



Fossil plants from eastern Canada

**Presentation for the
West End Horticultural Society
October 18, 2023**

Image by [Jasmine Wong](#)

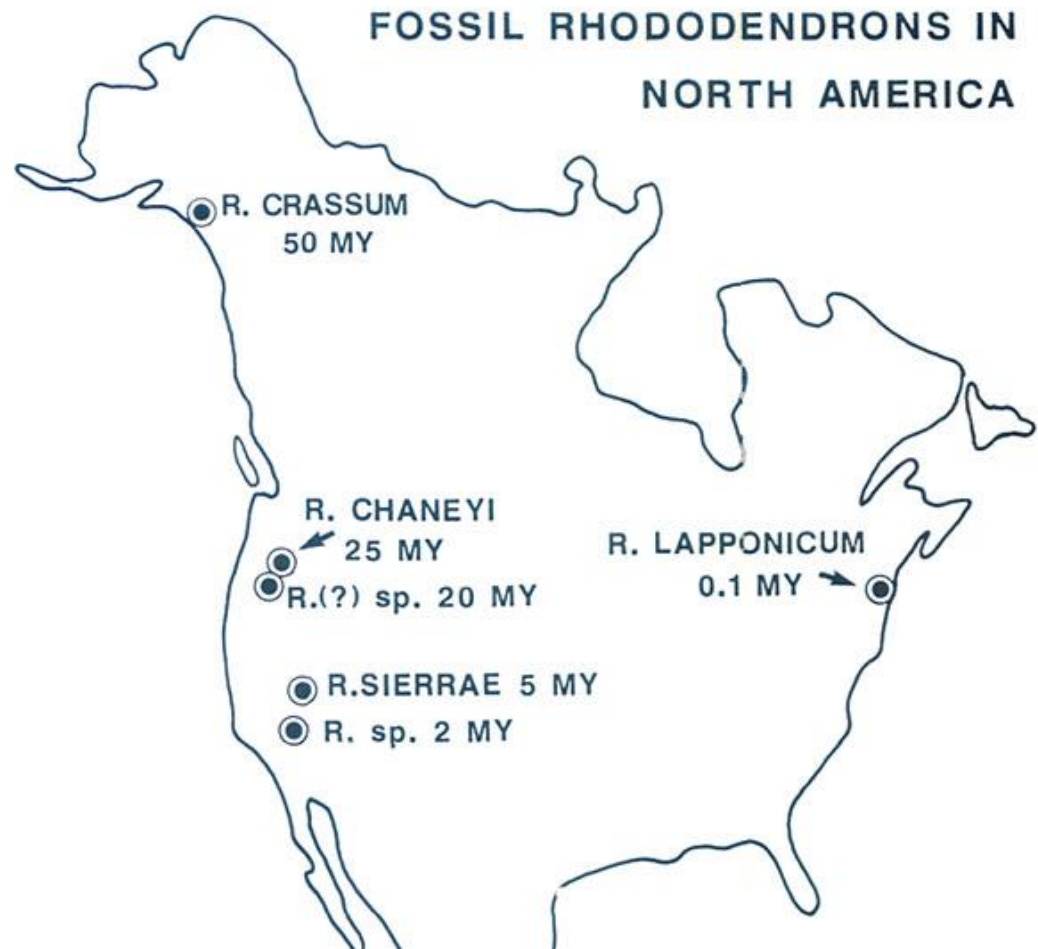


In Honour of their 90th anniversary

a Fossil Rhododendron leaf from BC and a
100 year old modern Rhododendron

When do
Rhododendrons
show up in North
America?

During the Late
Cretaceous, about
68 million years
ago.





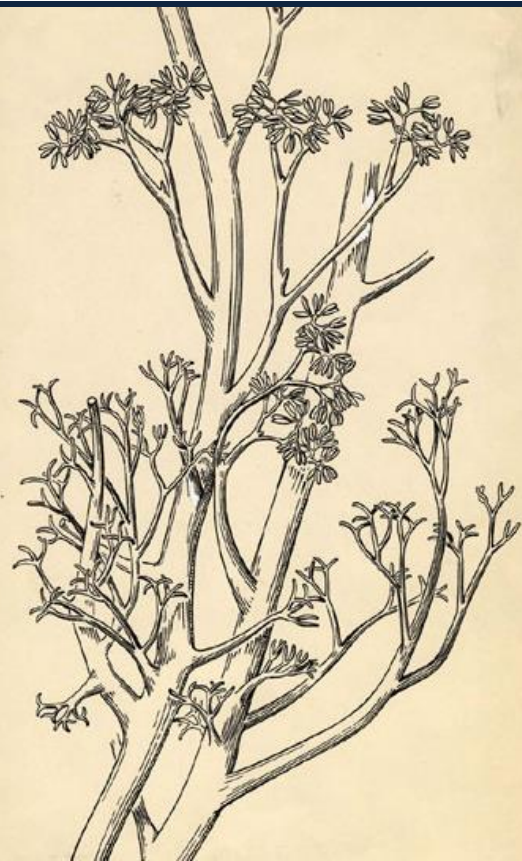
Can you see the Rhododendron and the azalea?
This diorama at the Redpath Museum shows reconstruction of plants and animals from the Cretaceous of western Canada, about 68 million.



Let's look at some older plants:
Psilophyton princeps

Plant life of the Devonian of the Gaspé

Dawson's drawing of *Psilophyton* (1859) and mural from Smith's College

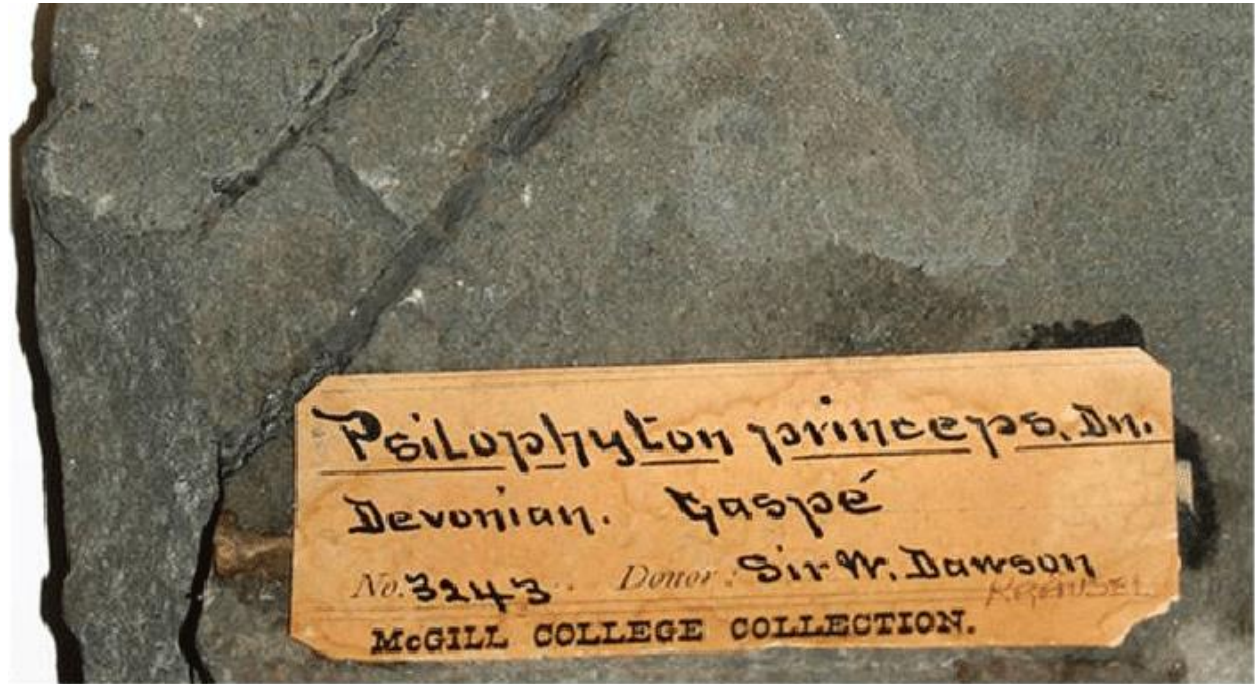


Plant life in the Late Devonian. 1.Cladoxylon scoparium 2.Cooksonia 3.Wattieza 4.Pertica 5.Drepanophycus 6.Pseudosporochnus 7.Psilophyton dawsonii 8.Zosterophyllum 9.Sawdonia 10.Renalia ([Via the Botanic Garden of Smith College](#))

From Gensel, Patricia & Andrews, Henry & Forbes, William. (1975). A New Species of *Sawdonia* with Notes on the Origin of Microphylls and Lateral Sporangia. *Botanical Gazette*. 136. 10.1086/336782. .



Closer look at *Psilophyton princeps* sporangia



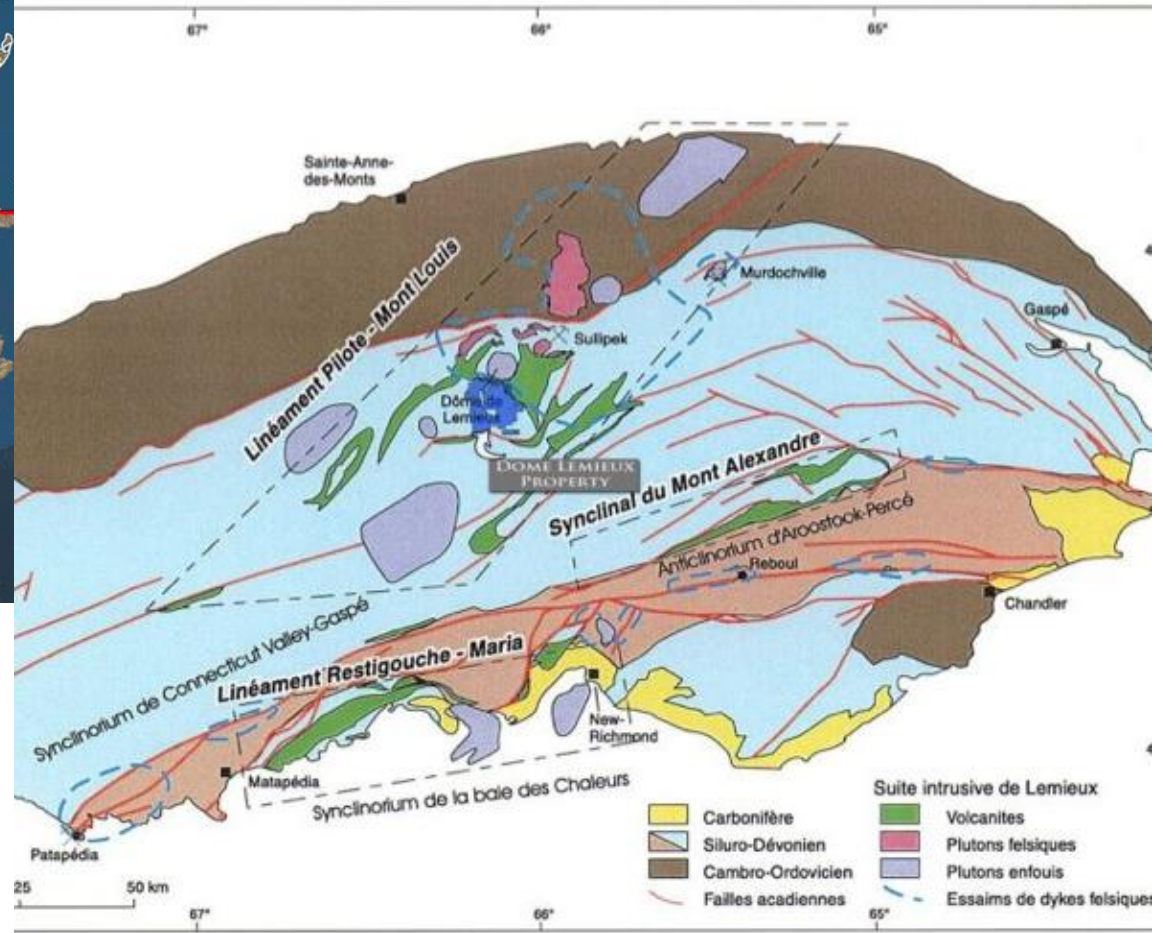
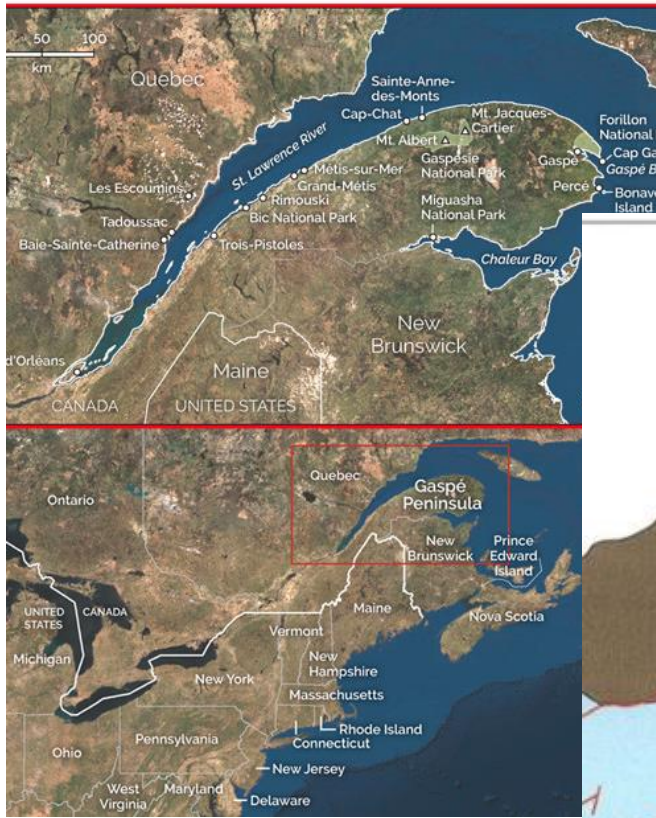
More Devonian fossils at Redpath Museum: *Psilophyton princeps*



When did the earliest plants show up on earth? About 380 million years ago in the Late Devonian. Graphic Wikipedia.

Where did Dawson find fossil plants in the Gaspé?





Geology of the Gaspé Peninsula

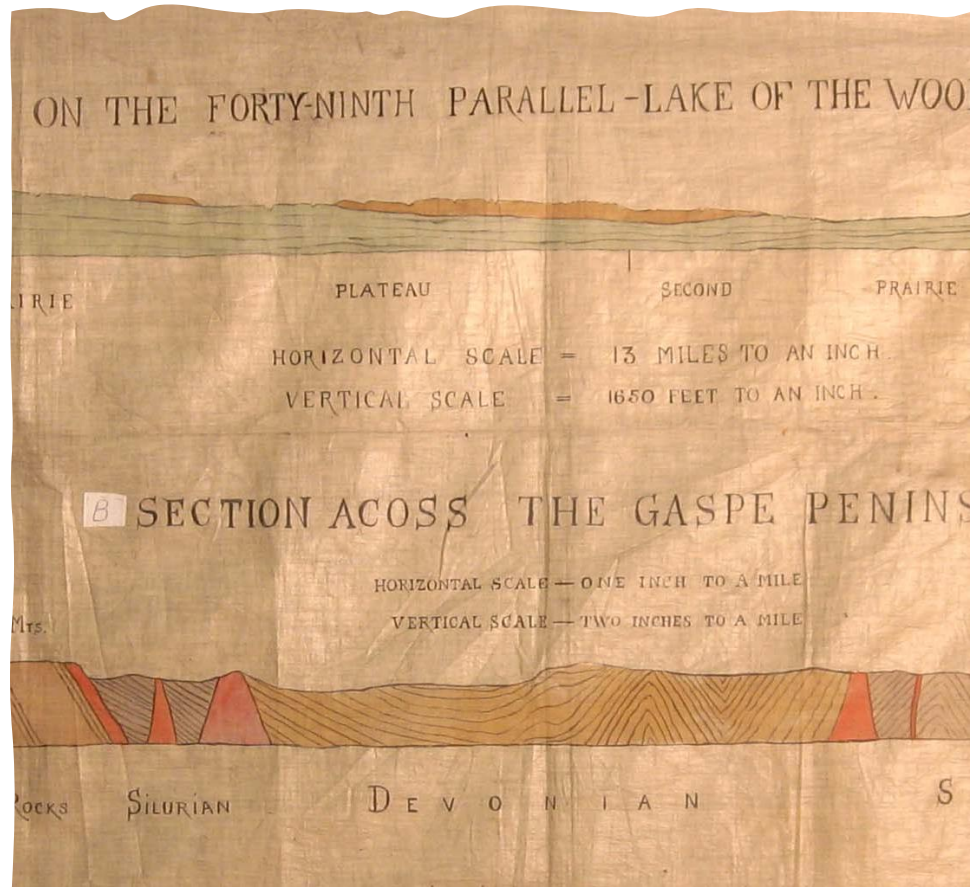
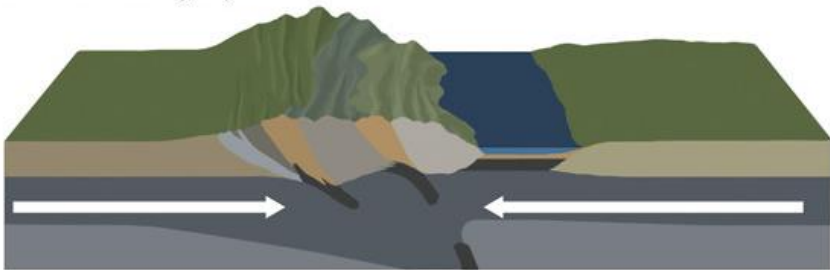
Mountain building in Gaspe Peninsula

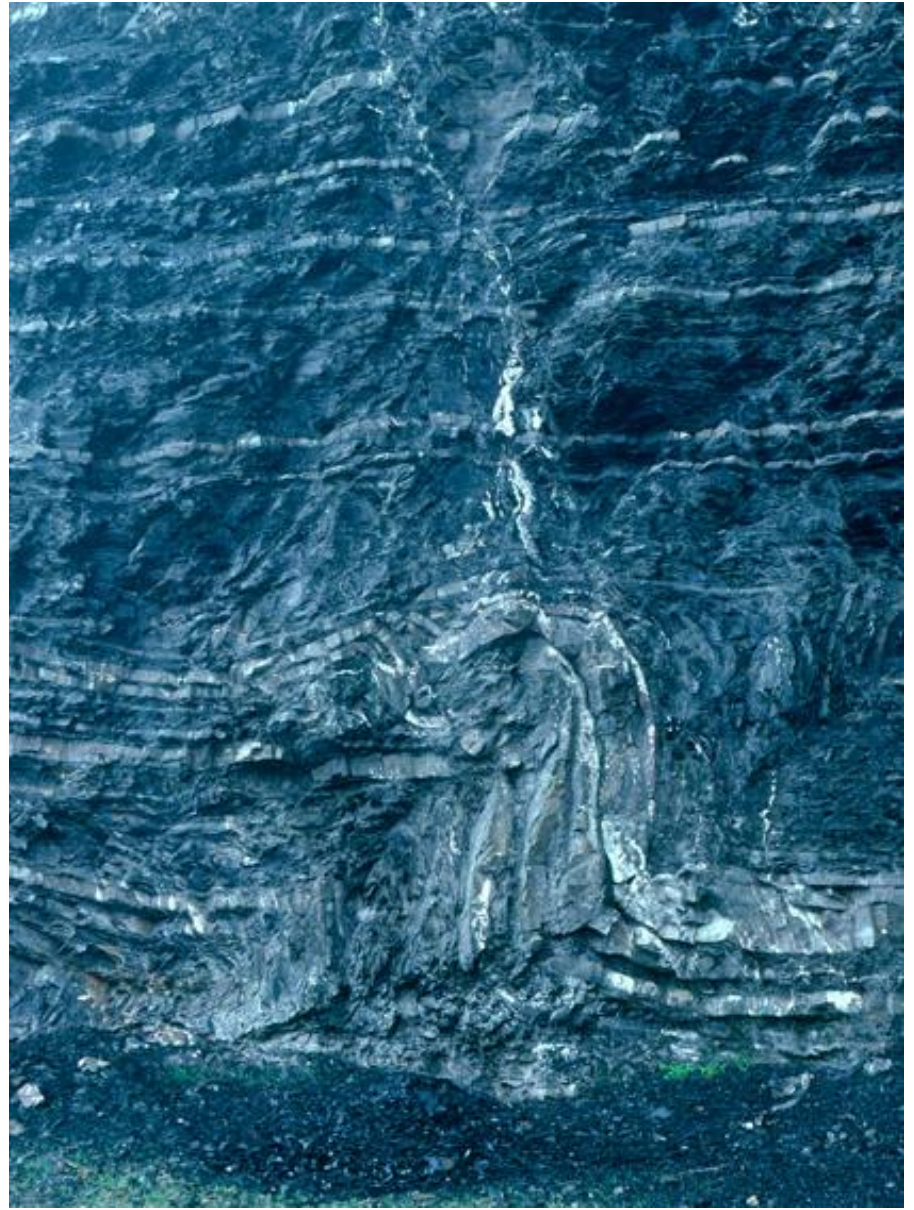


2) Taconic Orogeny



3) Acadian Orogeny







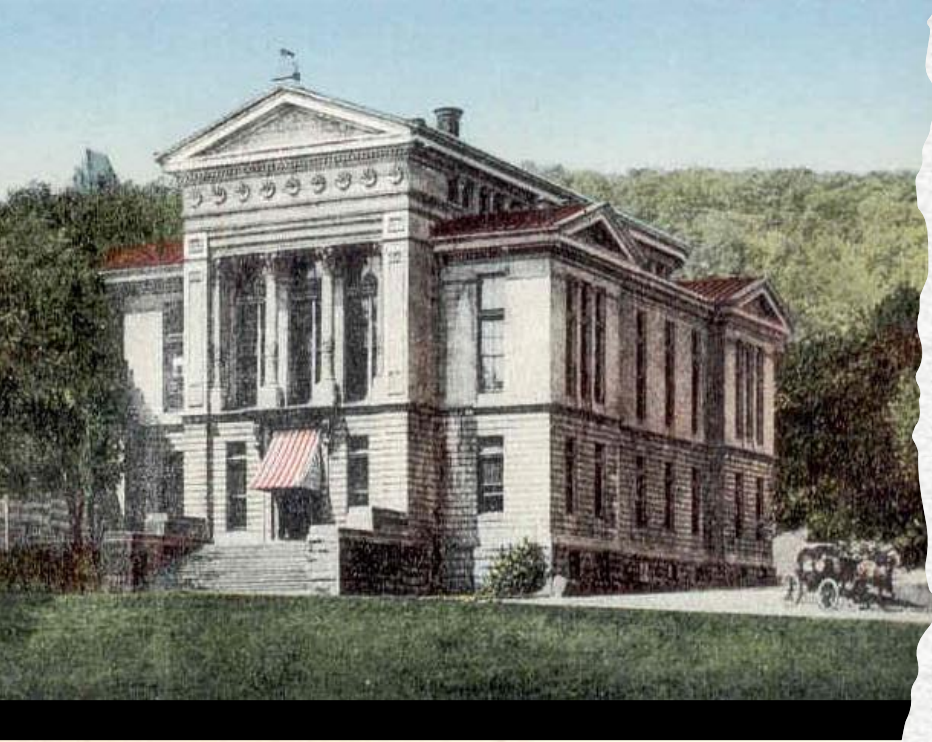
- Who was Dawson?





- Dawson and family in Metis beach





- Dawson in Montreal





Art and Devonian landscape

Clockwise from left:
Anna Dawson c.
1870s; Prehistoric
life book (1956) by
Z. Burian; Robert
Evans paintings for
Smith College
Botanical Garden
(2006).

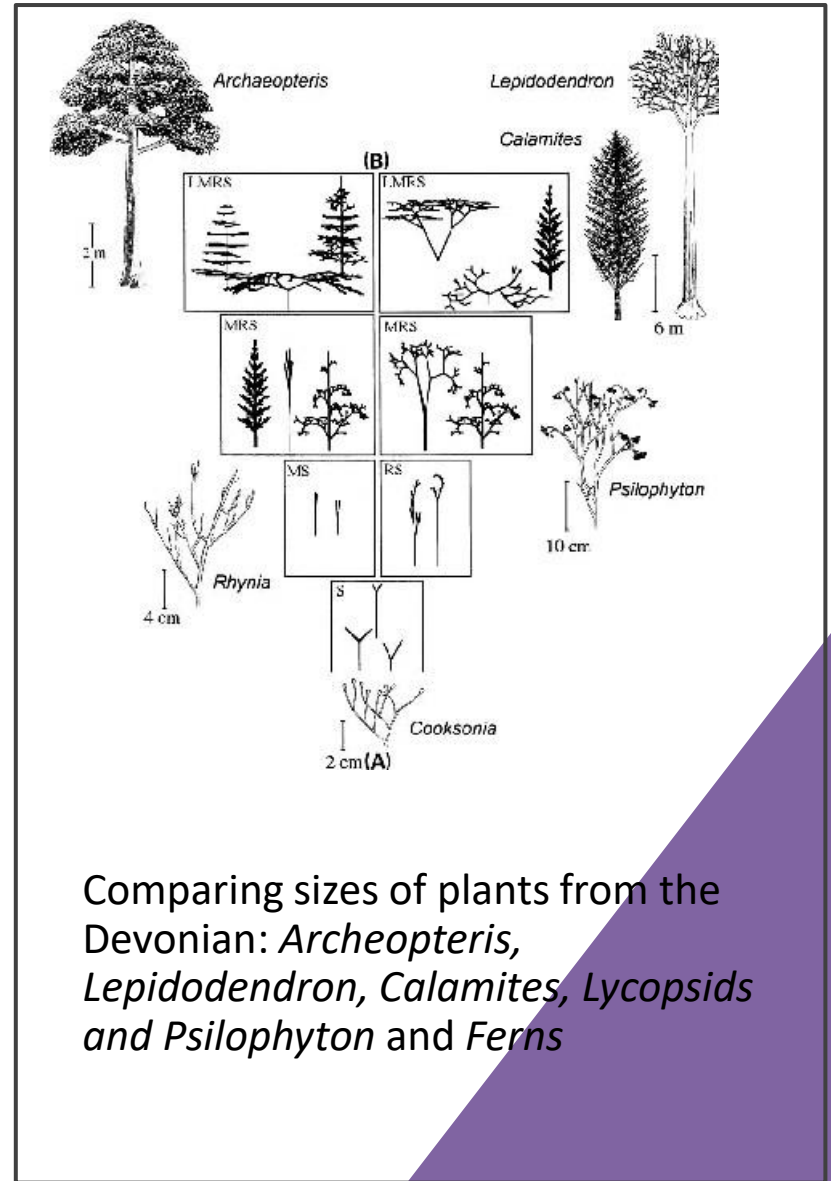
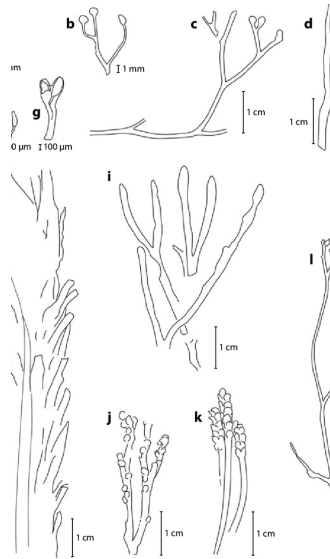




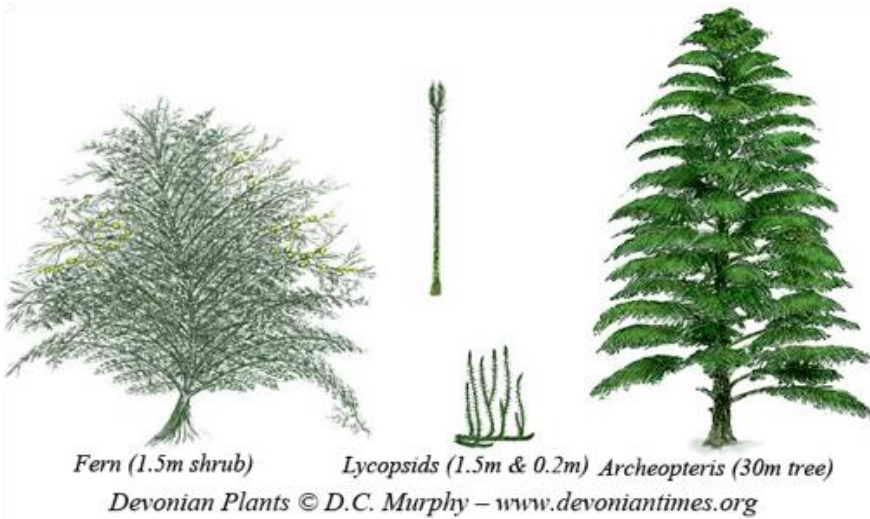
Dawson's hand painted teaching sheet of Devonian flora



Archeopteris, a tree fern
from Miguasha

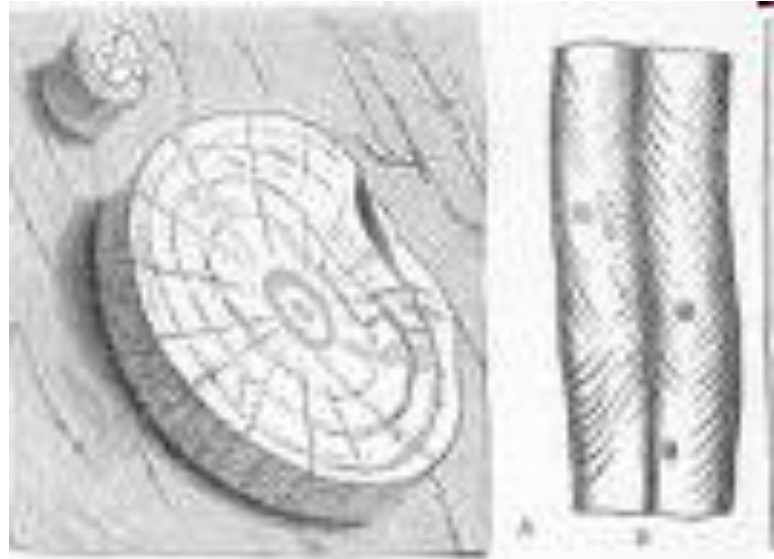


Comparing sizes of plants from the Devonian: *Archeopteris*, *Lepidodendron*, *Calamites*, *Lycopsids* and *Psilophyton* and Ferns





- Tree Ferns like *Pecopteris*



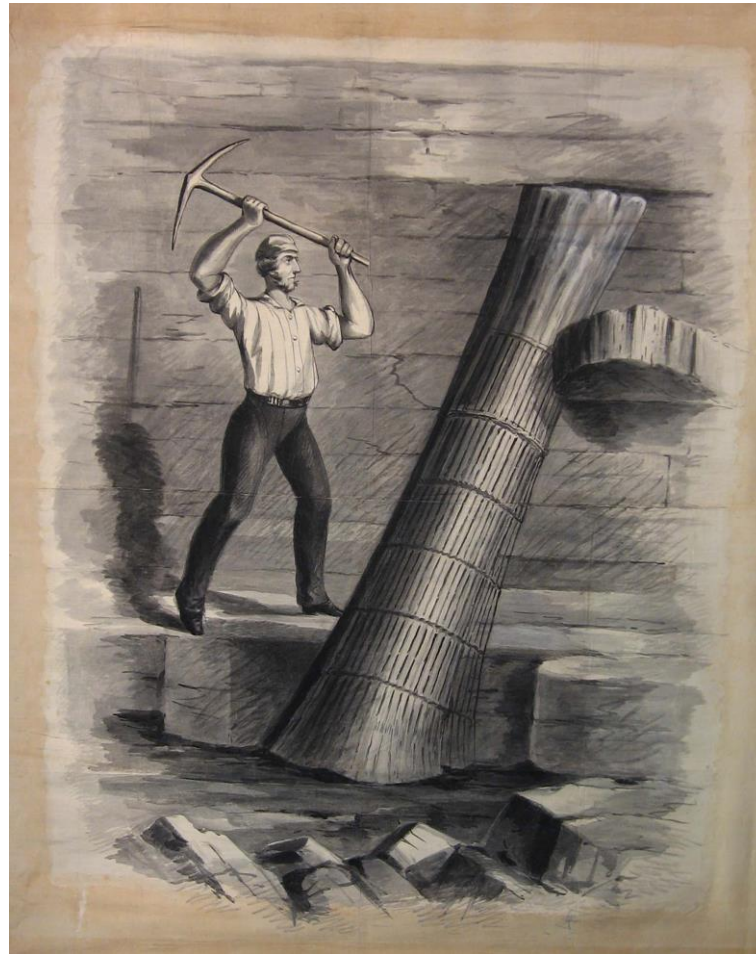
Prototaxites



Painted Dawson
teaching sheet showing
algae, trunks of
lycopods, psilophyton,
Annularia and
duckweed



Fossil trees in Joggins, Nova Scotia coal mines



Carboniferous plant fossils

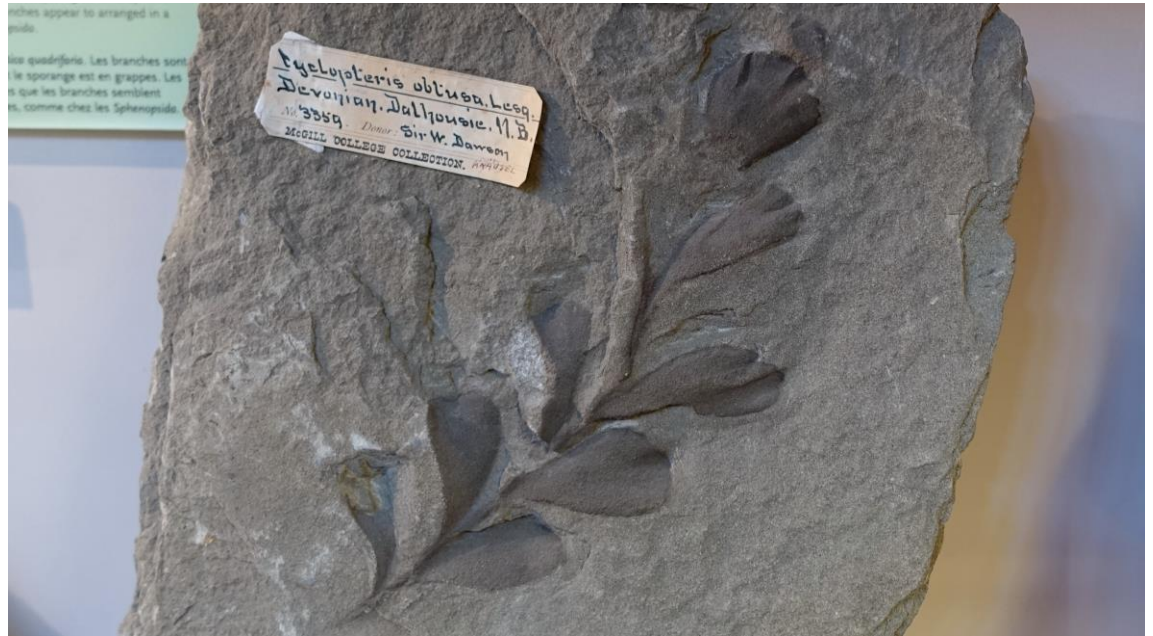


Carboniferous landscape



Carboniferous landscape





Some Carboniferous fossils

More Carboniferous plants





*Living fossil
plants around us*
Dawn Redwood
in Westmount
Park

Metasequoia (Dawn Redwood)



Metasequoia Dawn Redwood at McGill



In Westmount Park, Montreal



Tulip tree

Liriodendron tulipifera



Liriodendron tulipifera on campus



Liriodendron tulipifera



Liriodendron tulipifera
Jardin Botanique



Distribution of *Leriodendron*





Ginkgo
fruits are
delicious