

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

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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* sp.

Leaves

RESOURCES:

The Mazon Creek Fossil Flora by J. M. Wittry.

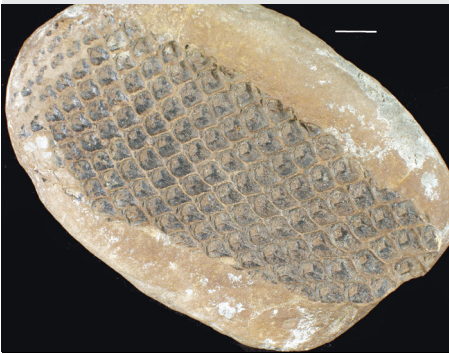
ESCONI. 2006. ISBN: 978-0-578-1148-3

Upper Pennsylvanian Floras of North America by W. C. Darrah. 1969. ISBN: 74-1113602

<http://www.fieldmuseum.org/explore/our-collections/mazon-creek-flora>

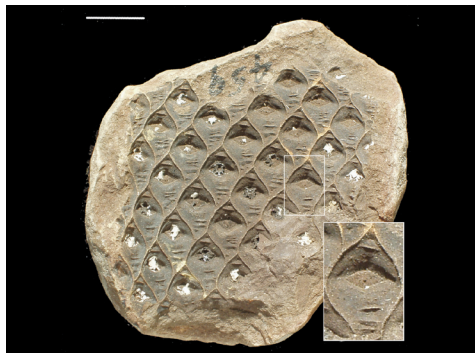
<http://www.http://paleobiology.si.edu/mazoncreek/index.html>

http://www.museum.state.il.us/exhibits/mazon_creek/



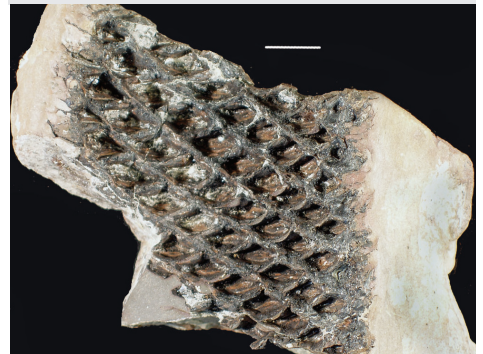
2 *Synchysidendron andrewsii*

Leaf bases on outer bark



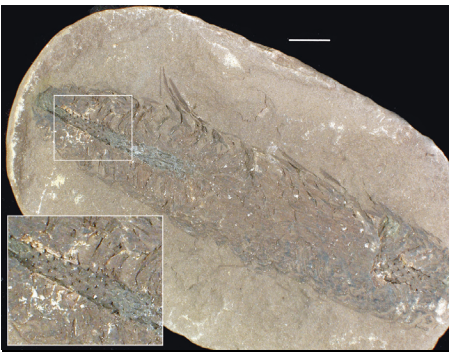
3 *Synchysidendron andrewsii*

Leaf bases on outer bark



4 *Lepidophloios protuberans*

Leaf bases on outer bark



5 *Lepidostrobus variabilis*

Cone in longitudinal section



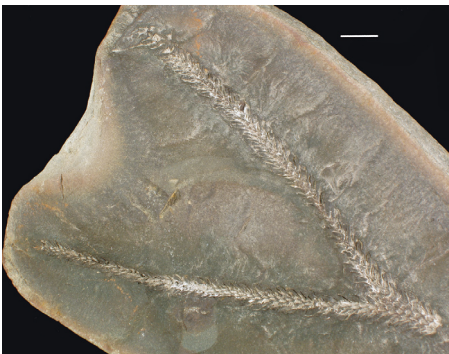
6 *Lepidostrobus variabilis*

Cone in transverse section



7 *Lepidocystis* sp.

Isolated sporangium (spore bearing case)



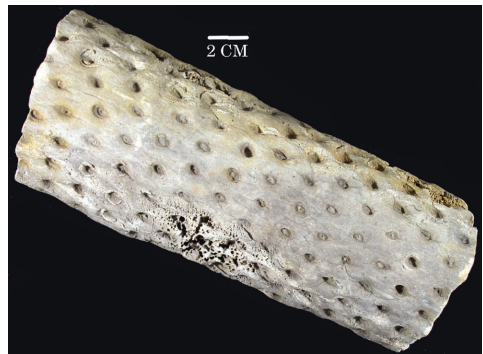
8 *Lycopodites meekii*

Branch tips



9 *Lycopodites pendulus*

Branch tips



10 *Stigmaria ficoides*

Rooting structure

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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 stellata*
 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

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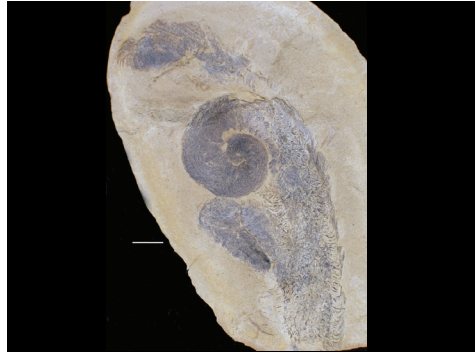
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FILICOPSIDA - Ferns

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 furled fronds called fiddleheads.



1 *Spiropteris*
Fiddlehead or crozier



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



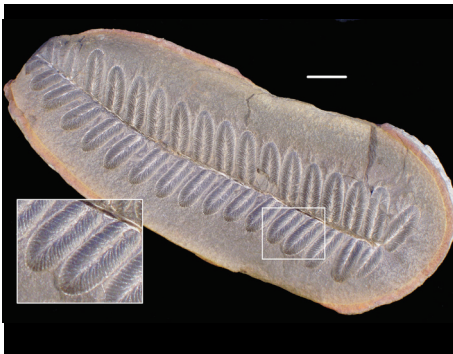
3 *Crenulopteris acadica*
Frond tip of tree fern



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



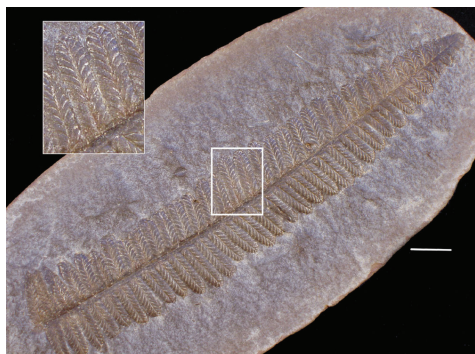
7 *Oligocarpia gutbierii*
Pinna of a shrub-like fern



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

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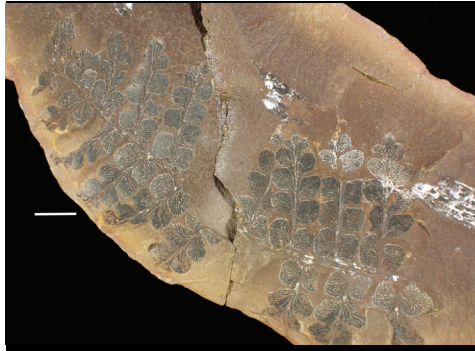
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PTERIDOSPERMS

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



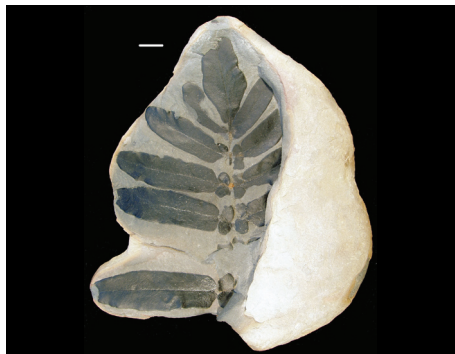
6 *Neuropteris vermicularis*
 Arborescent medullosan pteridosperm



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

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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.

Cordaitan trunk or branch pith (spongy central tissue) cast



2 *Cordaiacladus* sp.

Cordaitan leaf scars on trunk or branch



3 *Cordaites borassifolius*

Dispersed cordaitan leaf

Seeds and Pollen Organs

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



1 *Cordaiaanthus* sp.

Cordaitan compound cone-like structure bearing either ovules (immature seeds) or pollen organs



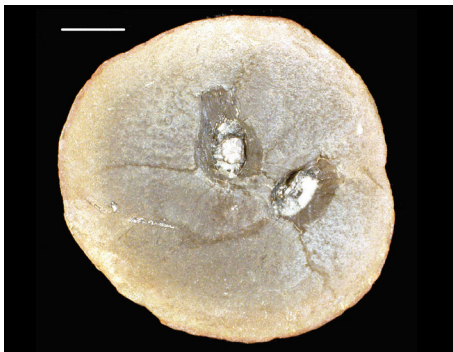
2 *Dolerotheca* sp.

Medullosan pteridosperm pollen organ



3 *Codonotheca caduca*

Medullosan pteridosperm pollen organ



4 *Stephanospermum konopeonus*

Medullosan pteridosperm ovule (immature seed)



5 *Trigonocarpus* sp.

Medullosan pteridosperm ovule



6 *Samaropsis* sp.

Cordaitan ovule