

A 12,000-year record of forest history from Cahaba Pond, St. Clair County, Alabama

by Hazel R. Delcourt, Paul A. Delcourt, and Elliott C. Spiker

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This microfiche contains three tables of pollen and plant-macrofossil data that were the basis for construction of the diagrams that appear in Figures 6, 7, and 8 of the site report for Cahaba Pond, St. Clair County, Alabama. Table 1 contains the pollen counts tallied by Hazel R. Delcourt for samples obtained from sediment core 79B. Table 1 includes data for trees, shrubs, lianas, upland herbs, ferns and fern allies, unknown grains, obligate aquatics, deteriorated grains, and counts of Eucalyptus grains added to each sample for determination of pollen influx. Table 2 includes pollen influx values calculated for selected taxa. Table 3 contains counts of plant and animal macrofossils tallied by Paul A. Delcourt for samples obtained from sediment core 79B. Values in this table represent number of macrofossils per 100 cm³ sediment.

TABLE 1

COUNTS OF POLLEN GRAINS AND SPORES FROM SEDIMENT CORE 79B, CAHABA POND, ST. CLAIR COUNTY, ALABAMA

<u>Pollen and Spore Types</u>	<u>Sample Depth (cm)</u>									
	<u>0</u>	<u>134</u>	<u>140</u>	<u>150</u>	<u>160</u>	<u>170</u>	<u>180</u>	<u>190</u>	<u>200</u>	<u>232</u>
TREES										
<u>Acer negundo</u>	0	0	0	0	0	0	0	0	0	0
<u>Acer rubrum</u>	0	0	0	1	2	0	0	0	0	1
<u>Acer saccharum</u>	0	1	1	1	0	2	0	2	0	0
<u>Acer saccharinum</u>	0	1	0	0	0	0	0	0	0	2
<u>Acer spicatum</u>	0	0	0	0	0	0	0	0	0	0
<u>Acer pensylvanicum</u>	0	0	0	0	0	0	0	0	0	0
<u>Betula</u>	1	0	0	0	0	2	0	1	0	2
<u>Carpinus/Ostrya type</u>	3	1	0	3	1	0	1	0	0	1
<u>Carya</u>	4	7	4	4	9	8	6	6	9	9
<u>Castanea</u>	0	11	12	10	6	10	13	16	8	3
<u>Celtis/Maclura type</u>	2	0	0	1	0	0	0	0	0	1
<u>Cornus alternifolia type</u>	0	0	0	0	0	1	0	0	1	0
<u>Cornus florida</u>	0	0	0	0	0	0	0	0	0	0
<u>Cupressaceae undiff.</u>	0	0	5	0	0	0	0	0	0	2
<u>Ericaceae (individual grains)</u>	0	0	4	4	0	0	0	0	0	0
<u>Fagus grandifolia</u>	0	2	2	2	0	1	3	1	1	1
<u>Fraxinus undiff.</u>	2	1	0	2	8	1	5	2	2	4
<u>Fraxinus quadrangulata-nigra type</u>	0	0	0	1	0	0	0	1	0	0
<u>Fraxinus pennsylvanica-americana type</u>	2	0	2	0	1	0	1	0	0	0
<u>Fraxinus C₃stp type</u>	0	3	1	1	3	0	2	0	0	2
<u>Ilex type</u>	0	0	0	0	0	0	0	0	0	0
<u>Juglans cinerea</u>	0	0	0	0	0	0	0	0	0	0
<u>Juglans undiff.</u>	0	0	0	0	0	0	0	0	0	0
<u>Juglans nigra</u>	0	0	0	0	0	0	0	0	0	0
<u>Liquidambar styraciflua</u>	31	8	13	10	11	9	15	10	19	15
<u>Liriodendron tulipifera</u>	0	0	0	0	0	0	0	0	0	0
<u>Magnolia acuminata</u>	0	2	0	0	2	0	0	0	0	0
<u>Morus</u>	0	0	0	1	0	0	0	0	0	0
<u>Nyssa</u>	24	147	133	160	207	181	204	231	297	129

Pollen and Spore TypesSample Depth (cm)

	<u>0</u>	<u>134</u>	<u>140</u>	<u>150</u>	<u>160</u>	<u>170</u>	<u>180</u>	<u>190</u>	<u>200</u>	<u>232</u>
<u>Bidens</u> type	0	0	0	0	0	0	0	0	0	0
<u>Iva ciliata</u> type	0	0	0	0	0	0	0	0	0	0
<u>Cruciferae</u>	0	0	0	0	1	0	0	0	0	0
<u>Cyperaceae</u>	0	0	0	0	0	0	0	2	0	2
<u>Gramineae</u> (wild)	5	2	1	3	2	2	1	1	1	5
<u>Humulus/Cannabis</u> type	0	0	0	0	0	0	0	0	0	0
<u>Mentha</u> type	0	0	0	0	0	0	0	0	0	0
<u>Plantago</u> undiff.	0	0	0	0	0	0	0	0	0	0
<u>Thalictrum</u>	0	0	0	0	0	0	0	0	0	0
<u>Urtica</u>	0	0	0	0	0	0	0	0	0	0
FERNS & FERN ALLIES										
<u>Dryopteris</u> type	0	0	0	1	0	0	0	0	0	1
<u>Osmunda cinnamomea</u> type	0	1	0	0	2	0	1	0	0	0
<u>Osmunda regalis</u> type	0	0	0	0	0	0	0	0	0	0
<u>Pteridium aquilinum</u>	0	0	0	0	1	0	0	1	1	2
Trilete spores undiff.	0	0	0	0	0	0	0	0	0	0
<u>Lycopodium clavatum</u> type	0	0	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	1	1	0	0	1	0
OBLIGATE AQUATIC PLANTS										
<u>Brasenia schreberi</u>	0	0	0	0	0	0	0	0	0	0
<u>Decodon verticillatus</u>	0	0	0	0	0	0	0	0	0	0
<u>Isoetes</u>	0	0	0	0	0	0	0	0	0	0
<u>Jussiaea</u>	0	0	0	0	0	0	0	0	0	0
<u>Nuphar</u>	0	0	0	0	1	0	0	0	0	0
<u>Nymphaea</u>	0	0	0	0	1	0	0	0	0	0
<u>Nymphoides</u>	0	0	0	0	0	0	0	0	0	0
<u>Potamogeton</u> (subgenus Coleogeton)	0	0	0	0	0	0	0	0	0	0
<u>Potamogeton</u> (subgenus Eupotamogeton)	0	0	0	0	0	0	1	0	1	1
<u>Polygonum hydropiper</u> type	0	0	0	0	0	0	1	0	0	1
<u>Sagittaria</u>	0	0	1	1	0	0	0	1	2	0
<u>Sparganium</u> type	0	0	1	0	0	0	0	0	0	0
<u>Sphagnum</u>	0	0	0	0	0	0	0	0	0	0
<u>Utricularia</u>	0	0	0	0	0	0	0	0	0	0
TOTAL DETERIORATED GRAINS	7	6	9	15	13	7	13	10	18	13
TOTAL EUCALYPTUS GRAINS TALLIED	31	34	225	114	152	60	92	21	50	155
NUMBER OF EUCALYPTUS TABLETS	1	2	8	8	8	8	8	2	3	3
DRY WEIGHT (g) OF EUCALYPTUS TABLETS	0.091	0.170	0.679	0.713	0.700	0.701	0.694	0.200	0.253	0.265

Pollen and Spore TypesSample Depth (cm)

	<u>240</u>	<u>250</u>	<u>260</u>	<u>270</u>	<u>280</u>	<u>290</u>	<u>300</u>	<u>320</u>	<u>330</u>	<u>340</u>
TREES										
<u>Acer negundo</u>	0	0	0	0	0	1	0	0	1	11
<u>Acer rubrum</u>	0	5	2	2	2	11	6	3	2	12
<u>Acer saccharum</u>	1	4	1	0	1	0	0	3	1	0
<u>Acer saccharinum</u>	0	0	0	0	2	0	0	1	0	0
<u>Acer spicatum</u>	0	0	0	0	0	0	2	0	0	0
<u>Acer pensylvanicum</u>	0	0	0	0	0	0	4	0	0	0
<u>Betula</u>	1	0	0	0	1	0	0	3	0	2
<u>Carpinus/Ostrya type</u>	0	2	0	3	1	3	3	3	3	4
<u>Carya</u>	6	17	20	20	12	32	16	19	14	24
<u>Castanea</u>	5	2	1	2	6	0	1	3	3	0
<u>Celtis/Maclura type</u>	0	0	0	2	1	0	2	1	1	0
<u>Cornus alternifolia type</u>	0	3	0	0	1	3	0	0	0	0
<u>Cornus florida</u>	1	2	0	0	0	2	0	0	0	0
<u>Cupressaceae undiff.</u>	0	0	0	0	0	2	0	2	2	3
<u>Ericaceae (individual grains)</u>	0	12	0	0	0	0	0	0	0	0
<u>Fagus grandifolia</u>	4	0	0	3	5	11	8	8	4	3
<u>Fraxinus undiff.</u>	2	0	8	3	5	3	9	8	9	9
<u>Fraxinus quadrangulata-nigra type</u>	1	2	1	1	0	5	5	0	19	5
<u>Fraxinus pennsylvanica-americana type</u>	0	1	0	2	1	3	4	2	1	1
<u>Fraxinus C₃stp type</u>	2	3	1	2	4	3	12	0	7	2
<u>Ilex type</u>	0	0	0	0	0	0	0	0	0	0
<u>Juglans cinerea</u>	0	0	0	0	0	0	0	0	1	0
<u>Juglans undiff.</u>	0	0	2	1	0	2	0	0	0	0
<u>Juglans nigra</u>	0	0	0	0	0	0	0	0	0	0
<u>Liquidambar styraciflua</u>	9	2	2	2	2	3	6	7	2	2
<u>Liriodendron tulipifera</u>	0	0	0	0	0	0	1	0	0	0
<u>Magnolia acuminata</u>	0	0	0	0	0	0	0	0	0	0
<u>Morus</u>	0	0	0	0	0	0	3	0	0	0
<u>Nyssa</u>	160	7	2	4	4	11	3	22	0	2

Pollen and Spore TypesSample Depth (cm)

	<u>240</u>	<u>250</u>	<u>260</u>	<u>270</u>	<u>280</u>	<u>290</u>	<u>300</u>	<u>320</u>	<u>330</u>	<u>340</u>
<u>Bidens</u> type	0	4	6	3	0	0	0	0	2	1
<u>Iva ciliata</u> type	0	0	0	0	0	0	0	0	0	1
<u>Cruciferae</u>	0	0	0	0	0	0	0	0	0	0
<u>Cyperaceae</u>	3	1	2	13	1	9	1	4	19	1
<u>Gramineae</u> (wild)	6	18	13	8	7	4	9	6	3	2
<u>Humulus/Cannabis</u> type	0	0	0	0	0	0	0	0	0	0
<u>Mentha</u> type	0	0	1	1	1	2	0	0	0	0
<u>Plantago</u> undiff.	0	0	1	0	0	0	0	0	0	0
<u>Thalictrum</u>	0	0	0	0	0	0	1	0	0	0
<u>Urtica</u>	0	0	0	0	0	0	0	0	0	0
FERNS & FERN ALLIES										
<u>Dryopteris</u> type	0	0	0	2	0	0	0	0	0	1
<u>Osmunda cinnamomea</u> type	0	0	1	7	2	5	0	2	0	1
<u>Osmunda regalis</u> type	0	2	9	96	30	42	11	1	12	5
<u>Pteridium aquilinum</u>	0	4	1	1	3	0	0	0	0	0
Trilete spores undiff.	0	0	0	0	0	0	0	1	0	0
<u>Lycopodium clavatum</u> type	0	0	0	0	0	0	0	0	0	0
UNKNOWN	0	2	0	1	0	1	1	0	0	0
OBLIGATE AQUATIC PLANTS										
<u>Brasenia schreberi</u>	0	0	0	0	0	0	0	1	0	0
<u>Decodon verticillatus</u>	5	3	2	9	6	5	0	5	0	0
<u>Isoetes</u>	0	2	0	0	0	0	0	0	0	0
<u>Jussiaea</u>	0	0	0	0	0	0	0	0	0	0
<u>Nuphar</u>	0	0	2	0	0	0	3	3	6	13
<u>Nymphaea</u>	0	0	0	0	0	0	0	0	0	0
<u>Nymphoides</u>	0	0	0	0	0	0	0	0	0	0
<u>Potamogeton</u> (subgenus Coleogeton)	1	0	0	0	0	0	0	0	0	0
<u>Potamogeton</u> (subgenus Eupotamogeton)	0	1	0	1	0	0	0	1	0	0
<u>Polygonum hydropiper</u> type	0	2	2	0	0	0	0	0	0	0
<u>Sagittaria</u>	0	0	0	0	0	0	0	0	2	2
<u>Sparganium</u> type	0	0	0	0	0	0	0	0	0	0
<u>Sphagnum</u>	0	0	0	0	0	1	0	0	0	0
<u>Utricularia</u>	0	0	0	0	0	0	0	0	0	0
TOTAL DETERIORATED GRAINS	7	12	25	12	12	17	4	16	12	4
TOTAL EUCALYPTUS GRAINS TALLIED	41	146	184	407	479	309	1022	215	217	1154
NUMBER OF EUCALYPTUS TABLETS	3	2	3	3	3	3	3	2	3	3
DRY WEIGHT (g) OF EUCALYPTUS TABLETS	0.284	0.179	0.259	0.270	0.273	0.252	0.260	0.183	0.262	0.258

Pollen and Spore TypesSample Depth (cm)

	<u>350</u>	<u>360</u>	<u>370</u>	<u>380</u>	<u>390</u>	<u>400</u>	<u>410</u>	<u>420</u>	<u>430</u>	<u>440</u>
TREES										
<u>Acer negundo</u>	0	1	0	1	3	1	3	1	2	6
<u>Acer rubrum</u>	9	2	18	15	14	7	12	25	21	19
<u>Acer saccharum</u>	0	0	0	1	2	1	0	0	1	1
<u>Acer saccharinum</u>	0	1	2	0	0	3	0	2	0	0
<u>Acer spicatum</u>	0	0	0	0	0	0	0	0	0	0
<u>Acer pensylvanicum</u>	0	0	0	0	0	0	0	0	0	0
<u>Betula</u>	1	1	7	1	2	1	2	6	4	9
<u>Carpinus/Ostrya type</u>	2	4	2	1	2	4	6	5	2	4
<u>Carya</u>	30	35	23	20	24	19	24	30	10	11
<u>Castanea</u>	10	1	16	14	17	9	3	24	17	16
<u>Celtis/Maclura type</u>	0	0	0	2	0	2	0	0	0	1
<u>Cornus alternifolia type</u>	1	0	0	0	0	0	0	0	0	0
<u>Cornus florida</u>	0	0	0	0	0	0	0	0	0	0
<u>Cupressaceae undiff.</u>	1	0	0	0	4	1	1	0	1	2
<u>Ericaceae (individual grains)</u>	0	0	0	0	0	0	0	0	0	0
<u>Fagus grandifolia</u>	1	1	3	2	2	4	1	2	4	3
<u>Fraxinus undiff.</u>	5	7	2	6	6	1	1	1	4	7
<u>Fraxinus quadrangulata-nigra type</u>	5	1	0	3	6	0	6	1	6	6
<u>Fraxinus pennsylvanica-americana type</u>	1	1	0	0	3	1	0	0	3	2
<u>Fraxinus C₃stp type</u>	3	1	1	2	1	3	1	0	3	6
<u>Ilex type</u>	0	0	0	0	0	0	1	0	1	0
<u>Juglans cinerea</u>	0	1	2	0	1	1	2	1	0	1
<u>Juglans undiff.</u>	0	0	1	0	0	0	0	0	1	1
<u>Juglans nigra</u>	0	0	0	0	0	0	0	0	0	0
<u>Liquidambar styraciflua</u>	0	1	1	2	1	2	1	0	0	0
<u>Liriodendron tulipifera</u>	0	0	0	0	0	0	0	0	0	0
<u>Magnolia acuminata</u>	1	0	0	1	0	0	2	1	2	2
<u>Morus</u>	0	0	0	0	0	0	0	0	0	0
<u>Nyssa</u>	1	0	1	0	0	4	2	1	1	0

Pollen and Spore TypesSample Depth (cm)

	<u>350</u>	<u>360</u>	<u>370</u>	<u>380</u>	<u>390</u>	<u>400</u>	<u>410</u>	<u>420</u>	<u>430</u>	<u>440</u>
<u>Picea</u>	1	0	0	3	0	0	1	0	0	0
<u>Pinus undiff.</u>	9	16	13.5	7.5	12	17.5	12.5	9.5	12.5	19
<u>Diploxylon Pinus</u>	0	5	2.5	1	10	0	5	6.5	2	8
<u>Haploxylon Pinus</u>	0	1	1	0	0	0	0	0	0	1
<u>Planera aquatica</u>	0	0	0	0	0	0	0	0	0	0
<u>Platanus occidentalis</u>	1	0	0	0	0	3	1	0	0	0
<u>Populus</u>	0	0	0	0	0	0	0	0	0	0
<u>Prunus type</u>	0	0	0	0	0	0	0	0	0	0
<u>Quercus</u>	220	215	210	213	185	212	211	198	201	166
<u>Ptelea trifoliata</u>	0	0	0	0	0	0	0	0	0	0
<u>Rhamnus</u>	0	0	0	0	0	0	0	0	0	0
<u>Rhus undiff.</u>	0	0	0	0	0	0	0	0	0	0
<u>Rhus copallina</u>	0	0	0	0	0	0	0	0	0	0
<u>Salix</u>	2	0	1	0	0	1	0	4	3	2
<u>Taxodium</u>	1	0	0	0	0	0	0	0	0	0
<u>Tilia</u>	0	0	0	0	0	0	0	0	0	0
<u>Tsuga</u>	0	0	0	1	2	0	0	2	2	1
<u>Ulmus</u>	3	2	2	7	7	6	7	5	1	5
<u>Viburnum undiff.</u>	0	0	0	0	0	0	0	0	0	1
TOTAL ARBOREAL POLLEN	308	306	309	303.5	304	303.5	305.5	325	304.5	300
SHRUBS										
<u>Alnus rugosa-serrulata type</u>	2	0	2	6	2	0	2	4	3	2
<u>Cephalanthus occidentalis</u>	1	7	4	3	15	1	4	5	3	0
<u>Corylus</u>	0	0	3	1	0	0	1	0	0	1
<u>Itea virginica</u>	0	0	0	0	0	0	0	0	0	0
<u>Lonicera</u>	0	0	0	0	0	0	0	0	0	0
<u>Sambucus</u>	0	0	0	0	0	0	0	0	1	0
<u>Rubus</u>	0	0	0	0	1	0	6	0	0	0
<u>Sarcobatus</u>	0	0	0	0	0	0	0	0	0	0
LIANAS										
<u>Parthenocissus</u>	0	0	0	0	0	0	0	0	0	0
<u>Vitis</u>	0	0	0	0	0	1	0	0	1	4
UPLAND HERBS										
<u>Caryophyllaceae</u>	0	0	0	0	0	0	0	0	0	0
<u>Chenopodiaceae/Amaranthaceae</u>	0	0	0	0	0	0	0	0	0	0
<u>Tubuliflorae undiff.</u>	0	2	2	1	1	1	3	2	1	3
<u>Ambrosia type</u>	2	1	4	0	2	3	1	7	3	4
<u>Artemisia</u>	0	0	0	0	1	0	1	0	1	0

Pollen and Spore TypesSample Depth (cm)

	<u>350</u>	<u>360</u>	<u>370</u>	<u>380</u>	<u>390</u>	<u>400</u>	<u>410</u>	<u>420</u>	<u>430</u>	<u>440</u>
<u>Bidens</u> type	0	0	0	0	1	0	2	0	3	0
<u>Iva ciliata</u> type	0	0	0	0	0	0	0	0	0	0
Cruciferae	0	0	0	0	0	0	0	0	0	0
Cyperaceae	1	8	3	6	4	3	4	2	4	4
Gramineae (wild)	8	8	7	6	3	6	6	4	8	6
<u>Humulus/Cannabis</u> type	0	0	0	0	0	0	0	0	0	0
<u>Mentha</u> type	0	0	0	0	0	0	0	0	0	0
<u>Plantago</u> undiff.	0	0	0	2	1	0	0	0	0	0
<u>Thalictrum</u>	0	2	0	0	0	0	0	0	0	0
<u>Urtica</u>	0	0	0	0	0	0	3	0	0	0
FERNS & FERN ALLIES										
<u>Dryopteris</u> type	1	0	0	0	0	0	1	0	2	0
<u>Osmunda cinnamomea</u> type	5	1	6	0	1	0	0	2	5	2
<u>Osmunda regalis</u> type	0	2	1	6	2	4	6	0	5	2
<u>Pteridium aquilinum</u>	0	1	0	0	0	1	0	0	0	0
Trilete spores undiff.	0	0	0	0	0	0	0	0	0	0
<u>Lycopodium clavatum</u> type	0	1	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0	0	0	0
OBLIGATE AQUATIC PLANTS										
<u>Brasenia schreberi</u>	0	0	0	0	0	0	0	0	0	0
<u>Decodon verticillatus</u>	0	0	0	0	0	0	0	0	0	0
<u>Isoetes</u>	0	0	0	0	0	0	0	0	0	0
<u>Jussiaea</u>	0	0	0	0	0	0	2	0	5	0
<u>Nuphar</u>	15	3	10	14	10	13	5	6	15	5
<u>Nymphaea</u>	0	1	0	2	1	0	0	0	1	4
<u>Nymphoides</u>	0	0	0	0	0	0	0	0	0	0
<u>Potamogeton</u> (subgenus Coleogeton)	0	0	0	0	1	0	0	1	0	0
<u>Potamogeton</u> (subgenus Eupotamogeton)	0	2	0	0	1	0	1	0	2	0
<u>Polygonum hydropiper</u> type	0	0	0	0	0	0	0	0	0	0
<u>Sagittaria</u>	10	6	0	3	3	2	2	0	0	1
<u>Sparganium</u> type	0	0	0	0	0	0	0	0	0	0
<u>Sphagnum</u>	0	0	0	0	0	0	0	0	0	0
<u>Utricularia</u>	0	0	0	0	0	2	0	0	0	0
TOTAL DETERIORATED GRAINS	3	16	3	4	6	6	11	2	5	6
TOTAL EUCALYPTUS GRAINS TALLIED	246	347	188	261	257	226	269	134	167	177
NUMBER OF EUCALYPTUS TABLETS	3	3	2	3	3	3	3	2	3	3
DRY WEIGHT (g) OF EUCALYPTUS TABLETS	0.267	0.268	0.166	0.272	0.266	0.248	0.263	0.177	0.257	0.266

Pollen and Spore TypesSample Depth (cm)

	<u>450</u>	<u>460</u>	<u>470</u>	<u>480</u>	<u>520</u>	<u>530</u>	<u>540</u>	<u>550</u>	<u>560</u>	<u>570</u>
TREES										
<u>Acer negundo</u>	0	1	1	0	0	3	0	0	0	1
<u>Acer rubrum</u>	23	3	6	3	1	2	4	0	0	0
<u>Acer saccharum</u>	2	1	2	0	2	2	0	1	2	1
<u>Acer saccharinum</u>	1	0	0	1	4	0	0	0	0	0
<u>Acer spicatum</u>	0	0	0	0	0	0	1	0	0	1
<u>Acer pensylvanicum</u>	0	0	0	0	0	0	1	1	0	0
<u>Betula</u>	4	8	6	12	9	12	10	3	5	0
<u>Carpinus/Ostrya</u> type	4	3	5	4	4	4	12	15	17	20
<u>Carya</u>	21	14	17	30	18	25	18	24	19	47
<u>Castanea</u>	22	15	26	21	8	4	1	0	1	0
<u>Celtis/Maclura</u> type	0	1	0	1	0	0	0	1	0	3
<u>Cornus alternifolia</u> type	0	0	0	0	0	0	0	0	0	0
<u>Cornus florida</u>	0	0	0	0	0	0	0	0	0	1
<u>Cupressaceae</u> undiff.	3	1	1	3	2	4	8	7	3	2
<u>Ericaceae</u> (individual grains)	0	0	0	0	0	0	0	0	0	4
<u>Fagus grandifolia</u>	1	1	4	3	4	7	8	28	138	125
<u>Fraxinus</u> undiff.	3	5	9	2	6	2	2	0	5	9
<u>Fraxinus quadrangulata-nigra</u> type	2	1	3	1	6	1	1	1	4	3
<u>Fraxinus pennsylvanica-americana</u> type	3	5	4	1	1	2	2	5	3	0
<u>Fraxinus C₃stp</u> type	3	1	0	2	4	1	5	2	2	2
<u>Ilex</u> type	0	0	0	0	0	3	0	0	1	0
<u>Juglans cinerea</u>	1	0	0	0	0	0	2	0	0	0
<u>Juglans</u> undiff.	0	0	0	1	1	0	1	2	0	0
<u>Juglans nigra</u>	0	0	1	1	1	0	0	0	0	1
<u>Liquidambar styraciflua</u>	0	0	0	0	0	0	0	0	0	1
<u>Liriodendron tulipifera</u>	0	0	0	0	0	0	0	0	0	0
<u>Magnolia acuminata</u>	4	2	12	5	11	9	32	32	0	0
<u>Morus</u>	0	0	0	0	0	0	0	0	0	0
<u>Nyssa</u>	0	0	0	0	19	0	3	0	1	0

Pollen and Spore TypesSample Depth (cm)

	<u>450</u>	<u>460</u>	<u>470</u>	<u>480</u>	<u>520</u>	<u>530</u>	<u>540</u>	<u>550</u>	<u>560</u>	<u>570</u>
<u>Bidens</u> type	0	0	0	0	0	2	0	1	1	0
<u>Iva ciliata</u> type	0	0	0	0	0	0	0	0	0	0
Cruciferae	0	0	0	0	0	1	0	0	0	0
Cyperaceae	8	1	3	18	13	10	4	4	2	1
Gramineae (wild)	11	6	15	9	10	17	28	10	3	3
<u>Humulus/Cannabis</u> type	0	0	0	0	0	0	0	0	0	0
<u>Mentha</u> type	0	0	0	0	0	0	0	0	0	0
<u>Plantago</u> undiff.	0	0	0	0	0	0	0	0	0	0
<u>Thalictrum</u>	0	0	0	0	0	0	0	0	0	0
<u>Urtica</u>	0	0	0	0	0	0	0	0	0	0
FERNS & FERN ALLIES										
<u>Dryopteris</u> type	1	0	0	0	0	2	0	0	1	0
<u>Osmunda cinnamomea</u> type	2	9	2	0	1	5	0	1	0	0
<u>Osmunda regalis</u> type	2	0	0	0	0	0	0	0	0	1
<u>Pteridium aquilinum</u>	0	0	0	0	0	0	0	1	0	0
Trilete spores undiff.	0	0	0	0	0	0	0	0	0	0
<u>Lycopodium clavatum</u> type	0	0	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	1	0	0	0	0	0	0
OBLIGATE AQUATIC PLANTS										
<u>Brasenia schreberi</u>	0	0	0	0	2	0	0	16	0	0
<u>Decodon verticillatus</u>	0	0	0	0	0	0	0	0	0	0
<u>Isoetes</u>	0	0	0	0	0	0	0	0	0	0
<u>Jussiaea</u>	0	0	0	3	0	0	0	0	0	0
<u>Nuphar</u>	13	7	11	3	9	4	0	0	0	0
<u>Nymphaea</u>	4	5	11	0	15	0	21	0	0	0
<u>Nymphoides</u>	0	0	0	0	1	0	0	0	0	0
<u>Potamogeton</u> (subgenus Coleogeton)	0	0	0	1	0	0	0	0	0	0
<u>Potamogeton</u> (subgenus Eupotamogeton)	0	0	2	1	4	1	0	5	0	0
<u>Polygonum hydropiper</u> type	0	0	0	0	0	0	0	0	1	0
<u>Sagittaria</u>	1	1	0	2	0	0	1	0	0	2
<u>Sparganium</u> type	0	0	0	0	0	0	0	0	0	0
<u>Sphagnum</u>	0	0	0	0	0	0	0	0	0	0
<u>Utricularia</u>	0	0	0	1	0	0	1	0	0	0
TOTAL DETERIORATED GRAINS	5	8	4	3	6	7	2	11	17	11
TOTAL EUCALYPTUS GRAINS TALLIED	281	396	226	127	279	133	236	361	120	187
NUMBER OF EUCALYPTUS TABLETS	3	3	3	2	3	2	3	6	5	6
DRY WEIGHT (g) OF EUCALYPTUS TABLETS	0.267	0.272	0.263	0.176	0.278	0.169	0.257	0.503	0.433	0.521

Pollen and Spore TypesSample Depth (cm)

	<u>580</u>	<u>590</u>	<u>600</u>	<u>610</u>	<u>620</u>	<u>630</u>	<u>640</u>	<u>650</u>	<u>660</u>	<u>670</u>
TREES										
<u>Acer negundo</u>	0	0	0	0	0	0	0	0	1	0
<u>Acer rubrum</u>	0	0	0	0	0	1	0	0	0	0
<u>Acer saccharum</u>	2	3	1	1	2	0	0	4	1	2
<u>Acer saccharinum</u>	0	0	0	1	0	0	0	2	0	0
<u>Acer spicatum</u>	0	2	0	0	0	1	0	0	0	0
<u>Acer pensylvanicum</u>	0	0	0	0	0	2	0	0	0	1
<u>Betula</u>	3	1	1	3	4	1	0	5	1	1
<u>Carpinus/Ostrya type</u>	17	25	21	18	11	21	19	21	19	16
<u>Carya</u>	40	44	47	31	37	36	35	37	50	52
<u>Castanea</u>	1	0	0	0	0	0	0	1	0	0
<u>Celtis/Maclura type</u>	6	2	0	3	2	2	3	3	0	3
<u>Cornus alternifolia type</u>	0	0	0	0	0	0	0	0	0	0
<u>Cornus florida</u>	0	0	0	0	0	0	0	1	0	0
<u>Cupressaceae undiff.</u>	9	12	12	22	25	19	13	19	24	19
<u>Ericaceae (individual grains)</u>	0	0	0	0	0	0	0	0	4	0
<u>Fagus grandifolia</u>	126	117	109	104	112	99	120	118	129	125
<u>Fraxinus undiff.</u>	2	9	4	2	10	2	5	6	7	6
<u>Fraxinus quadrangulata-nigra type</u>	4	3	7	0	10	0	11	4	8	0
<u>Fraxinus pennsylvanica-americana type</u>	4	6	3	4	4	5	0	0	1	1
<u>Fraxinus C3stp type</u>	1	4	2	1	2	0	5	2	5	4
<u>Ilex type</u>	0	0	2	1	0	0	4	1	5	0
<u>Juglans cinerea</u>	1	1	2	2	0	4	1	0	2	2
<u>Juglans undiff.</u>	0	0	1	0	1	0	0	0	1	0
<u>Juglans nigra</u>	0	0	2	1	0	0	0	1	0	1
<u>Liquidambar styraciflua</u>	1	0	1	0	0	1	3	0	2	0
<u>Liriodendron tulipifera</u>	0	0	0	0	0	0	0	0	0	0
<u>Magnolia acuminata</u>	0	0	0	0	0	0	0	0	0	0
<u>Morus</u>	0	0	0	0	0	0	0	1	0	0
<u>Nyssa</u>	0	0	0	0	0	0	1	0	0	1

Pollen and Spore TypesSample Depth (cm)

	<u>580</u>	<u>590</u>	<u>600</u>	<u>610</u>	<u>620</u>	<u>630</u>	<u>640</u>	<u>650</u>	<u>660</u>	<u>670</u>
<u>Bidens</u> type	0	1	1	0	1	0	0	1	0	1
<u>Iva ciliata</u> type	0	0	0	0	0	0	0	0	0	0
<u>Cruciferae</u>	0	0	0	1	0	0	0	0	0	0
<u>Cyperaceae</u>	0	0	0	4	1	1	0	2	1	1
<u>Gramineae</u> (wild)	1	1	2	2	2	2	2	2	0	0
<u>Humulus/Cannabis</u> type	0	0	1	0	0	0	2	0	0	0
<u>Mentha</u> type	0	0	0	0	0	0	0	0	0	0
<u>Plantago</u> undiff.	0	0	0	0	0	0	0	0	0	0
<u>Thalictrum</u>	0	0	0	0	0	0	0	0	0	0
<u>Urtica</u>	0	0	1	0	0	0	0	0	0	0
FERNS & FERN ALLIES										
<u>Dryopteris</u> type	0	0	0	0	0	1	0	0	0	0
<u>Osmunda cinnamomea</u> type	0	0	0	0	0	0	0	0	0	0
<u>Osmunda regalis</u> type	0	0	0	0	0	0	0	0	0	0
<u>Pteridium aquilinum</u>	0	0	0	0	0	0	0	0	0	1
Trilete spores undiff.	0	0	0	0	0	0	0	0	0	0
<u>Lycopodium clavatum</u> type	0	0	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0	0	0	0
OBLIGATE AQUATIC PLANTS										
<u>Brasenia schreberi</u>	0	0	0	0	0	0	0	0	0	0
<u>Decodon verticillatus</u>	0	0	0	0	0	0	0	0	0	0
<u>Isoetes</u>	0	0	0	0	0	0	0	3	0	0
<u>Jussiaea</u>	0	0	0	0	0	0	0	0	0	0
<u>Nuphar</u>	0	0	0	2	0	0	0	0	0	0
<u>Nymphaea</u>	0	0	0	0	0	0	0	0	0	0
<u>Nymphoides</u>	0	0	0	0	0	0	0	0	0	0
<u>Potamogeton</u> (subgenus Coleogeton)	0	0	0	0	0	0	0	0	0	1
<u>Potamogeton</u> (subgenus Eupotamogeton)	0	0	0	0	0	0	0	1	0	0
<u>Polygonum hydropiper</u> type	0	0	0	1	0	0	0	0	0	2
<u>Sagittaria</u>	0	1	0	1	1	0	0	2	2	0
<u>Sparganium</u> type	0	0	0	0	0	0	0	0	0	0
<u>Sphagnum</u>	0	0	1	0	0	0	0	0	0	0
<u>Utricularia</u>	0	0	0	0	0	0	0	0	0	0
TOTAL DETERIORATED GRAINS	11	11	5	15	11	12	12	7	11	15
TOTAL EUCALYPTUS GRAINS TALLIED	44	131	148	124	184	215	254	46	213	168
NUMBER OF EUCALYPTUS TABLETS	2	6	6	5	6	6	6	2	6	6
DRY WEIGHT (g) OF EUCALYPTUS TABLETS	0.170	0.553	0.522	0.463	0.517	0.519	0.538	0.176	0.535	0.529

Pollen and Spore TypesSample Depth (cm)

	<u>680</u>	<u>690</u>	<u>700</u>	<u>710</u>	<u>720</u>	<u>730</u>	<u>740</u>	<u>750</u>	<u>760</u>	<u>766</u>
TREES										
<u>Acer negundo</u>	0	0	0	0	0	0	0	0	2	0
<u>Acer rubrum</u>	0	0	0	0	0	0	0	0	0	0
<u>Acer saccharum</u>	1	3	0	3	0	5	1	0	2	2
<u>Acer saccharinum</u>	0	0	0	0	0	0	0	0	0	0
<u>Acer spicatum</u>	0	0	0	0	0	0	0	0	0	0
<u>Acer pensylvanicum</u>	0	0	0	0	0	1	0	0	0	0
<u>Betula</u>	0	1	1	1	2	6	2	0	1	2
<u>Carpinus/Ostrya type</u>	14	13	25	14	12	15	21	14	25	28
<u>Carya</u>	35	37	28	34	52	40	48	57	47	35
<u>Castanea</u>	0	0	0	0	0	0	0	0	0	0
<u>Celtis/Maclura type</u>	2	2	0	7	5	2	4	3	4	2
<u>Cornus alternifolia type</u>	0	0	0	0	0	0	0	0	0	0
<u>Cornus florida</u>	0	0	1	0	0	0	0	0	0	0
<u>Cupressaceae undiff.</u>	16	20	14	14	11	32	42	42	49	44
<u>Ericaceae (individual grains)</u>	0	0	0	0	0	0	0	0	0	0
<u>Fagus grandifolia</u>	151	112	108	123	121	57	50	35	19	28
<u>Fraxinus undiff.</u>	4	5	5	7	13	7	6	4	9	5
<u>Fraxinus quadrangulata-nigra type</u>	3	2	2	5	3	2	3	0	2	1
<u>Fraxinus pennsylvanica-americana type</u>	1	3	7	2	3	2	3	6	4	2
<u>Fraxinus C3stp type</u>	1	5	3	2	4	0	1	4	1	4
<u>Ilex type</u>	2	0	1	1	0	0	0	0	0	2
<u>Juglans cinerea</u>	2	1	1	0	0	4	3	2	0	0
<u>Juglans undiff.</u>	0	0	0	1	0	0	1	2	2	1
<u>Juglans nigra</u>	1	0	4	0	1	1	0	0	0	0
<u>Liquidambar styraciflua</u>	0	0	0	1	0	2	0	0	0	0
<u>Liriodendron tulipifera</u>	0	0	0	0	0	0	0	0	0	0
<u>Magnolia acuminata</u>	0	0	0	0	0	0	0	0	0	0
<u>Morus</u>	0	0	0	0	0	0	0	0	0	0
<u>Nyssa</u>	0	1	0	2	0	0	0	0	0	1

Pollen and Spore TypesSample Depth (cm)

	<u>680</u>	<u>690</u>	<u>700</u>	<u>710</u>	<u>720</u>	<u>730</u>	<u>740</u>	<u>750</u>	<u>760</u>	<u>766</u>
<u>Bidens</u> type	1	1	0	0	0	1	0	0	0	0
<u>Iva ciliata</u> type	0	0	0	0	0	0	0	0	0	0
<u>Cruciferae</u>	0	0	0	0	0	3	0	2	0	1
<u>Cyperaceae</u>	2	0	2	1	3	1	0	1	0	1
<u>Gramineae</u> (wild)	2	0	5	3	0	2	2	1	2	5
<u>Humulus/Cannabis</u> type	0	0	0	0	0	0	0	0	0	0
<u>Mentha</u> type	0	0	0	0	0	0	0	0	0	0
<u>Plantago</u> undiff.	0	0	0	0	0	0	0	0	0	0
<u>Thalictrum</u>	1	0	0	1	0	0	0	0	1	0
<u>Urtica</u>	1	0	0	0	0	0	0	0	0	0
FERNS & FERN ALLIES										
<u>Dryopteris</u> type	0	0	0	0	0	0	0	0	1	0
<u>Osmunda cinnamomea</u> type	0	0	0	0	0	0	0	1	0	2
<u>Osmunda regalis</u> type	0	0	0	0	0	0	0	0	0	0
<u>Pteridium aquilinum</u>	0	0	0	0	0	0	0	0	0	0
Trilete spores undiff.	0	0	0	0	0	0	0	0	0	0
<u>Lycopodium clavatum</u> type	0	0	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	1	0	0	0	1
OBLIGATE AQUATIC PLANTS										
<u>Brasenia schreberi</u>	0	0	0	0	0	0	0	0	0	0
<u>Decodon verticillatus</u>	0	1	0	0	0	0	0	0	0	0
<u>Isoetes</u>	0	0	0	0	0	0	0	0	0	2
<u>Jussiaea</u>	0	0	0	0	0	0	0	0	0	0
<u>Nuphar</u>	0	0	0	0	0	0	0	0	0	1
<u>Nymphaea</u>	0	0	0	0	0	0	0	0	0	0
<u>Nymphoides</u>	0	0	0	0	0	0	0	0	0	0
<u>Potamogeton</u> (subgenus Coleogeton)	0	0	0	0	0	0	0	0	0	0
<u>Potamogeton</u> (subgenus Eupotamogeton)	0	1	1	1	0	0	0	0	1	0
<u>Polygonum hydropiper</u> type	0	0	0	0	0	0	0	0	0	0
<u>Sagittaria</u>	0	0	0	0	1	0	0	0	0	0
<u>Sparganium</u> type	0	0	0	0	0	0	0	0	0	0
<u>Sphagnum</u>	0	0	0	0	0	0	0	0	0	0
<u>Utricularia</u>	0	0	0	0	0	0	0	0	0	0
TOTAL DETERIORATED GRAINS	14	13	12	14	8	11	19	16	4	10
TOTAL EUCALYPTUS GRAINS TALLIED	170	191	37	165	107	142	190	124	148	76
NUMBER OF EUCALYPTUS TABLETS	5	6	2	6	6	4	4	4	4	2
DRY WEIGHT (g) OF EUCALYPTUS TABLETS	0.469	0.514	0.169	0.555	0.562	0.358	0.367	0.345	0.361	0.186

TABLE 2

POLLEN INFLUX VALUES FOR SELECTED TAXA IN SEDIMENT CORE 79B, CAHABA POND, ST. CLAIR COUNTY, ALABAMA

<u>Pollen Types</u>	<u>Sample Depth (cm)</u>											
	<u>134</u>	<u>140</u>	<u>150</u>	<u>160</u>	<u>170</u>	<u>180</u>	<u>190</u>	<u>200</u>	<u>232</u>	<u>240</u>	<u>250</u>	<u>260</u>
<u>Cupressaceae undiff.</u>	0	85	0	0	0	0	0	0	8	0	0	0
<u>Taxodium</u>	0	17	0	0	0	0	0	0	0	0	0	27
<u>Acer negundo</u>	0	0	0	0	0	0	0	0	0	0	0	0
<u>Acer rubrum</u>	0	0	35	52	0	0	0	0	4	0	116	53
<u>Nyssa</u>	4148	2265	5648	5380	11,165	8125	11,616	7935	523	2623	163	53
<u>Fagus grandifolia</u>	56	34	71	0	62	119	50	27	4	66	0	0
<u>Ostrya/Carpinus</u>	28	0	106	26	0	40	0	0	4	0	46	0
<u>Ulmus</u>	28	17	71	0	0	0	50	0	8	16	186	213
<u>Fraxinus</u>	113	51	141	312	62	319	151	53	24	82	139	267
<u>Betula</u>	0	0	0	0	123	0	50	0	8	16	0	0
<u>Tsuga</u>	0	0	0	0	0	0	0	0	0	0	0	0
<u>Magnolia acuminata</u>	56	0	0	52	0	0	0	0	0	0	0	0
<u>Carya</u>	198	68	141	234	493	239	302	240	36	98	395	533
<u>Quercus</u>	2371	1311	2930	1741	4256	4620	4324	2805	296	1213	5223	5917
<u>Pinus undiff.</u>	1185	1065	1571	1495	1573	1653	1433	1349	144	402	464	626
<u>Diploxylon Pinus</u>	198	170	194	182	247	239	302	214	16	82	279	120
<u>Haploxylon Pinus</u>	0	0	0	0	0	0	101	0	4	0	0	0
<u>Castanea</u>	310	204	353	156	617	518	805	214	12	82	46	27
<u>Liquidambar styraciflua</u>	226	221	353	286	555	597	503	508	61	148	46	53
<u>Alnus rugosa type</u>	0	0	0	26	0	0	0	0	4	0	0	0
<u>Cephalanthus occidentalis</u>	282	204	0	104	0	119	251	27	28	0	186	240
<u>Rubus</u>	0	0	0	26	123	0	50	0	0	0	1555	2692
<u>Osmunda</u>	28	0	0	52	0	40	0	0	0	0	46	267
<u>Tubuliflorae undiff.</u>	0	17	0	52	0	0	50	0	4	49	163	133
<u>Ambrosia type</u>	56	119	71	78	0	119	50	27	16	0	0	27
<u>Gramineae</u>	56	17	106	56	123	40	50	27	20	98	418	346
<u>Cyperaceae</u>	0	0	0	0	0	0	101	0	8	49	23	53
TOTAL POLLEN INFLUX OF UPLAND TAXA	9482	6021	12,002	10,410	20,017	16,828	20,441	13,639	1331	5222	10,354	12,100

<u>Pollen Types</u>	<u>Sample Depth (cm)</u>										
	<u>270</u>	<u>280</u>	<u>290</u>	<u>300</u>	<u>320</u>	<u>330</u>	<u>340</u>	<u>350</u>	<u>360</u>	<u>370</u>	<u>380</u>
<u>Cupressaceae undiff.</u>	0	0	31	0	32	46	13	71	0	0	0
<u>Taxodium</u>	0	0	0	0	0	0	0	71	0	0	0
<u>Acer negundo</u>	0	0	15	0	0	23	47	0	50	0	68
<u>Acer rubrum</u>	25	22	170	29	48	46	51	635	552	1033	1016
<u>Nyssa</u>	50	43	170	14	355	0	8	71	0	57	203
<u>Fagus grandifolia</u>	38	54	170	39	129	91	13	71	50	172	135
<u>Ostrya/Carpinus</u>	38	11	46	14	48	69	17	141	201	115	68
<u>Ulmus</u>	126	97	108	24	97	137	30	212	100	115	474
<u>Fraxinus</u>	25	108	170	145	161	823	72	988	50	172	745
<u>Betula</u>	0	11	0	0	48	0	8	71	50	402	68
<u>Tsuga</u>	0	0	15	0	32	0	0	0	0	0	68
<u>Magnolia acuminata</u>	0	0	0	0	0	0	0	71	0	0	68
<u>Carya</u>	251	130	494	77	306	320	102	2116	1757	1320	1355
<u>Quercus</u>	2939	2191	2841	944	2804	5258	923	15,520	10,793	12,052	14,428
<u>Pinus undiff.</u>	170	119	193	36	250	217	38	635	803	775	508
<u>Diploxylon Pinus</u>	38	11	77	29	81	34	13	0	251	143	68
<u>Haploxylon Pinus</u>	0	0	0	0	0	0	0	0	50	57	0
<u>Castanea</u>	25	65	0	5	48	69	0	705	50	918	948
<u>Liquidambar styraciflua</u>	25	22	46	29	113	46	8	0	50	57	0
<u>Alnus rugosa type</u>	0	0	0	14	16	23	4	141	0	115	406
<u>Cephalanthus occidentalis</u>	214	119	432	111	387	1257	106	71	351	230	203
<u>Rubus</u>	565	0	432	0	306	0	4	0	0	0	0
<u>Osmunda</u>	1294	345	726	53	48	274	25	353	151	402	406
<u>Tubuliflorae undiff.</u>	25	11	15	0	81	46	8	0	100	115	68
<u>Ambrosia type</u>	25	22	0	5	32	0	8	141	50	230	0
<u>Gramineae</u>	100	76	62	43	97	69	8	564	402	402	406
<u>Cyperaceae</u>	163	11	139	5	64	412	4	71	402	172	406
TOTAL POLLEN INFLUX OF UPLAND TAXA	6450	3831	6524	1717	5955	9373	1541	23,139	17,018	19,570	22,658

<u>Pollen Types</u>	<u>Sample Depth (cm)</u>										
	<u>390</u>	<u>400</u>	<u>410</u>	<u>420</u>	<u>430</u>	<u>440</u>	<u>450</u>	<u>460</u>	<u>470</u>	<u>480</u>	<u>520</u>
Cupressaceae undiff.	269	71	64	0	100	195	89	21	36	129	62
Taxodium	0	0	0	0	0	0	0	0	0	173	0
Acer negundo	202	71	191	86	200	586	0	21	36	0	0
Acer rubrum	942	499	763	2146	2101	1856	680	64	217	129	31
Nyssa	0	285	127	86	100	0	0	0	0	0	589
Fagus grandifolia	135	285	64	172	400	293	30	21	145	129	124
Ostrya/Carpinus	135	285	381	429	200	391	118	64	181	173	124
Ulmus	471	428	445	429	100	488	89	21	254	259	62
Fraxinus	1076	357	508	172	1600	2051	325	257	580	259	527
Betula	135	71	127	515	400	879	118	171	217	518	279
Tsuga	135	0	0	172	200	98	30	0	181	86	62
Magnolia acuminata	0	0	127	86	200	195	0	43	435	216	341
Carya	1615	1355	1525	2576	1000	1074	621	299	616	1294	558
Quercus	12,446	15,121	13,409	16,999	20,105	16,215	5177	4213	4348	5566	4157
Pinus undiff.	807	1248	794	816	1250	1856	695	620	1594	2330	1753
Diploxylon Pinus	673	-	318	558	200	781	89	214	688	626	450
Haploxylon Pinus	0	0	0	0	0	98	0	21	181	173	186
Castanea	1144	642	191	2061	1700	1563	651	321	942	906	248
Liquidambar styraciflua	67	143	64	0	0	0	0	0	0	0	0
Alnus rugosa type	135	0	127	343	300	195	118	107	181	216	279
Cephalanthus occidentalis	1009	71	254	429	300	0	148	150	72	129	186
Rubus	67	0	381	0	0	0	30	0	0	0	0
Osmunda	202	285	381	172	1000	391	118	192	72	0	31
Tubuliflorae undiff.	67	71	191	172	100	293	30	0	36	173	93
Ambrosia type	135	214	64	601	300	391	118	150	217	173	217
Gramineae	202	428	381	343	800	586	325	128	543	388	310
Cyperaceae	269	214	254	172	400	391	237	21	109	777	403
TOTAL POLLEN INFLUX OF UPLAND TAXA	22,738	23,073	21,956	30,135	34,459	32,039	10,102	7249	12,282	15,381	11,478

<u>Pollen Types</u>	<u>Sample Depth (cm)</u>										
	<u>530</u>	<u>540</u>	<u>550</u>	<u>560</u>	<u>570</u>	<u>580</u>	<u>590</u>	<u>600</u>	<u>610</u>	<u>620</u>	<u>630</u>
Cupressaceae undiff.	158	271	304	258	133	829	1208	1009	1959	894	1094
<u>Taxodium</u>	0	0	0	0	0	0	101	0	0	36	0
<u>Acer negundo</u>	119	0	0	0	66	0	0	0	0	0	0
<u>Acer rubrum</u>	79	136	0	0	0	0	0	0	0	0	58
<u>Nyssa</u>	0	102	0	86	66	0	0	0	0	0	0
<u>Fagus grandifolia</u>	277	271	1215	11,876	8306	11,611	11,780	9169	9262	4007	5700
<u>Ostrya/Carpinus</u>	158	407	651	1463	1329	1567	2517	1767	1603	394	1209
<u>Ulmus</u>	396	407	477	1205	598	1290	1107	1094	980	429	691
<u>Fraxinus</u>	237	339	347	1205	930	1014	2215	1346	623	930	403
<u>Betula</u>	475	339	130	430	0	276	101	84	267	143	58
<u>Tsuga</u>	198	34	87	0	0	92	0	0	89	0	0
<u>Magnolia acuminata</u>	356	1085	1388	0	0	0	0	0	0	0	0
<u>Carya</u>	989	610	1041	1635	3123	3686	4430	3954	2761	1324	2073
<u>Quercus</u>	5815	5628	7461	6368	5914	9215	8155	7234	8104	3256	5297
<u>Pinus</u> undiff.	1167	373	152	172	133	276	101	210	267	0	144
<u>Diploxylon Pinus</u>	475	0	0	0	66	92	0	84	0	72	0
<u>Haploxylon Pinus</u>	732	170	0	0	0	0	0	0	0	0	0
<u>Castanea</u>	158	34	0	86	0	92	0	0	0	0	0
<u>Liquidambar styraciflua</u>	0	0	0	0	66	92	0	84	0	0	58
<u>Alnus rugosa</u> type	198	237	130	0	66	92	101	0	178	36	0
<u>Cephalanthus occidentalis</u>	277	68	130	0	0	0	0	0	0	0	0
<u>Rubus</u>	40	0	0	0	0	92	0	0	0	0	0
<u>Osmunda</u>	198	0	43	0	66	0	0	0	0	0	0
<u>Tubuliflorae</u> undiff.	0	136	174	86	0	92	101	336	267	250	230
<u>Ambrosia</u> type	237	271	304	775	864	737	302	421	1336	250	173
Gramineae	673	949	434	258	199	92	101	168	178	72	115
Cyperaceae	396	136	174	172	66	0	0	0	356	36	58
TOTAL POLLEN INFLUX OF UPLAND TAXA	14,321	12,375	15,161	27,367	22,859	32,621	33,426	28,391	30,190	12,450	18,395

<u>Pollen Types</u>	<u>Sample Depth (cm)</u>									
	<u>640</u>	<u>650</u>	<u>660</u>	<u>670</u>	<u>680</u>	<u>690</u>	<u>700</u>	<u>710</u>	<u>720</u>	<u>730</u>
Cupressaceae undiff.	657	2078	1723	1710	1262	1538	1828	1346	1651	2688
<u>Taxodium</u>	51	328	574	0	315	0	0	96	0	0
<u>Acer negundo</u>	0	0	72	0	0	0	0	0	0	0
<u>Acer rubrum</u>	0	0	0	0	0	0	0	0	0	0
<u>Nyssa</u>	51	0	0	90	0	77	0	192	0	0
<u>Fagus grandifolia</u>	6062	12,905	9262	11,251	11,908	8615	14,101	11,826	18,166	4788
<u>Ostrya/Carpinus</u>	960	2297	1364	1440	1104	1000	3264	1346	1802	1260
<u>Ulmus</u>	758	875	1364	1530	946	1615	1828	1346	2853	1092
<u>Fraxinus</u>	1061	1312	1508	990	710	1154	2220	1538	3453	924
<u>Betula</u>	0	547	72	90	0	77	131	96	300	504
<u>Tsuga</u>	0	0	0	0	0	0	0	0	0	0
<u>Magnolia acuminata</u>	0	0	0	0	0	0	0	0	0	0
<u>Carya</u>	1768	4047	3590	4680	2760	2846	3656	3269	7807	3360
<u>Quercus</u>	4496	7765	5241	6930	6072	7461	11,750	6442	13,062	9912
<u>Pinus undiff.</u>	0	0	144	180	39	38	131	96	0	84
<u>Diploxylon Pinus</u>	0	109	0	180	0	0	0	0	150	84
<u>Haploxylon Pinus</u>	0	0	0	0	0	0	0	0	0	0
<u>Castanea</u>	0	109	0	0	0	0	0	0	0	0
<u>Liquidambar styraciflua</u>	152	0	144	0	0	0	0	96	0	168
<u>Alnus rugosa</u> type	0	0	0	0	0	77	0	96	0	0
<u>Cephalanthus occidentalis</u>	0	0	0	90	0	0	0	0	0	0
<u>Rubus</u>	0	109	0	0	0	0	0	0	0	0
<u>Osmunda</u>	0	0	0	0	0	0	0	0	0	0
<u>Tubuliflorae undiff.</u>	51	328	72	540	79	0	392	96	300	252
<u>Ambrosia</u> type	303	328	503	630	631	692	522	769	601	252
<u>Gramineae</u>	101	219	0	0	158	0	653	288	0	168
<u>Cyperaceae</u>	101	219	72	90	158	0	261	96	450	84
TOTAL POLLEN INFLUX OF UPLAND TAXA	17,025	35,653	27,139	32,222	27,482	26,192	41,910	30,671	51,646	27,636

<u>Pollen Types</u>	<u>Sample Depth (cm)</u>			
	<u>740</u>	<u>750</u>	<u>760</u>	<u>766</u>
Cupressaceae undiff.	2703	3893	3982	3588
<u>Taxodium</u>	193	0	0	0
<u>Acer negundo</u>	0	0	163	0
<u>Acer rubrum</u>	0	0	0	0
<u>Nyssa</u>	0	0	0	82
<u>Fagus grandifolia</u>	3218	3244	1544	2283
<u>Ostrya/Carpinus</u>	1351	1298	2032	2283
<u>Ulmus</u>	837	1483	488	815
<u>Fraxinus</u>	837	1298	1300	978
<u>Betula</u>	129	0	81	163
<u>Tsuga</u>	0	0	0	0
<u>Magnolia acuminata</u>	0	0	0	0
<u>Carya</u>	3089	5284	3820	2854
<u>Quercus</u>	8302	12,144	13,653	10,356
<u>Pinus undiff.</u>	32	93	203	204
<u>Diploxylon Pinus</u>	0	0	0	0
<u>Haploxylon Pinus</u>	0	0	0	0
<u>Castanea</u>	0	0	0	0
<u>Liquidambar styraciflua</u>	0	0	0	0
<u>Alnus rugosa</u> type	0	0	0	82
<u>Cephalanthus occidentalis</u>	0	0	81	0
<u>Rubus</u>	0	0	0	0
<u>Osmunda</u>	0	93	0	163
<u>Tubuliflorae undiff.</u>	708	0	163	245
<u>Ambrosia</u> type	322	556	81	326
<u>Gramineae</u>	129	93	163	408
<u>Cyperaceae</u>	0	93	0	82
TOTAL POLLEN INFLUX OF UPLAND TAXA	22,428	30,961	28,891	26,460

Values for pollen influx are expressed as number of grains deposited per cm² of sediment

TABLE 3

MACROFOSSIL DATA FOR SEDIMENT CORE 79B, CAHABA POND, ST. CLAIR COUNTY, ALABAMA

<u>Macrofossil Types</u>	<u>Sample Depth (cm)</u>									
	<u>145 to</u> <u>150</u>	<u>160 to</u> <u>165</u>	<u>175 to</u> <u>180</u>	<u>195 to</u> <u>200</u>	<u>255 to</u> <u>260</u>	<u>280 to</u> <u>285</u>	<u>300 to</u> <u>305</u>	<u>330 to</u> <u>335</u>	<u>355 to</u> <u>360</u>	<u>380 to</u> <u>385</u>
<u>Fagus</u> leaves & petioles	-	-	-	-	-	-	-	-	-	-
<u>Fagus</u> bud scales	-	-	-	-	-	-	-	-	-	-
<u>Fagus</u> fruits	-	-	-	-	-	-	-	-	-	-
Twigs & wood undiff.	++	+++	+++	+++	+++	++	+++	++	+	-
<u>Chamaecyparis thyoides</u>										
branchlets	0	0	0	0	0	0	0	0	0	0
<u>Pinus</u> seeds	0	0	0	0	0	0	0	0	0	0
<u>Diploxylon Pinus</u>										
needle fragments	118	17	2	3	0	0	0	0	0	0
<u>Haploxylon Pinus</u>										
needle fragments	0	0	0	0	0	0	0	0	0	0
<u>Nyssa sylvatica</u> seeds	0	1	3	7	0	0	1	0	0	0
<u>Quercus</u> acorns	0	0	0	0	1	0	0	0	0	0
<u>Cephalanthus occidentalis</u>										
fruit heads	0	0	0	0	0	0	0	1	0	0
<u>Cephalanthus occidentalis</u>										
nutlets	1	0	0	1	0	1	4	12	0	2
<u>Cornus obliqua</u> seeds	0	0	0	0	0	0	0	0	0	0
cf. <u>Rubus</u> spines	0	0	0	0	0	0	0	0	0	0
<u>Aralia</u> seeds	0	0	0	0	0	0	0	0	0	0
<u>Hypericum</u> seeds	0	0	0	0	0	0	0	0	1	1
<u>Galium</u> seeds	0	0	0	0	1	0	0	0	1	0
<u>Rorippa</u> seeds	0	0	0	0	0	0	0	0	0	0
<u>Viola</u> seeds	0	0	0	0	0	0	1	3	0	0
<u>Boehmeria cylindrica</u> seeds	0	0	0	0	0	0	0	1	1	0
<u>Rubus</u> seeds	0	0	0	0	0	0	2	0	0	0
<u>Cornus</u> undiff. seeds	0	1	0	0	0	0	0	0	0	0
Bryophyte gametophyte										
fragments	0	0	0	0	0	0	1	1	0	0

Macrofossil TypesSample Depth (cm)

	<u>145 to</u> <u>150</u>	<u>160 to</u> <u>165</u>	<u>175 to</u> <u>180</u>	<u>195 to</u> <u>200</u>	<u>255 to</u> <u>260</u>	<u>280 to</u> <u>285</u>	<u>300 to</u> <u>305</u>	<u>330 to</u> <u>335</u>	<u>355 to</u> <u>360</u>	<u>380 to</u> <u>385</u>
<u>Carex lenticular</u> achenes	0	0	0	0	2	0	0	0	10	5
<u>Carex trigonous</u> achenes	0	0	2	0	0	0	1	2	0	0
<u>Cyperus strigosus</u> achenes	0	0	0	0	0	0	0	0	0	0
<u>Juncus</u> seeds	0	0	0	0	43	2	10	165	57	71
<u>Typha</u> seeds	0	0	0	2	0	0	0	2	0	0
<u>Alismataceae</u> embryos undiff.	3	7	10	4	0	0	0	1	11	13
<u>Najas gracillima</u> seeds	0	0	0	0	0	0	0	0	0	0
<u>Scirpus validus</u> type achenes	0	0	0	0	0	0	0	0	0	0
<u>Scirpus cyperinus</u> type achenes	0	0	0	0	0	0	11	2	65	36
<u>Polygonum trigonous</u> achenes	0	0	0	0	3	0	1	1	1	0
<u>Scirpus</u> undiff. achenes	0	0	0	0	0	0	0	0	0	0
<u>Scirpus americanus</u> type achenes	0	0	0	0	0	0	0	0	0	1
<u>Dulichium arundinaceum</u> achenes	4	1	0	0	1	0	1	0	15	1
<u>Brasenia schreberi</u> seeds	4	4	3	4	0	0	0	1	0	0
<u>Polygonum sagittatum</u> type achenes	0	0	0	0	0	0	0	1	0	0
<u>Nymphaea odorata</u> seeds	0	0	0	0	0	0	0	0	0	0
<u>Sparganium</u> nutlets	0	1	0	0	1	6	0	0	0	0
<u>Nuphar</u> seeds	0	0	1	0	1	0	0	0	3	2
<u>Scirpus cespitosus</u> type achenes	0	0	0	0	0	0	2	5	0	0
<u>Potamogeton</u> endocarps	2	2	0	0	0	0	0	0	0	0
<u>Nymphaea tuberosa</u> type seeds	0	0	0	0	0	0	0	0	0	0
<u>Nymphaea</u> undiff. seeds	0	0	0	0	0	0	0	0	0	0
<u>Scirpus smithii</u> type achenes	0	0	0	0	1	1	3	0	0	0
<u>Sagittaria</u> seeds	0	0	4	1	0	0	0	0	11	3
<u>Eleocharis</u> achenes	0	0	0	0	0	0	0	0	0	0
<u>Cyperus</u> cf. <u>engelmanni</u> achenes	0	0	0	0	0	0	0	3	0	2
Gramineae undiff. caryopses	0	0	0	0	0	0	3	2	12	3
<u>Decodon verticillatus</u> seeds	0	0	0	0	12	20	1	0	0	0
<u>Polygonum ramosissimum</u> type achenes	0	0	0	0	2	0	0	0	0	0
Characeae oogonia	+	+	-	-	-	-	-	-	-	-
<u>Myriophyllum heterophyllum</u> seeds	0	0	0	0	1	0	0	0	0	0

Macrofossil TypesSample Depth (cm)

	<u>400 to</u> <u>405</u>	<u>430 to</u> <u>435</u>	<u>455 to</u> <u>460</u>	<u>475 to</u> <u>480</u>	<u>520 to</u> <u>525</u>	<u>530 to</u> <u>535</u>	<u>550 to</u> <u>555</u>	<u>570 to</u> <u>575</u>	<u>585 to</u> <u>590</u>
Insect fragments	21	28	59	31	32	19	5	9	0
Ehippia	-	+	-	+	-	-	+	+	+

Macrofossil TypesSample Depth (cm)

	<u>600 to</u> <u>605</u>	<u>625 to</u> <u>630</u>	<u>650 to</u> <u>655</u>	<u>665 to</u> <u>670</u>	<u>680 to</u> <u>685</u>	<u>700 to</u> <u>705</u>	<u>715 to</u> <u>720</u>	<u>730 to</u> <u>735</u>	<u>745 to</u> <u>750</u>
<u>Fagus</u> leaves & petioles	-	+	+	+	+	+++	+++	+++	+
<u>Fagus</u> bud scales	+	+++	+++	++	++	+++	+++	+++	+
<u>Fagus</u> fruits	0	0	1	0	0	0	0	0	0
Twigs & wood undiff.	+	+	+	+	-	++	+	-	-
<u>Chamaecyparis thyoides</u> branchlets	0	0	0	0	0	0	0	0	2
<u>Pinus</u> seeds	0	0	0	0	0	0	0	0	0
<u>Diploxylon Pinus</u> needle fragments	0	0	0	0	0	0	0	0	0
<u>Haploxylon Pinus</u> needle fragments	0	0	0	0	0	0	0	0	0
<u>Nyssa sylvatica</u> seeds	0	0	0	0	0	0	0	0	0
<u>Quercus</u> acorns	0	0	0	0	0	0	0	0	0
<u>Cephalanthus occidentalis</u> fruit heads	0	0	0	0	0	0	0	0	0
<u>Cephalanthus occidentalis</u> nutlets	0	0	0	0	0	0	0	0	0
<u>Cornus obliqua</u> seeds	0	0	0	0	0	0	0	0	0
cf. <u>Rubus</u> spines	0	0	1	0	0	0	0	1	0
<u>Aralia</u> seeds	1	0	0	0	0	0	1	0	1
<u>Hypericum</u> seeds	1	0	0	0	0	0	1	3	1
<u>Galium</u> seeds	0	0	0	0	1	0	0	0	1
<u>Rorippa</u> seeds	4	1	0	1	0	1	0	0	1
<u>Viola</u> seeds	0	0	0	0	0	0	0	0	0
<u>Boehmeria cylindrica</u> seeds	0	0	0	0	0	0	0	0	0
<u>Rubus</u> seeds	0	0	0	0	0	0	0	0	0
<u>Cornus</u> undiff. seeds	0	0	0	0	0	0	0	0	0
Bryophyte gametophyte fragments	0	1	1	0	0	0	0	0	3

Macrofossil TypesSample Depth (cm)

	<u>600 to</u> <u>605</u>	<u>625 to</u> <u>630</u>	<u>650 to</u> <u>655</u>	<u>665 to</u> <u>670</u>	<u>680 to</u> <u>685</u>	<u>700 to</u> <u>705</u>	<u>715 to</u> <u>720</u>	<u>730 to</u> <u>735</u>	<u>745 to</u> <u>750</u>
Insect fragments	1	4	3	2	0	4	0	1	0
Ehippia	-	+	-	+	+	+	+	+	-

The numerical values for macrofossil abundance represent the number of items per 100 cm³ of sediment.

Presence/absence values for macrofossils that were unable to be tabulated are as follows:

- = not present in sample + = present ++ = frequent +++ = abundant