

TEXT TO ACCOMPANY SLIDES/PHOTOGRAPHS OF LOWER CRETACEOUS POLLEN AND SPORES
IN SEDIMENTS FROM THE MUIRKIRK CLAY PIT (PRINCE GEORGES COUNTY, MD)

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The pollen and spores found in clay beds at the Muirkirk clay pit are those of ferns and lycopods, seed ferns, shrubby conifers, bald cypress-type conifers, and tree-sized conifers. Some of the ferns and conifers have modern representatives which help interpret the vegetation of this site that bears Early Cretaceous dinosaur fossils. The plants, as well as the presence of algae, fungi, and mineral remains of bacteria, show that the site was once a wetland that developed on the clay floor of a waning oxbow lake.

1. Schizosporis microreticulatus - the multicellular cyst of a colonial alga
2. Cicatricosisporites australiensis - the ribbed spore of a schizaeaceous fern similar to Anemia
3. C. aralica - the ribbed spore of the most abundant schizaeaceous fern
4. Appendicisporites potomacensis - the horned spore of a schizaeaceous fern
5. Pilosisorites brevipapillosus - the warty spore of an unknown fern-type plant
6. Cyathidites minor - the smooth-walled spore of a Dicksoniaceae or Cyathea-type tree fern; note the distinct radial patterns made by degrading fungi
7. Cingulatisporites distaverrucosus - a tetrad of spores of an unknown fern-type plant
8. Cirratriradites spinulosus - the spined spore of a Selaginella-type water plant
9. Alisporites cf. bilateralis - the winged pollen grain of an extinct seed fern or conifer; note the black mineral pyrite that attests to the former presence of degrading bacteria
10. Parvisaccites radiatus - the winged pollen of a podocarp
11. Classopollis torosus - a tetrad of pollen grains of a shrubby conifer
12. Inaperturopollenites dubius - the split pollen grain of a bald cypress-type tree
13. Araucariacites sp. - the pollen grain of an araucariacean conifer
14. Abietineaepollenites microreticulatus - the winged pollen of a conifer
15. Podocarpidites potomacensis - the winged pollen of a podocarp





























