

Flora of the Mazon Creek Region

The Field Museum

Produced by: Jack Wittry, Field Associate, and Ian Glasspool, Adjunct Curator & Paleobotany Collections Manager, The Field Museum Photos © Jack Wittry [wittryj@yahoo.com] © The Field Museum, Chicago, IL 60605 USA. [fieldguides.fieldmuseum.org]. Date of publication 12/2013, new version: 06/2016

LYCOPSIDA - Ancestors to the club mosses

These fossils include parts of both arborescent (tree-like) and more herbaceous plants. The largest arborescent forms could grow to more than 40m (130 ft.) in height.

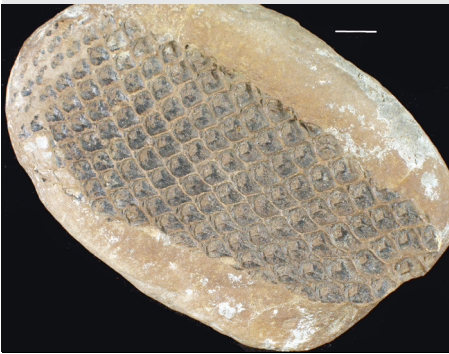


1 *Cyperites bicarinatus*  
Leaves

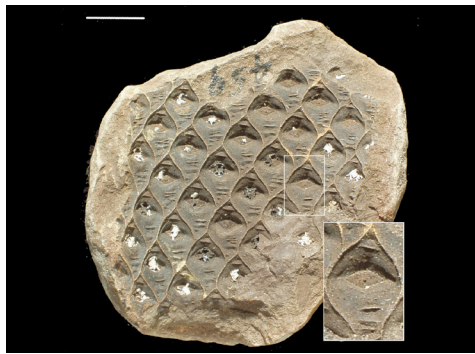
RESOURCES:

The Mazon Creek Fossil Flora by J. M. Wittry. ESCONI. 2006. ISBN: 978-0-578-1148-3  
Upper Pennsylvanian Floras of North America by W. C. Darrah. 1969. ISBN: 74-1113602

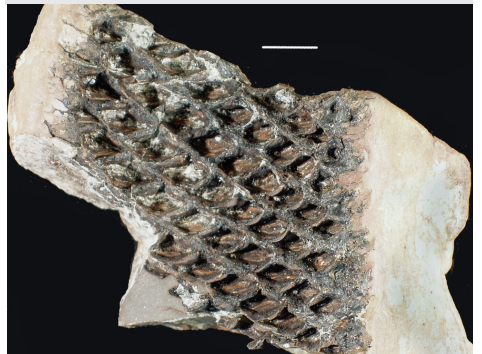
<http://www.fieldmuseum.org/explore/our-collections/mazon-creek-flora>  
<http://www.paleobiology.si.edu/mazoncreek/index.html>  
[http://www.museum.state.il.us/exhibits/mazon\\_creek/](http://www.museum.state.il.us/exhibits/mazon_creek/)



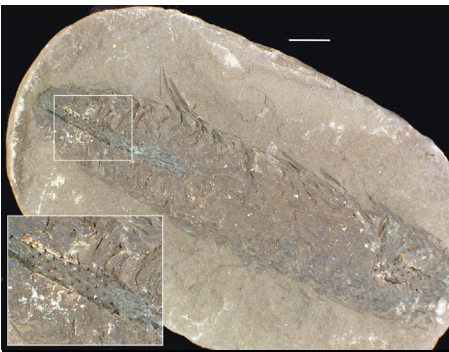
2 *Synchysidendron andrewsii*  
Leaf bases on outer bark



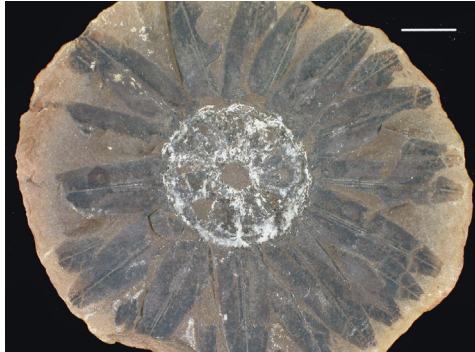
3 *Synchysidendron andrewsii*  
Leaf bases on outer bark



4 *Sublepidophloios protuberans*  
Leaf bases on outer bark



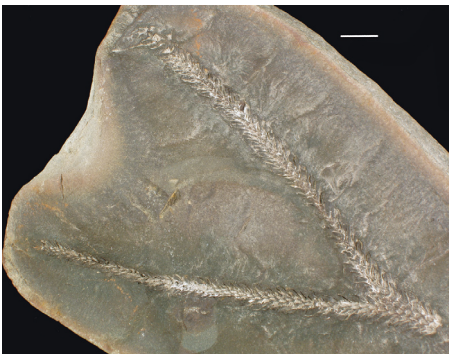
5 *Lepidostrobus variabilis*  
Cone in longitudinal section



6 *Lepidostrobus lanceolatus*  
Cone in transverse section



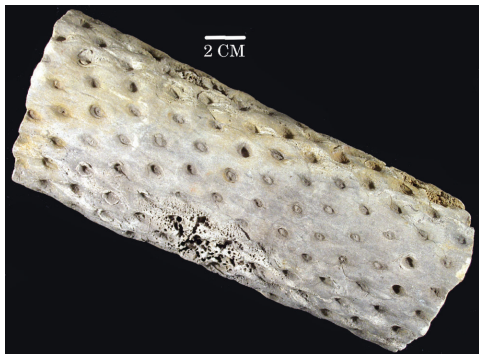
7 *Lepidocystis* sp.  
Isolated sporangium (spore bearing case)



8 *Lycopodites meekii*  
Branch tips



9 *Lycopodites pendulus*  
Branch tips



10 *Stigmaria ficoides*  
Rooting structure

Flora of the Mazon Creek Region

The Field Museum

Produced by: Jack Wittry, Field Associate, and Ian Glasspool, Adjunct Curator & Paleobotany Collections Manager, The Field Museum Photos © Jack Wittry; [wittryj@yahoo.com] © The Field Museum, Chicago, IL 60605 USA. [fieldguides.fieldmuseum.org]. Date of publication 12/2013, new version: 06/2016

SPHENOPSIDA

Ancestors to the horsetails

The sphenophytes include both arborescent (tree-like) and more scrambling (climbing) or shrubby forms. These plants are characterized by whorls of leaves and hollow stems with a node-internode organization.



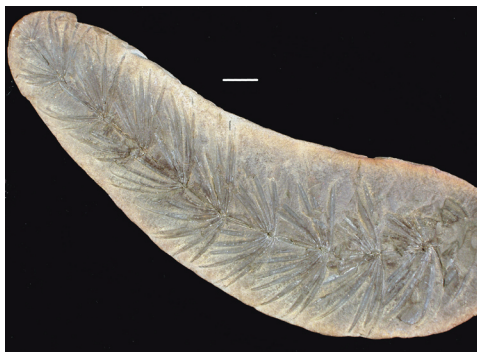
1 Annularia sphenophylloides Leaves of a scrambling/climbing sphenophyte



2 Annularia radiata Leaves of an arborescent sphenophyte



3 Annularia spinulosa Leaves of an arborescent sphenophyte



4 Asterophyllites equisetiformis Leaves of an arborescent sphenophyte



5 Asterophyllites longifolius Leaves of an arborescent sphenophyte



6 Asterophyllites lycopodioides Sphenophyte leaves



7 Sphenophyllum emarginatum Leaves of a scrambling/climbing sphenophyte



8 Calamites cisti Branch or trunk section of an arborescent sphenophyte



9 Calamostachys germanica Sphenophyte cone



10 Calamostachys tuberculata Sphenophyte cone



11 Palaeostachya sp. Sphenophyte cone

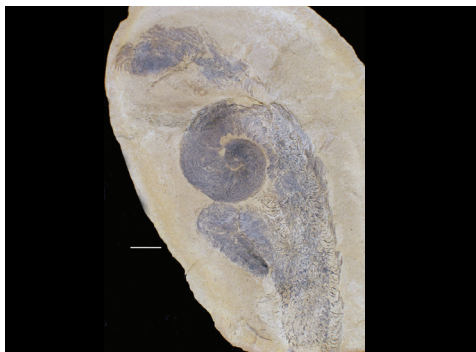
# Flora of the Mazon Creek Region

The Field Museum

Produced by: Jack Wittry, Field Associate, and Ian Glasspool, Adjunct Curator & Paleobotany Collections Manager, The Field Museum Photos © Jack Wittry; [wittryj@yahoo.com]  
 © The Field Museum, Chicago, IL 60605 USA. [fieldguides.fieldmuseum.org]. Date of publication 12/2013, new version: 06/2016

## FILICOPSIDA - Ferns

Most resemble modern tree ferns and produced sporangia (spore cases) with spores (reproductive cells) of a single type on the lower sides of the leaves. Like modern ferns they had pinnately divided leaves which grew from furred fronds called fiddleheads.



**1 *Spiropteris***  
Fiddlehead or crozier



**2 *Crenulopteris acadica***  
Pinna (leaflets of a pinnate leaf) of a tree fern



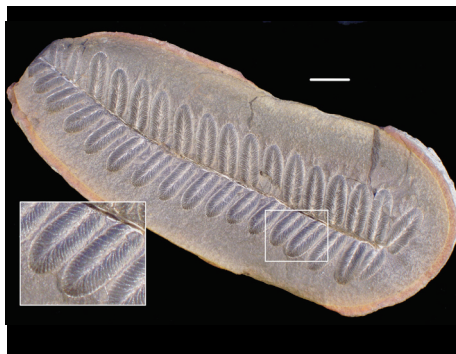
**3 *Crenulopteris acadica***  
Frond tip of tree fern



**4 *Diplazites unita***  
Pinna of a tree fern with some pinnules in a fertile state covered by sori (clusters of spore cases)



**5 *Alloiopteris winslovii***  
Pinna of a shrub-like fern



**6 *Acitheca polymorpha***  
Pinna of a tree fern



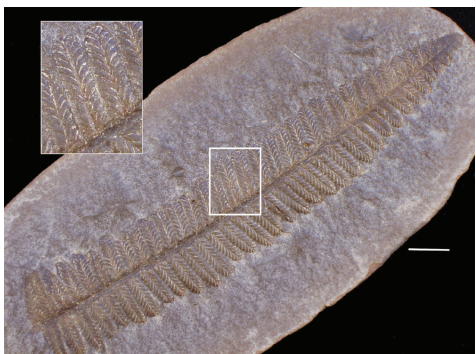
**7 *Oligocarpia gutbierii***  
Pinna of a shrub-like fern



**8 *Pecopteris squamosa***  
Pinna of a tree fern



**9 *Pecopteris mazoniana***  
Pinna of a tree fern



**10 *Cyathocarpus hemitelioides***  
Pinna of a tree fern



**11 *Pecopteris bucklandii***  
Pinna of a tree fern

Flora of the Mazon Creek Region

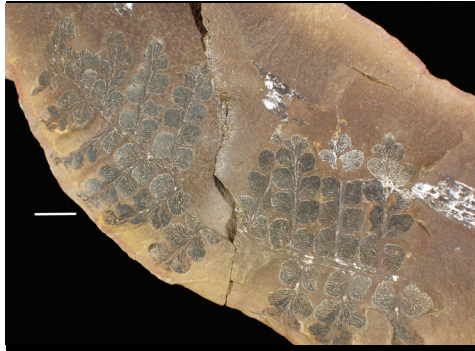
The Field Museum

Produced by: Jack Wittry, Field Associate, and Ian Glasspool, Adjunct Curator & Paleobotany Collections Manager, The Field Museum Photos  
 © Jack Wittry; [wittryj@yahoo.com]  
 © The Field Museum, Chicago, IL 60605 USA. [fieldguides.fieldmuseum.org]. Date of publication 12/2013, new version: 06/2016

**PTERIDOSPERMS**

**Seed Ferns**

Pteridosperm foliage appears similar to true ferns. Pteridosperms were arborescent or herbaceous. Unlike ferns, they had seeds and pollen organs. They inhabited a wide range of environments and were the most diverse group of plants in the Mazon Creek region. Seed ferns are now extinct.



**1 *Eusphenopteris neuropteroides***  
 Herbaceous (non woody) lyginopteridalean pteridosperm



**2 *Mariopteris nervosa***  
 Scrambling (climbing) lyginopteridalean pteridosperm



**3 *Alethopteris serlii***  
 Arborescent (tree-like) medullosan pteridosperm



**4 *Alethopteris sullivantii***  
 Arborescent medullosan pteridosperm



**5 *Neuropteris ovata***  
 Arborescent medullosan pteridosperm



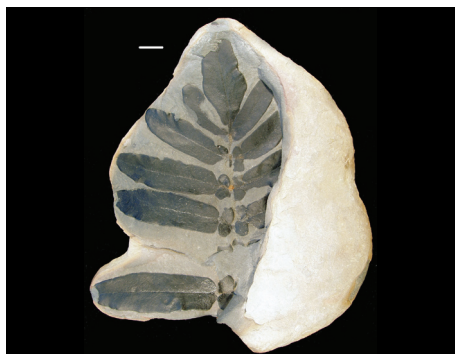
**6 *Neuropteris vermicularis***  
 Arborescent medullosan pteridosperm



**7 *Neuropteris flexuosa***  
 Arborescent medullosan pteridosperm



**8 *Macroneuropteris macrophylla***  
 Arborescent medullosan pteridosperm



**9 *Macroneuropteris scheuchzerii***  
 Arborescent medullosan pteridosperm



**10 *Odontopteris aequalis***  
 Arborescent medullosan pteridosperm



**11 *Laveineopteris rarinervis***  
 Arborescent medullosan pteridosperm

Flora of the Mazon Creek Region

The Field Museum

Produced by: Jack Wittry, Field Associate, and Ian Glasspool, Adjunct Curator & Paleobotany Collections Manager, The Field Museum  
 Photos © Jack Wittry; [wittryj@yahoo.com]  
 © The Field Museum, Chicago, IL 60605 USA. [fieldguides.fieldmuseum.org]. Date of publication 12/2013, new version: 06/2016

**CORDAITALES**

**Ancestral Conifers**

Arborescent or scrambling shrub-like plants, with large strap-like leaves distributed at the branch tips and along their length. Like modern conifers they produced separate male and female cone-like structures. All are now extinct.



**1 *Artisia* sp.**  
Cordaitean trunk or branch pith (spongy central tissue) cast



**2 *Cordaicladus* sp.**  
Cordaitean leaf scars on trunk or branch



**3 *Cordaites borassifolius***  
Dispersed cordaitean leaf

**Seeds and Pollen Organs**  
All members in this group are found detached and their exact affinities are difficult to determine.



**1 *Cordaianthus* sp.**  
Cordaitean compound cone-like structure bearing either ovules (immature seeds) or pollen organs



**2 *Dolerotheca* sp.**  
Medullosan pteridosperm pollen organ



**3 *Codonothea caduca***  
Medullosan pteridosperm pollen organ



**4 *Stephanospermum konopeonus***  
Medullosan pteridosperm ovule (immature seed)



**5 *Trigonocarpus* sp.**  
Medullosan pteridosperm ovule



**6 *Samaropsis* sp.**  
Cordaitean ovule