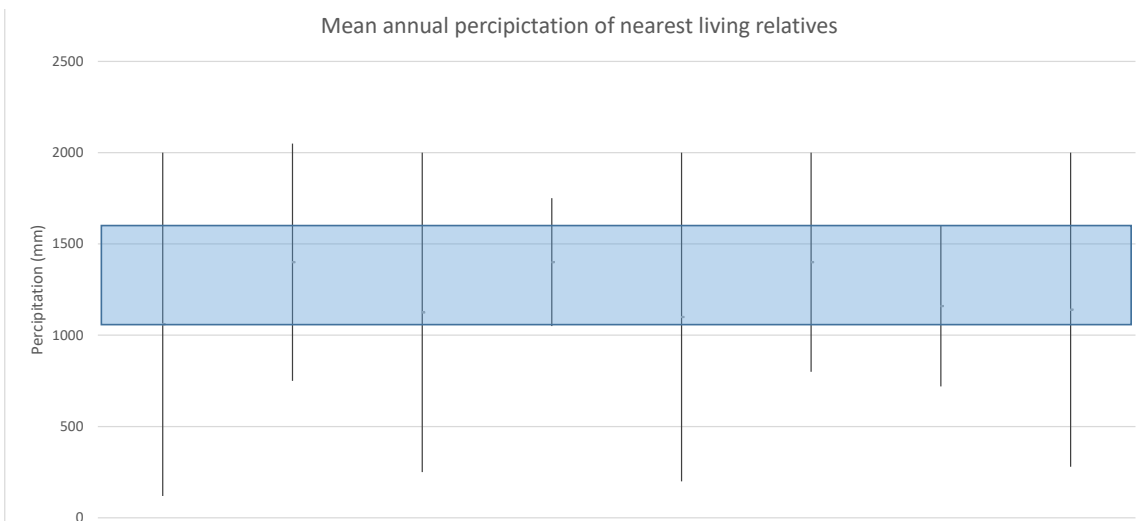
Fossil Card number	NLR of fossil plant	Genus of fossil plant

On graph paper, plot the climate parameters (found in the ID booklet) for each nearest living relative. Draw a separate graph for each climate parameter, so three graphs in total. The overlap of the ranges for a given parameter for all NLRs can be used to estimate climatic conditions in the Okanagan Highlands in the Early Eocene. On each graph, draw two lines to enclose the limiting range for the climate parameter.

What is the limiting range of temperatures for the MAT? _____

What is the limiting range of temperature for the CMMT? _____

What is the limiting range of precipitation for the MAP? _____



This is an example of what your graph could look like.

Discuss your results with your neighbouring groups. Are your graphs identical or are there some slight differences? Why might scientists want to include results from previous experiments in their results?

What are the limitations of using NLRs to estimate climate parameters for ancient environments? What factors might prevent this method from providing an accurate estimate?

Eight fossil plants and their NLRs are used to estimate climate parameters for Okanagan Highlands in the Early Eocene. How would using a larger or a smaller number of fossil plants and their NLRs be expected to affect the accuracy of these predictions?
