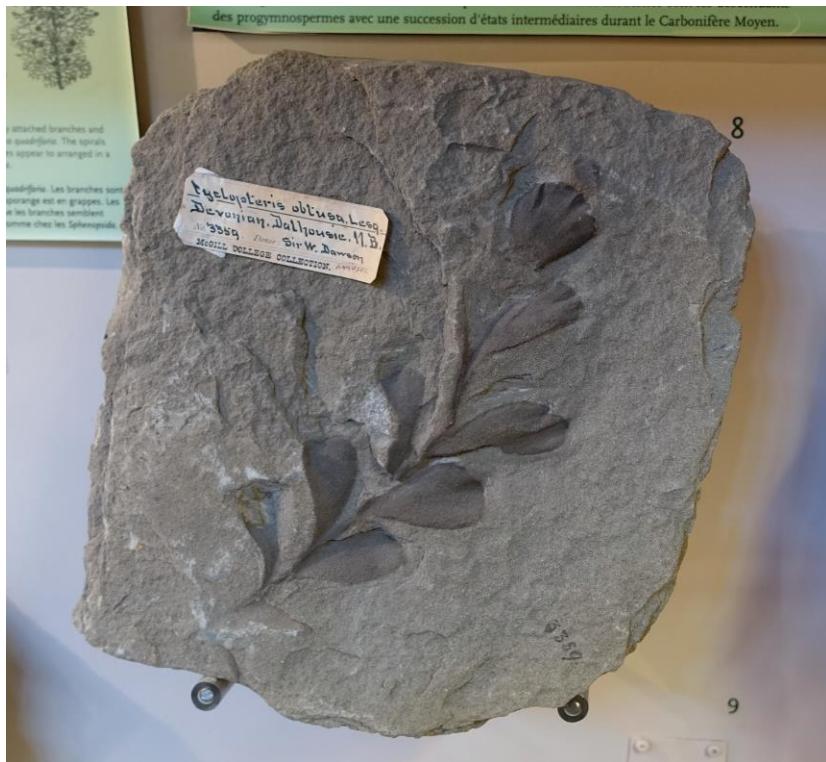


Fossil plants from eastern Canada

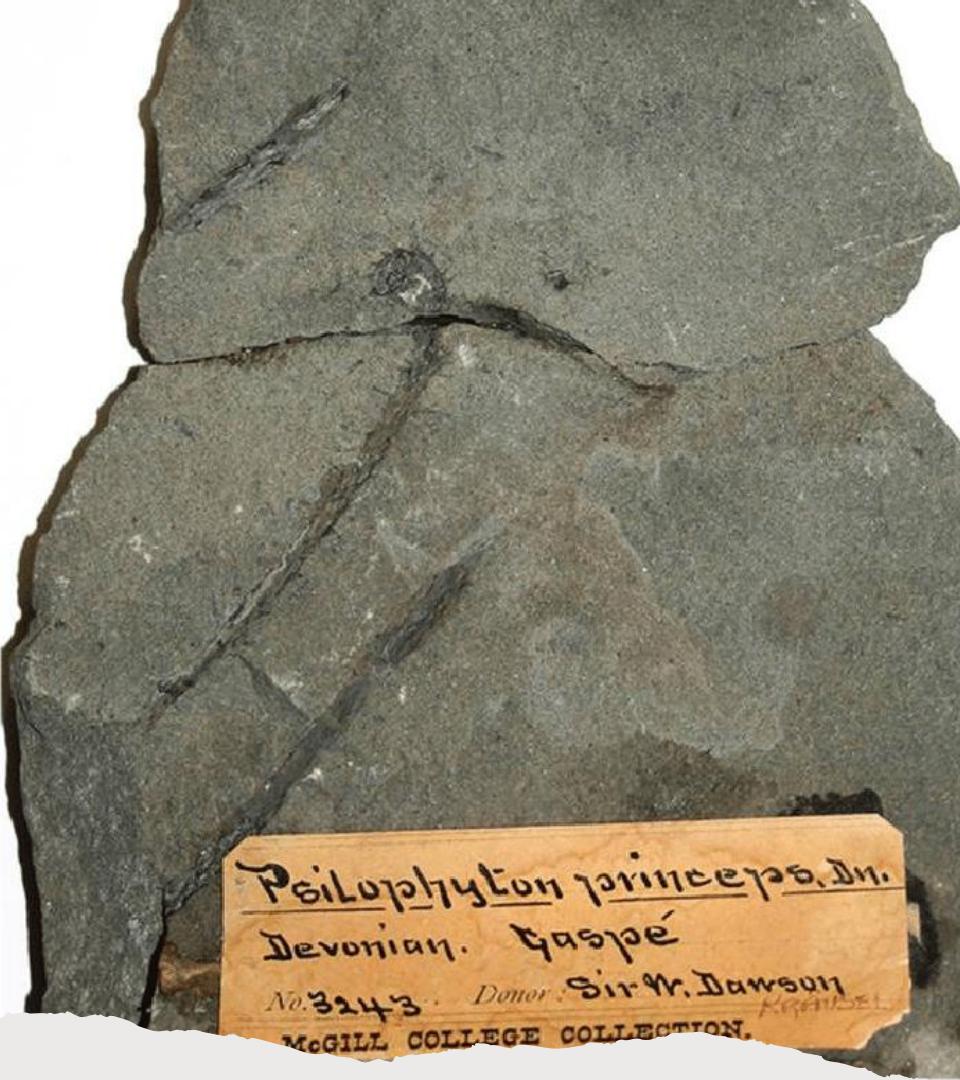
Presentation for the
Dorval Horticultural and Ecological Society

March 25, 2024





Where it all starts: *Psilophyton princeps*

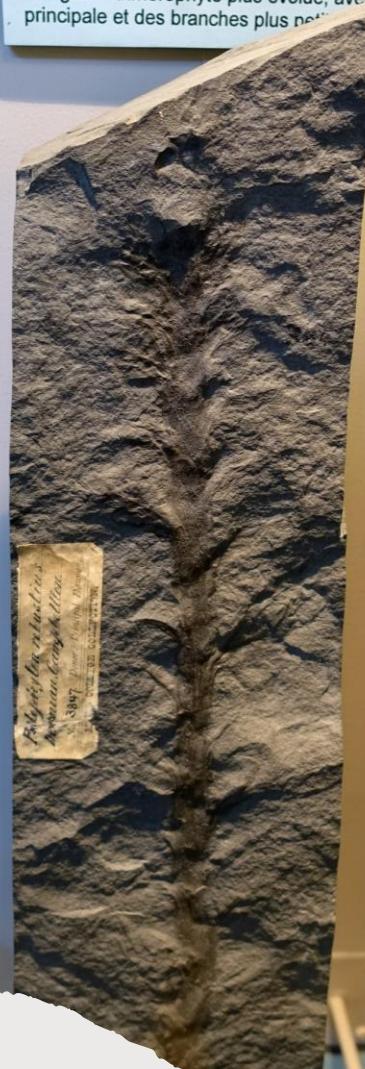


ago. A great variety of
Québec.

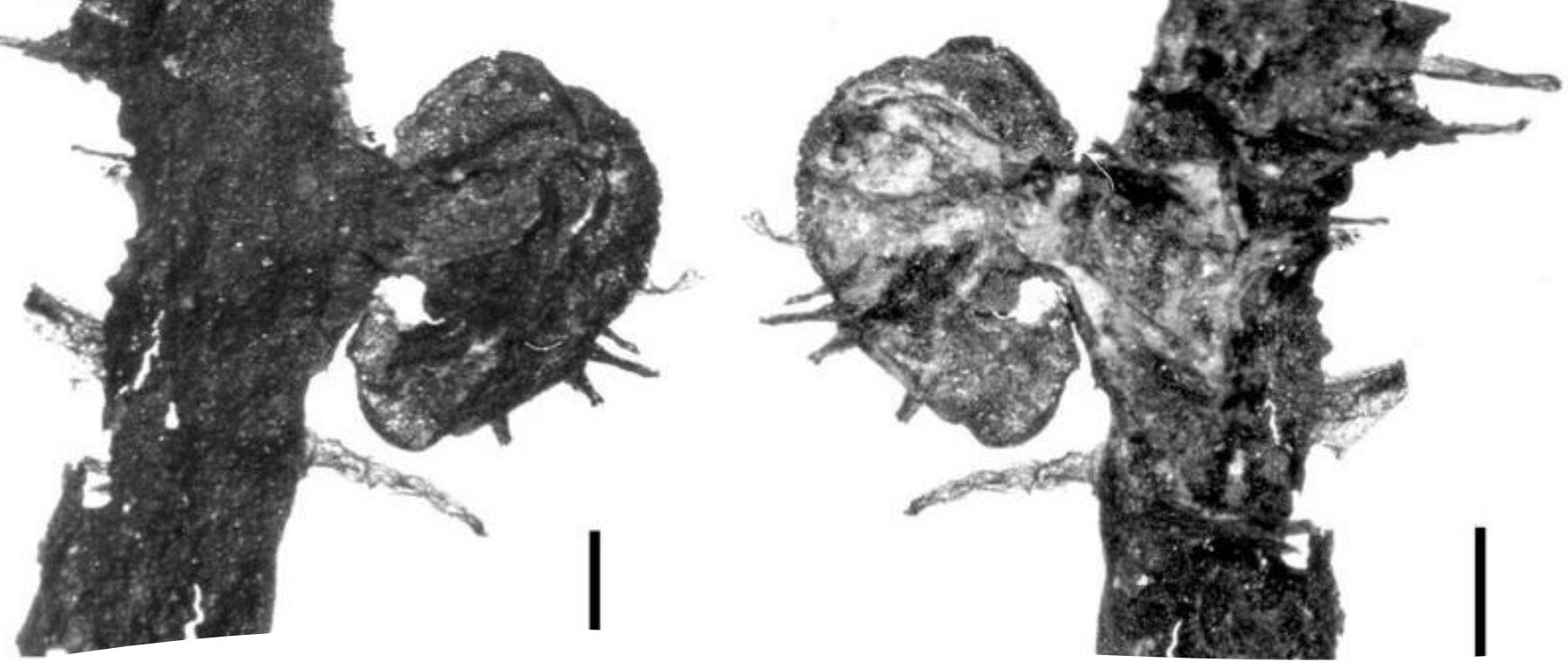
TRIMEROPHYTON ROBUSTIUS,

A large, more advanced trimerophyte, with a main stem
and smaller branches

Un grand trimérophyte plus évolué, avec une tige
principale et des branches plus petites



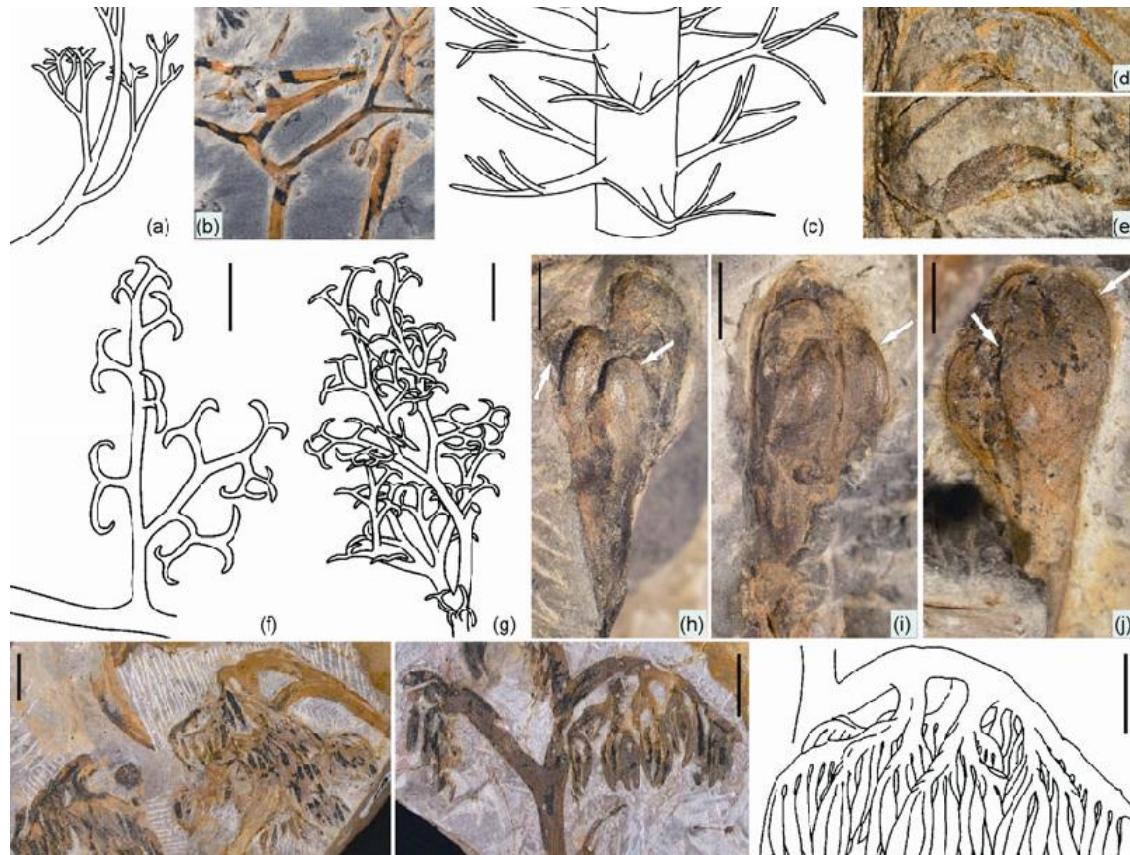
Where it all starts: *Psilophyton princeps*



Closer look at *Psilophyton* *princeps* 1975

From 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 and name changes (2013)

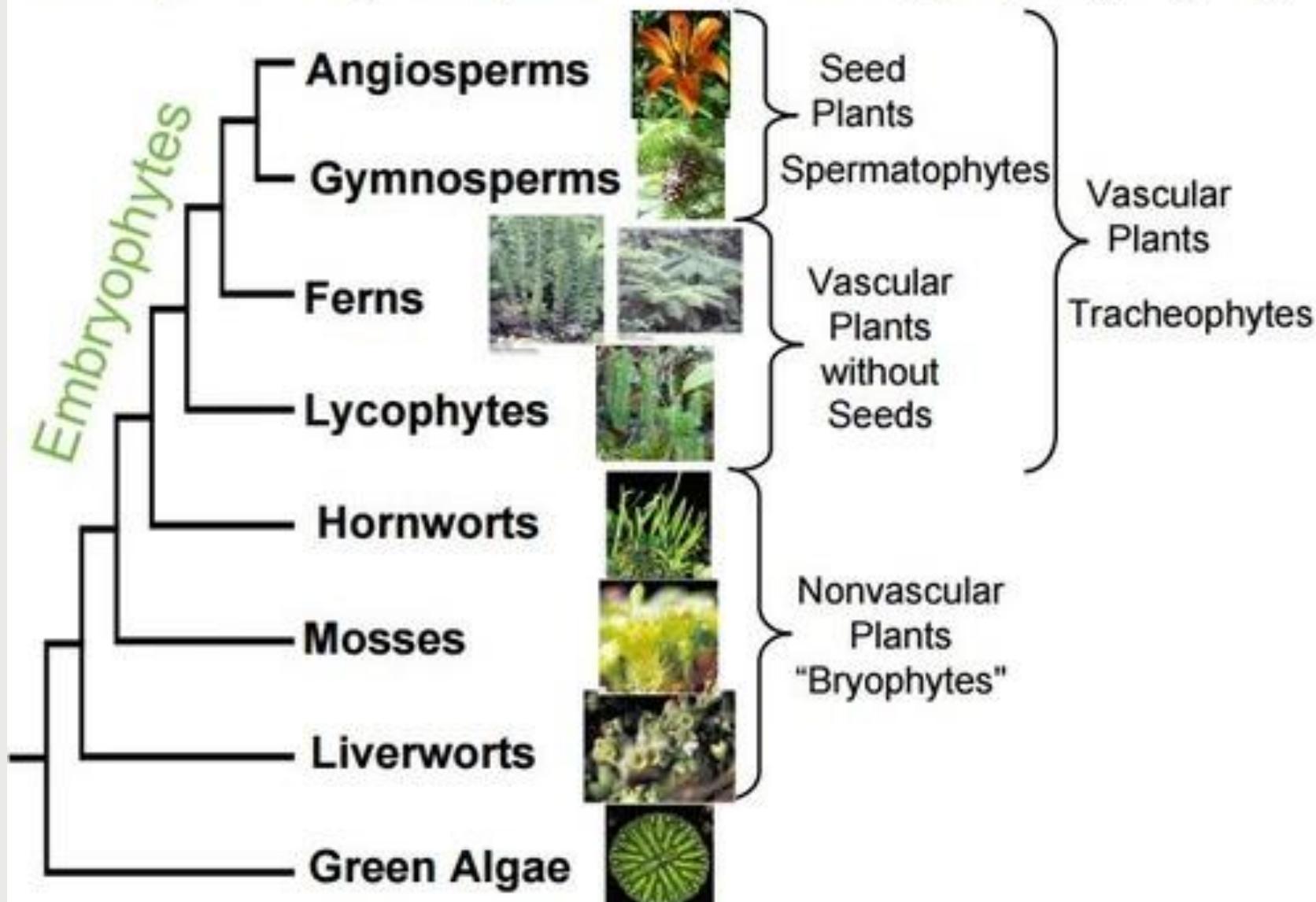




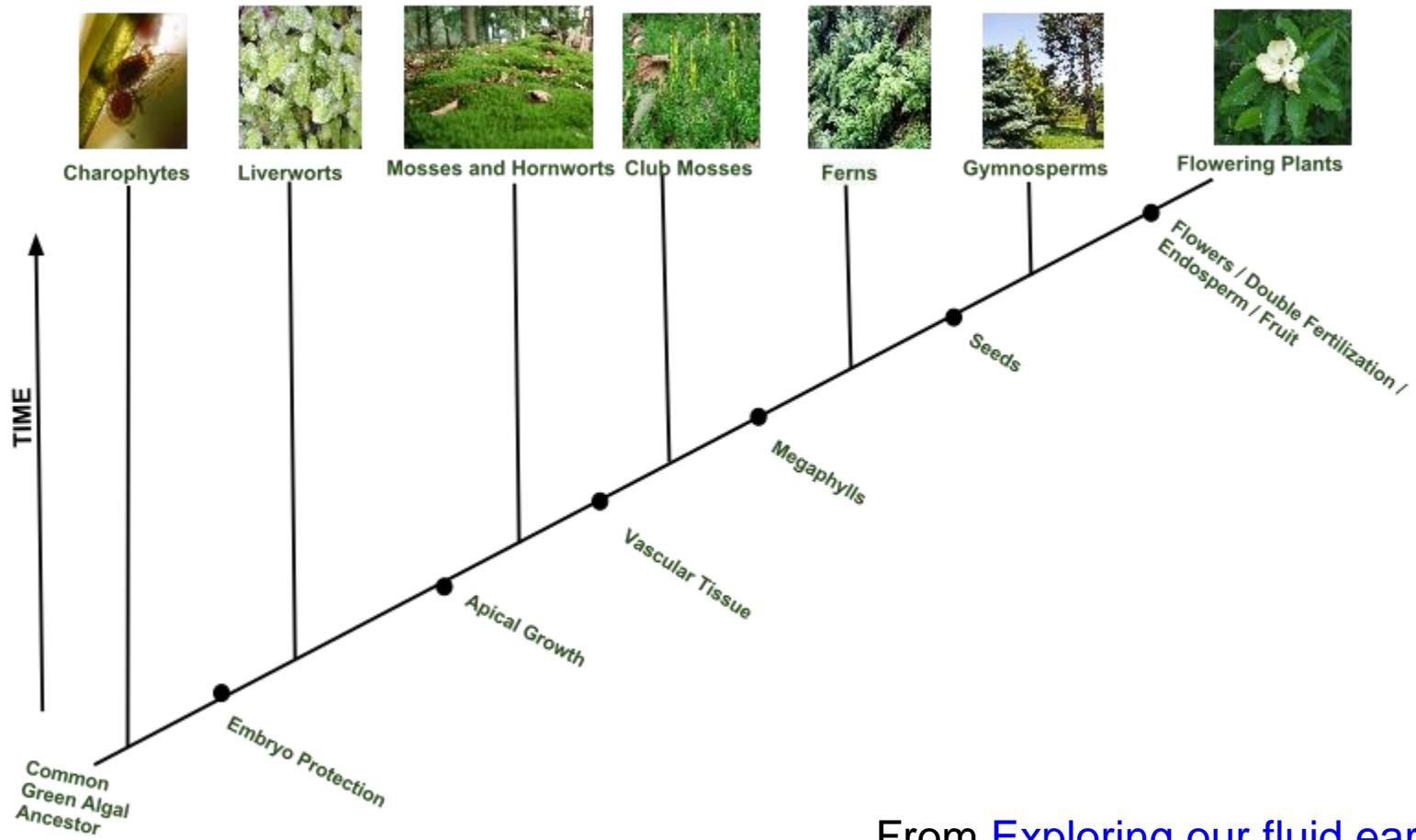
**A closer look at
*Psilophyton***
**(from 1863 and 1888
illustrations in
publications by J.W.
Dawson)**

How do early land plants fit together?

Viridiplantae (land plants + green algae) Phylogeny



How do early land plants fit together?



Where did Dawson find fossil plants in the Gaspé?





Geology of the Gaspe Peninsula

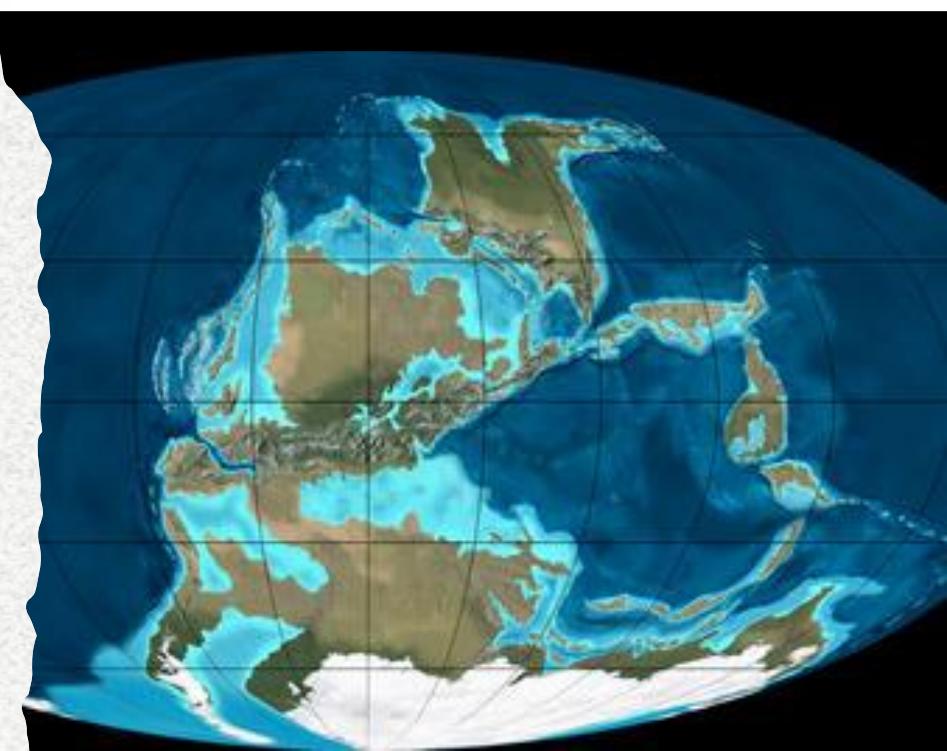
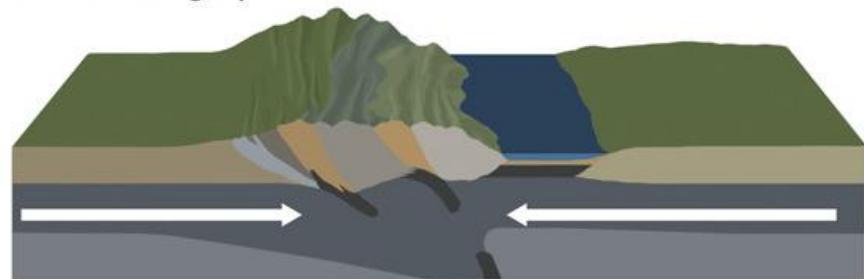
From [Earth, the Science behind the Headlines](#)

- Mountain building in
- Gaspe Peninsula
- from 540 mya to present

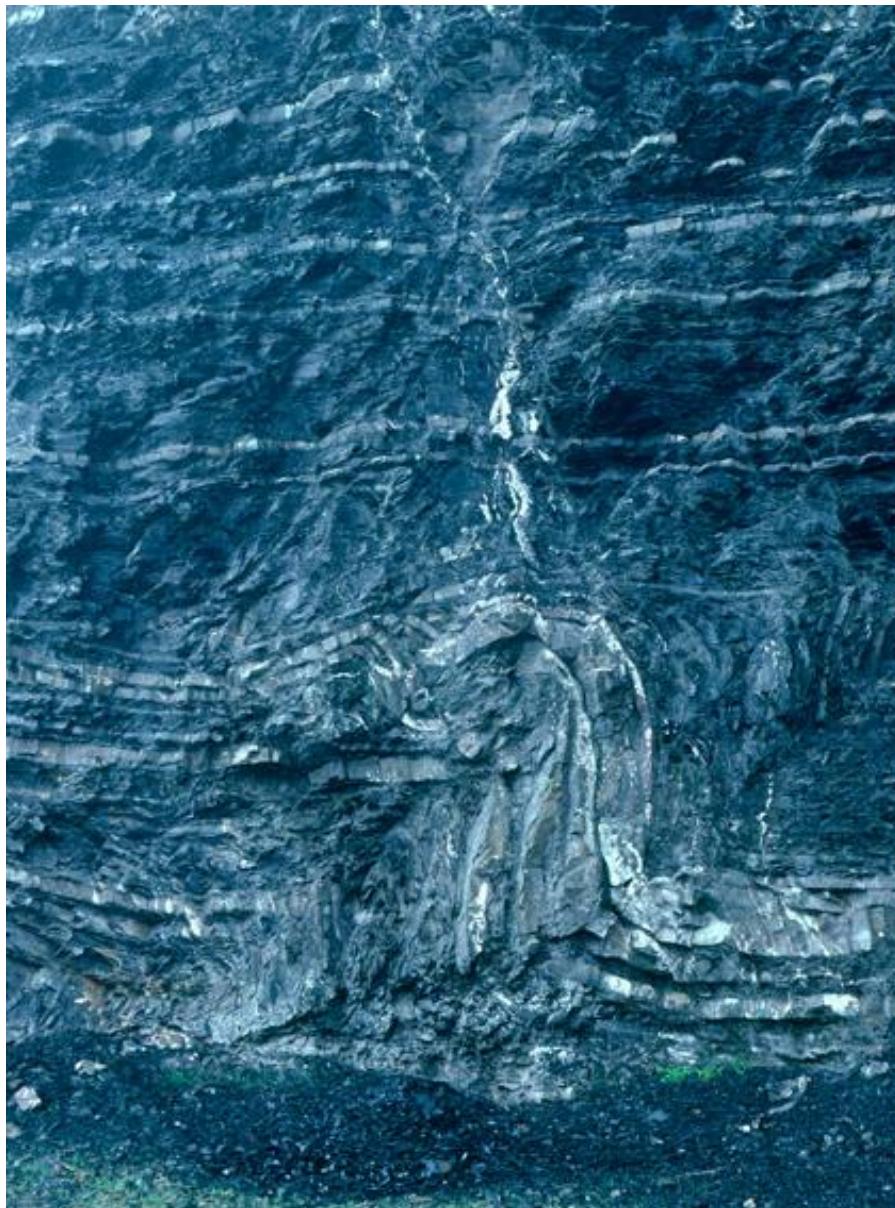


From [Earth the Science Behind the Headlines](#)

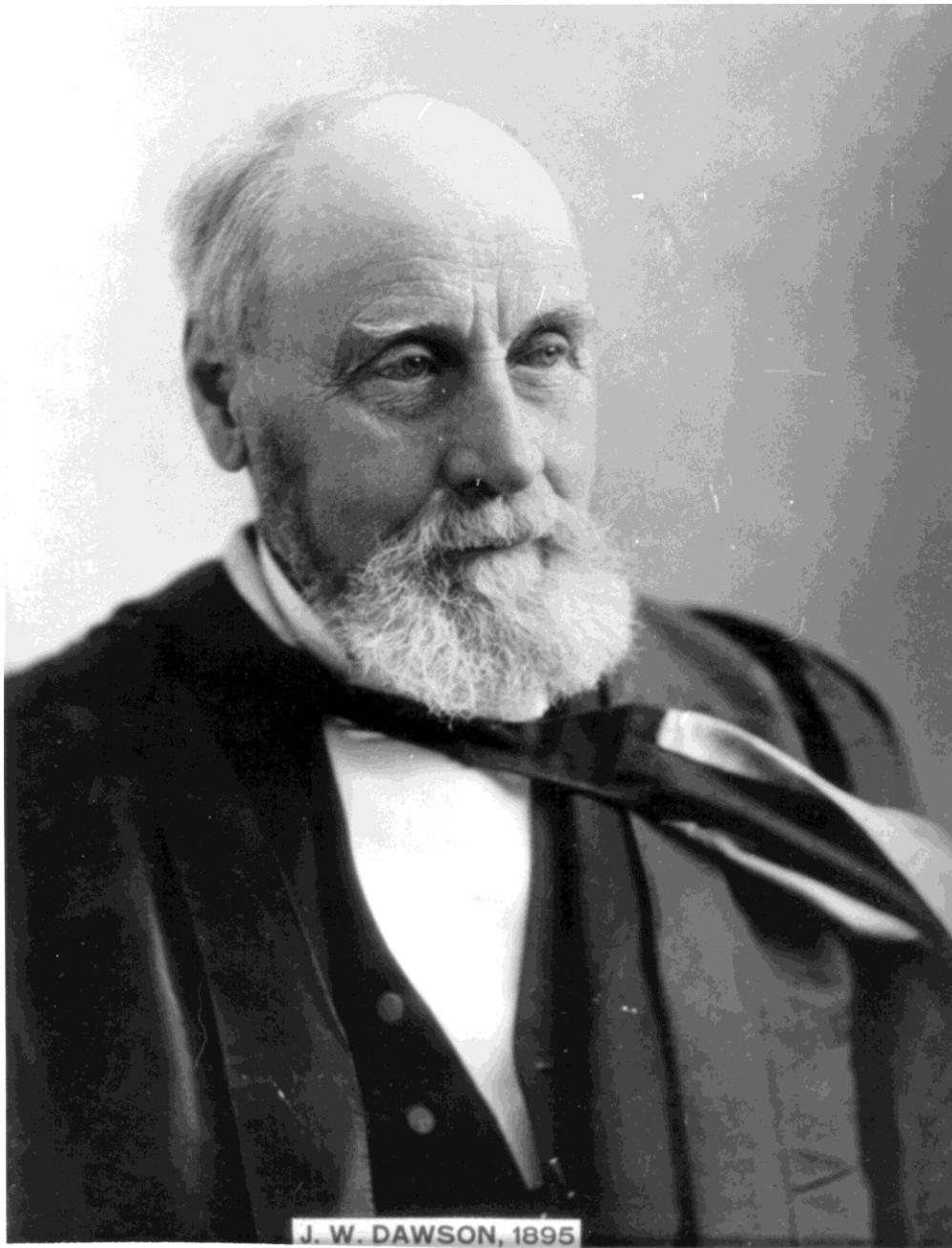
3) Acadian Orogeny

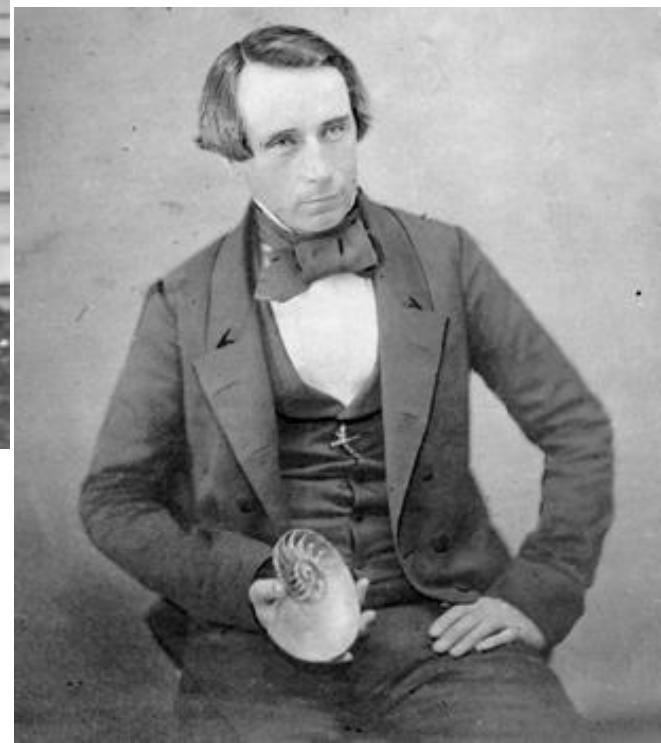


From [Earth, the Science behind the Headlines](#)



Who was Dawson and how did he know about all this?







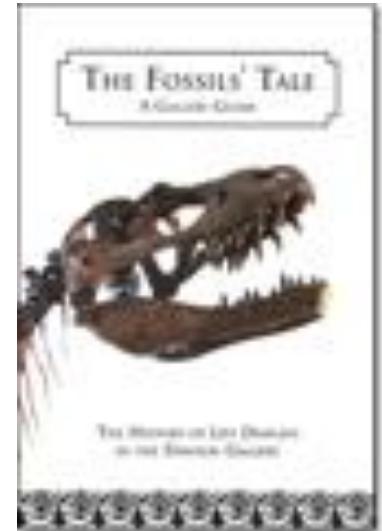


Anna Dawson Harrington Letters and Drawings

Anne Dawson Harrington Letters and Drawings

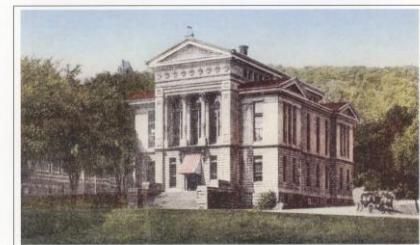


Ladies' Slippers
Annes Aug. 1883



TEA AND FOSSILS

A BRIEF HISTORY OF
THE REDPATH
MUSEUM



Anna Lois Dawson Harrington's hand-painted teaching sheet showing a reconstruction of the Devonian landscape (flora) hanging in Redpath Museum 2002.

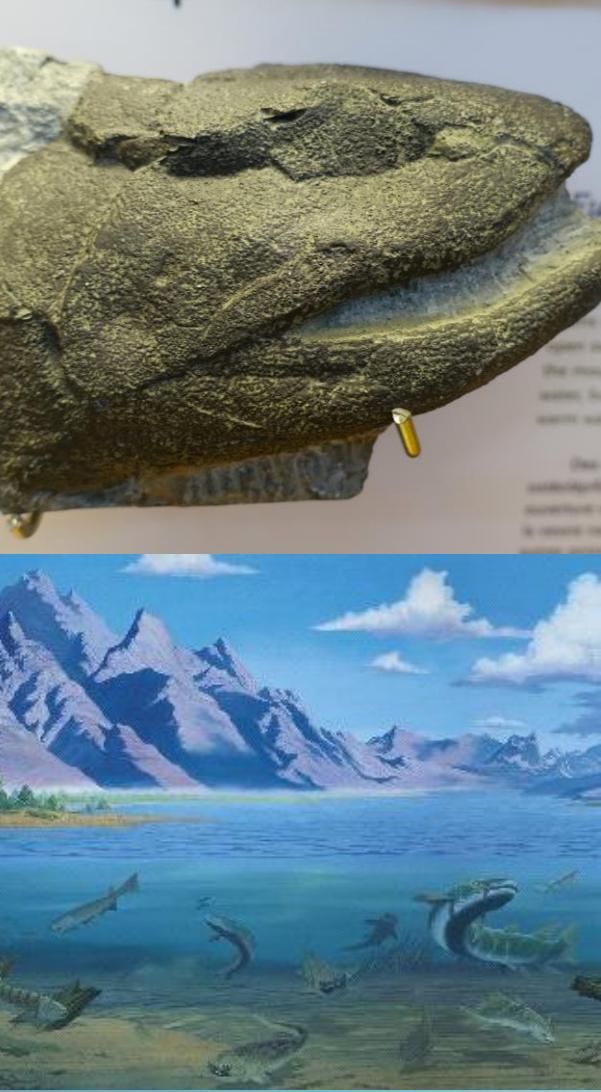


Comparing Anna Harrington's landscape paintings to the Dawson Teaching sheet



More early plants: *Archeopteris*





What and where is Miguasha?

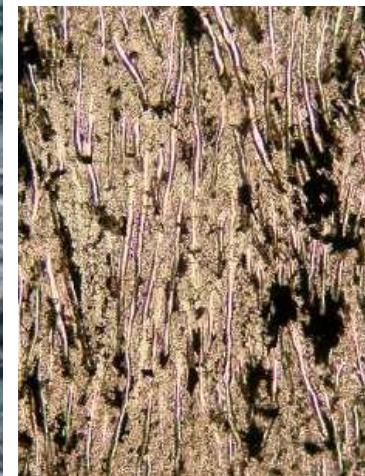
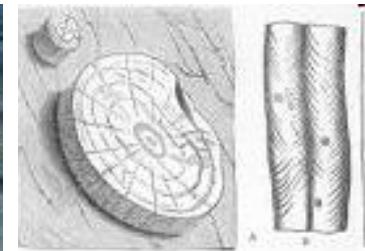


**More fossil plants from eastern
Canada: Ferns or fern like plants**



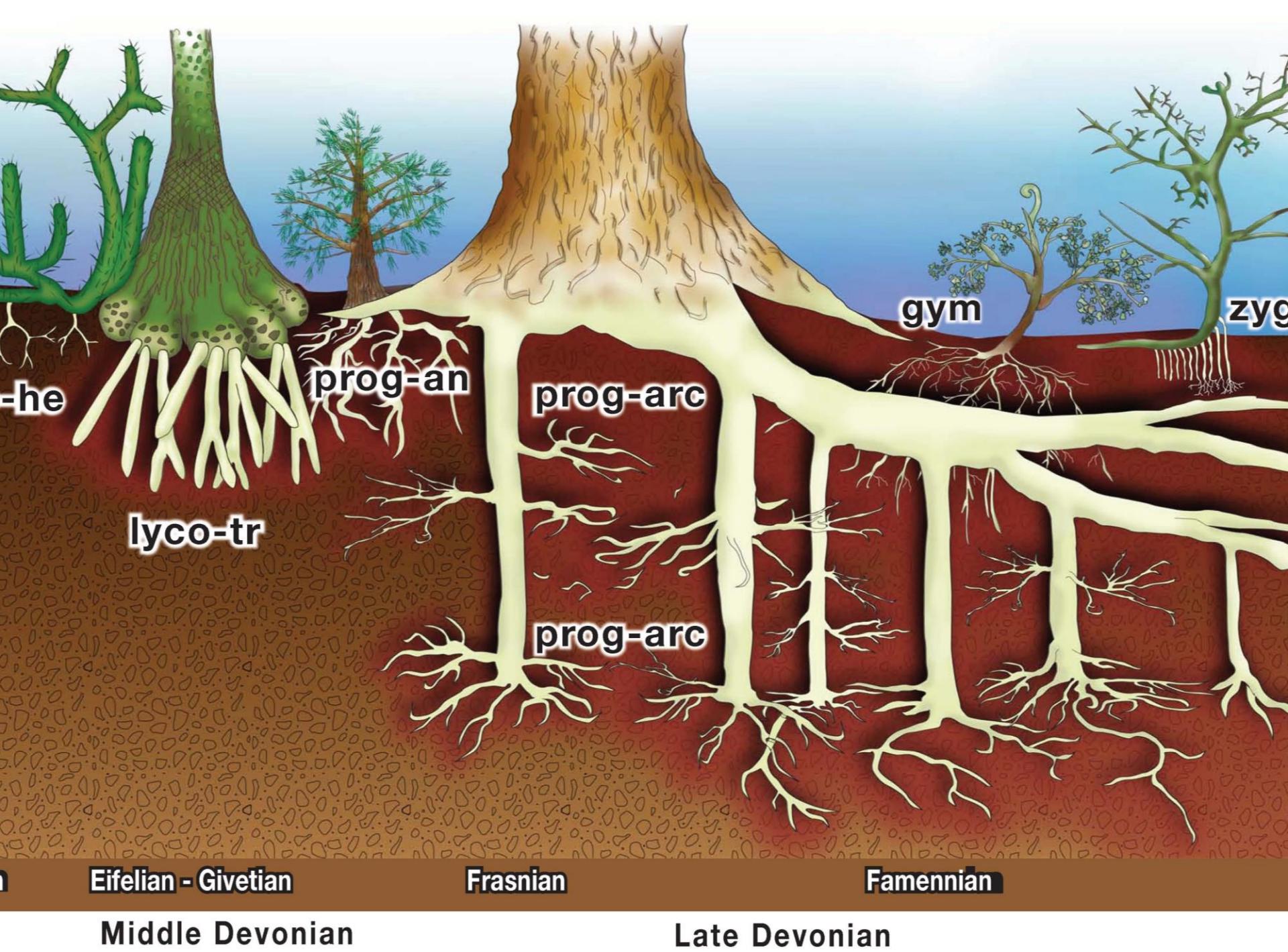
Pecopteris and Neuropteris fossils from [Mazon Creek](#), Illinois.

More fossil plants: *Prototaxites*











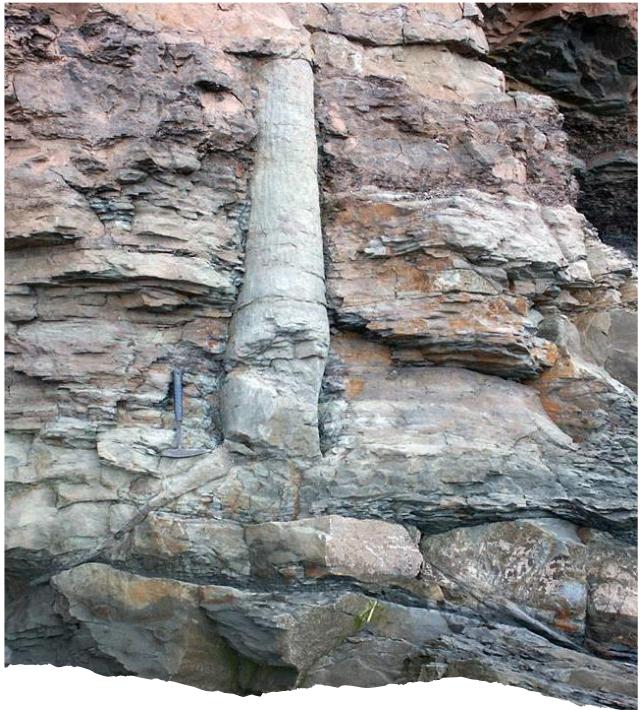


Fig. 4 A miner recovers an anatomically preserved lycopsid tree from the Joggins cliffs, a highly precarious manoeuvre. (Reprinted from Dawson 1877, p. 837.).

Fossil trees in Joggins, Nova Scotia coal mines

Joggins Fossil cliffs UNESCO World Heritage site in Bay of Fundy today and in [1843](#)

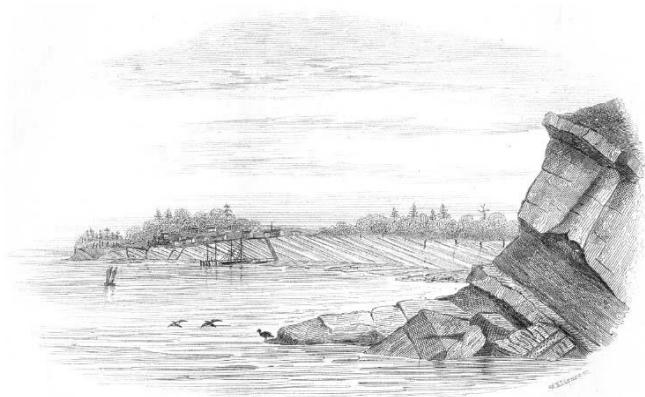
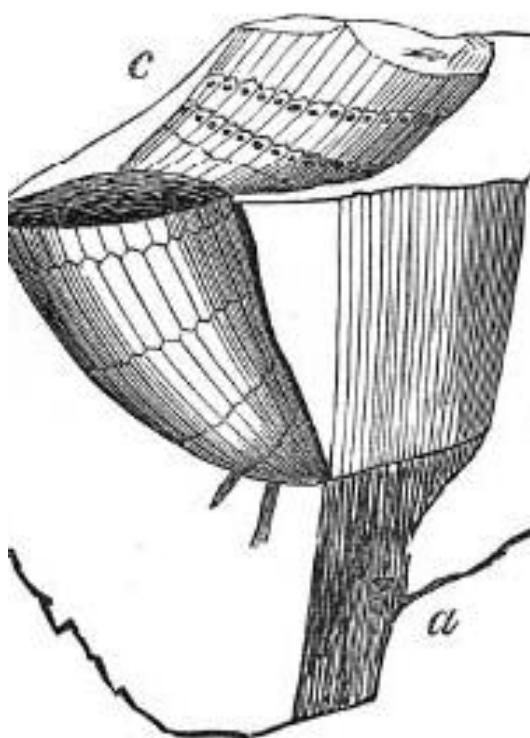


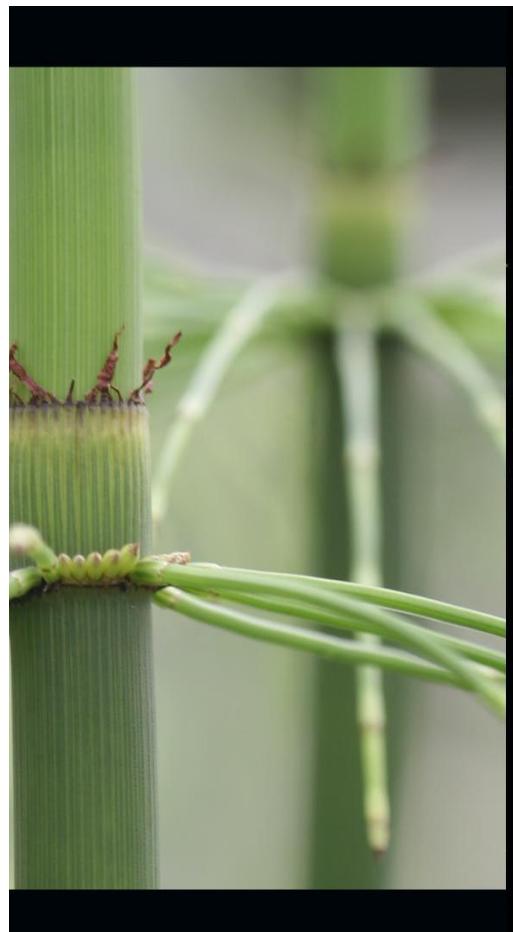
Fig. 2 The “slowly wasting” cliffs of Joggins, where Dawson made some 40 years of sustained geological observation. (Reprinted from Dawson 1868a, p. 179.)



Calamites and Equisitum



eans in growth position at P.
generation (Dawson 1868a,



Calamites



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



Metasequoia (Dawn Redwood)



Metasequoia Dawn Redwood at McGill



Tulip tree

Liriodendron tulipifera



Liriodendron tulipifera near
Redpath Museum



Distribution of *Leriiodendron*





Gingkos