

Supplementary Material
to the paper

**Depositional systems of the late Eocene Yolomécatl Formation, northwestern
Oaxaca, southeastern Mexico: a first approach**

by:

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Published in Revista Mexicana de Ciencias Geológicas núm. 35, vol. 2, p. 142-157

Table S1. Palynoflora of the Yolomécatl Formation, Late Eocene of northwestern Oaxaca.

Taxa	Remarks
CHLOROPHYTA	Fresh water algae
Family Botryococcaceae	Colonial algae abundant in eutrophic waters
<i>Botryococcus</i> sp.	
Family Zygnemataceae	
<i>Spirogyra</i>	Cysts
Order Coleochaetales	Undescribed cysts of cf. Coleochatales
Algae <i>incerta sedis</i> : <i>Tetraporina</i>	
FUNGOSPORES	Mushroom spores
<i>Dicellaesporites</i> sp.	Saprophytic
<i>Monosporiporites</i> sp.	Saprophytic
<i>Paleomycites</i> sp.	Saprophytic
<i>Pluricellaesporites</i> sp.	Saprophytic
<i>Quilonia</i> aff. <i>Q. dentata</i> .	Saprophytic
<i>Eumycetes incerta sedis</i>	
<i>Acalospora</i> spp.	Present only in paleosols, where is abundant
PTERIDOPHYTA	Ferns
Family Salviniaceae	This fern is aquatic, so it is abundant in the lacustrine sediments
<i>Salvinia</i> spp.	
Family Schizaceae	Tropical climate
<i>Anemia</i> (<i>Cicatricosisporites</i> sp.)	
Family Polypodiaceae	Several genera, tropical and temperate climate
Family Aspleniaceae	Temperate climate
<i>Asplenium</i>	
Family Gleicheniaceae	Tropical climate
<i>Concavisimisorites</i>	
<i>Gleichenia</i>	
Family Lycopodiaceae	Tropical to temperate climate
<i>Foveosporites</i>	
<i>Camarozonosporites</i>	
<i>Licopodiosporites</i>	
Family Selaginaceae	Tropical to temperate climate
<i>Equinatisporites</i>	
Family Adiantaceae	Tropical to temperate climate
<i>Punctatisporites</i>	
Pteridophyta <i>incerta sedis</i>	
<i>Verrucosisporites</i>	Tropical to temperate climate
GYMNOSPERMAE	Gymnosperms
Family Pinaceae	Temperate climate and high elevations
<i>Pinuspollenites</i> spp.	
Family Abietaceae	Temperate climate
<i>Abies</i> sp.	
Family Podocarpaceae	Cloud forest
<i>Podocarpus</i> sp.	
Order Cycadopsida	Tropical
<i>Monosulcites</i> .	
Family Ephedraceae	Xeric environment
<i>Ephedra</i> (<i>Ephedripites</i>)	
Family Taxodiaceae	Riparian tropical to temperate
<i>Taxodium</i> (<i>Inaperturopollenites</i>)	
LILYOPSIDA	Monocotyledons, 'monocots'
Family Arecaceae	These palms thrived in tropical/subtropical forests, their palynomorphs are abundant in fluvial sediments
<i>Arecipites</i> spp.	
Family Commelinaceae	This cosmopolitan taxon lives in cool to temperate climate; in our sample their pollen grains are scarce
<i>Cyperus</i> sp.	Cosmopolitan
Family Gramineae	Cosmopolitan
<i>Graminidites</i> .	
Family Restionaceae	Temperate. Southern Hemisphere
aff. <i>Milfordia</i> .	
Family Alismataceae	This taxon lives in tropical to subtropical climates, its pollen grains are common in swamp
<i>Sagittaria</i> ,	
Family Liliaceae	
cf. <i>Liliacidites</i> and cf. <i>Narcissus</i> .	

continues

Table S1 (cont.). Palynoflora of the Yolomécatl Formation, Late Eocene of northwestern Oaxaca.

Taxa	Remarks
MAGNOLIOPSIDA (Dicotyledoneae)	Dicotyledones, 'dicots'
Family Anacardiaceae	These taxa live in tropical climate
<i>Ailanthipites berryi</i>	
<i>Rhoipites</i>	
cf. <i>Rhus</i> sp.	
Family Asteraceae	Cosmopolitan
<i>Tubuliflorites</i> sp.	
Family Aceraceae	Temperate climate
<i>Acer</i> sp. (<i>Striatricolpites</i>) sp.	
Family Aquifoliaceae	Temperate to tropical climate
<i>Ilex</i> .	
Family Betulaceae	
<i>Betula claripites</i>	Temperate to subtropical climate
<i>Betula</i> spp. (<i>Tripoporollenites</i> spp.)	Temperate to subtropical climate
<i>Tripoporollenites paleobetuloides</i> -	Temperate to subtropical climate
<i>Casuarinidites granilabratus</i>	Temperate to subtropical climate
<i>Casuarinidites granulatus</i>	Temperate to subtropical climate
<i>Corilus</i> sp. <i>Carpinus</i> sp.	Temperate to subtropical climate
Family Bombacaceae	Tropical to subtropical climate
<i>Bombacacidites</i>	
Family Caryophyllaceae:	Temperate climate
Family Fagaceae	
<i>Alnipollenites</i> (4 Taxa)	Riparian forest, temperate climate
<i>Quercus</i> (<i>Quercodites</i> spp).	Temperate to subtropical climate
Family Hamamelidaceae	
<i>Liquidambar</i>	Subtropical to temperate climate
Family Juglandaceae	
<i>Carya</i> : <i>Cariapollenites</i> spp.	Temperate to subtropical climate
<i>Platycarya</i>	Temperate to subtropical climate
<i>Pterocarya</i>	Temperate to subtropical climate
<i>Momipites microcoriphaceous</i>	Tropical to subtropical climate
(<i>Engelhartia</i>).	Tropical climate
<i>Momipites trilepollenites</i> (<i>Engelhartia</i>)	Tropical to temperate climate
<i>Normapolles</i>	Tropical to temperate climate
Family Ranunculaceae	
<i>Thalictum</i> .	Herb of swamps. Temperate
Family Mimosaceae	Both genera indicate tropical climate
<i>Polyadopollenites</i> (<i>Acacia</i> and <i>Mimosa</i>)	
Family Moraceae	Tropical climate
<i>Ficus</i> .	
Family Oleaceae	Temperate climate
<i>Fraxinoipollenites</i> sp.	Temperate to subtropical
Family Ulmaceae	Temperate to subtropical
<i>Ulmipollenites</i> .	Temperate to subtropical
Family Sapindaceae	Tropical
Family Symplocaceae	Tropical, Asiatic
<i>Symplocos</i> .	
Family Chemopodiaceae.	Cosmopolitan
Family Smilacaceae	Temperate to tropical
cf. <i>Smilax</i> .	
Family Nyctaginaceae?	Cosmopolitan
<i>Limingtonia</i> .	
Family Viscaceae	Temperate climate
cf. <i>Arceuthobium</i> .	