

REPORT ON REFERRED FOSSILS

1

X

TREATING PHASE
 GENERAL LOCALITY
 QUADRANGLE
 AREA
 KINDS OF FOSSILS
 REFERRED BY

Upper Cretaceous
 Georgia
 Westlake 7.5 min. quad.
 Pollen
 Harold Gill and Dave Prowell
 Ray Christopher

SHIPMENT NUMBER
 REGION
 DATE RECEIVED
 STATUS OF WORK
 DATE REPORTED

WR-81-3
 Pulaski
 4/81
 incomplete
 9/23/81

Pulaski Co.

Project - Water Resources Division

Palyology report - 12 samples from the Cretaceous part of the Pulaski (arrowhead) core.
 For geographic locality information, see my report WR-81-3, dated 6/8/81

In an attempt to more accurately pin down some of the contacts between the pollen zones in the Pulaski core, I examined 12 additional samples. Listed below are the depths, the zones assigned, and the biostratigraphically important pollen types recovered from each sample. But perhaps of greater importance to you is the figure attached to this report in which I summarize all of the Cretaceous pollen data from the core, and relate it to European stages and formational equivalents in the Chatahoochee River region. (This should help Harold with his report to the Georgia Survey).

However, before you put too much emphasis on the correlations shown on this figure, let me point out some potential pitfalls. Except for the Eutaw formation, none of the correlations shown are based on direct comparisons of pollen assemblages. Rather, they are based on the relationships between the pollen zones and ranges of benthic mollusks that Norm Sohl and I have been working on for the past two years. The ranges of these mollusks in the Chatahoochee section are shown in U.S.G.S. Prof. Paper 674, p. 32, and I tied the pollen data to the mollusk data to the formations.

European stage assignments are based on Charlie Smith's work in both the North Carolina and Chatahoochee River sections; again, they are not based directly on the pollen data.

REPORT ON REFERRED FOSSILS

2 X

STRATIGRAPHIC RANGE
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MR-81-3

But let's face it. Regardless of the potential for inaccurate age and formational assignments, what I have provided you is one hell of a lot more than you knew before, and once again illustrates the necessity for well managed, integrated, and interdisciplinary approaches to geologic problem solving. (Bill Sliter made me say that).

Pulaski sample at 638 ft. - assigned to pollen zone A.

Species

- MPC-1
- NP-2
- MPH-2
- N11-8
- NK-4
- N15-31a
- C1-25b

Pulaski sample at 665 ft. - assigned to pollen zone B (questionable).

Species

- N15-27a
- N0-2
- N11-8
- CP3D-3

Pulaski sample at 682 ft. - assigned to pollen zone B.

Species

- CP3E-1
- P1-5
- CP3D-3N20-12
- MPH-1
- NN-1
- N0-2
- N-35
- NN-1a
- NH-1

See

L. Micastrich

MR-81-3

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RATIGRAPHIC RANGE
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CP3-47a
 NO-1
 NA-7

Pulaski sample at 701 ft. - assigned to pollen zone B.

Species

CP3-20
 MPH-1
 NO-2
 NO-3(?)
 CP3E-1
 NP-2
 N15-19
 CP3-112
 CP3-97
 CP3D-3
 NO-2
 NN-1
 N35-1
 N20-12a
 PR-1

Pulaski sample at 740 ft. - assigned to pollen zone C (uppermost Part).

Species

N15-19
 CP3D-3
 NC-1
 NC-2
 CP3-47a
 NN-1
 N7-12
 CP3E-1
 NO-1
 ND-3
 N35-1
 N1-2

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MR-81-3

Pulaski sample at 800 ft. - assigned to pollen zone C (upper or middle).

Species

- N20-2
- N11-7b
- N2-4
- C1-42
- C1-25b
- NN-1
- CP3-117

Pulaski sample at 860 ft. - assigned to pollen zone C (middle part).

Species

- NB-1
- NN-1
- CP3-115

Pulaski sample at 1002 ft. - assigned to pollen zone D. *L. Taylor*

Species

- CP3D-1
- C1-46
- CP3-85
- N6-23
- N6-4
- CP3-108
- CP3E-1
- N9-3

N5-9
N5-4
N6-2
CP3D-1
N5-17
N2-2
CP3E-1
N5-10
N6-15
NB-1
N1-2

Species

Pulaski sample at 1061 ft. - assigned to pollen zone D.

CP3D-1
N7-1
CP3E-1
N20-2
N7-2
CP3-115
C1-46
N13-2
PR-1
N9-3
N9-1
N6-2
C1-43
NB-1
N6-23
CP3-4
NF-1
N-19
N2-7

Species

Pulaski sample at 1040 ft. - assigned to pollen zone D.

STRATIGRAPHIC
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MR-81-3

REPORT ON REFERRED FOSSILS

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STRAATIGRAPHIC RANGE
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MR-81-3

CP3-85
 C1-25b
 N9-3
 NF-1
 N7-1
 N9-1

Pulaski sample at 1080 ft. - assigned to pollen zone D.

Species

N6-2
 N8-1
 CP3D-1
 N9-1
 N20-2
 N13-2
 N5-4
 N5-9
 N7-1
 N7-2
 NE-1
 CP3E-1
 N9-3
 N32-2
 CP3-34
 N6-3
 CP3-77
 N1-2
 C3-9
 N2-2

(continued on WR-81-3a)

REPORT ON REFERRED FOSSILS

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WR-81-3a

(continued from WR-81-3)

Pulaski sample at 1481 ft. - assigned to pollen zone V.

Species

POROCOLPOLENITES spp. (many more species are present, but this one is the key to recognizing the zone. Others will be reported later).

Three other samples were examined, but were barren of palytomorphs. These barren samples came from depths of

1500 ft.
 1302 ft.
 1285 ft.

Ray

 Ray Christopher

REPORT ON REFERRED FOSSILS

1
xx

PULASKI Co.

SHIPMENT NUMBER	REGION	DATE RECEIVED	STATUS OF WORK	DATE REPORTED	REFERRED BY	REPORT PREPARED BY
WR-81-3	Pulaski Co	2/83, 4/83	incomplete	05 03 83	D. Powell and H. Gill	Lucy Edwards

Project--WRD and 9510-02389

Here is the latest news on your 4 additional samples from the Arrowhead core, located just northwest of Ga. rte. 126 along the Pulaski-Bleckley Co. line, lat 32 deg., 22 min., 46 sec. N., long. 83 deg., 29 min., 02 sec. W., Pulaski County, Georgia. Wellhead elevation is 332 feet.

410 feet -- There isn't much in this sample, but it is probably late Paleocene or early Eocene in age. It contains *EOCLADOPYXIS PENICULATA* and *DEFLANDREA DILWYNENSE*.

396 feet -- This sample contains one dinoflagellate specimen and a handful of pollen grains. The dino is *EOCLADOPYXIS SP. 1* which seems to range from the late Paleocene to somewhere in the Eocene.

335 feet -- This is better. The sample is low in the middle Eocene and correlates with the Tallahatta of western Alabama. The flora looks like your Laurens core at 391 feet.

ACHILLEODINUM BIFORMIDES
AREOLIGERA sp.
PENTADINUM FAVATUM
SPINIFERITES sp.
TURBIOSPHAERA sp. (= Drugg's LANOSUM)
METZELIELLA ARTICULATA @

Ludy Edwards

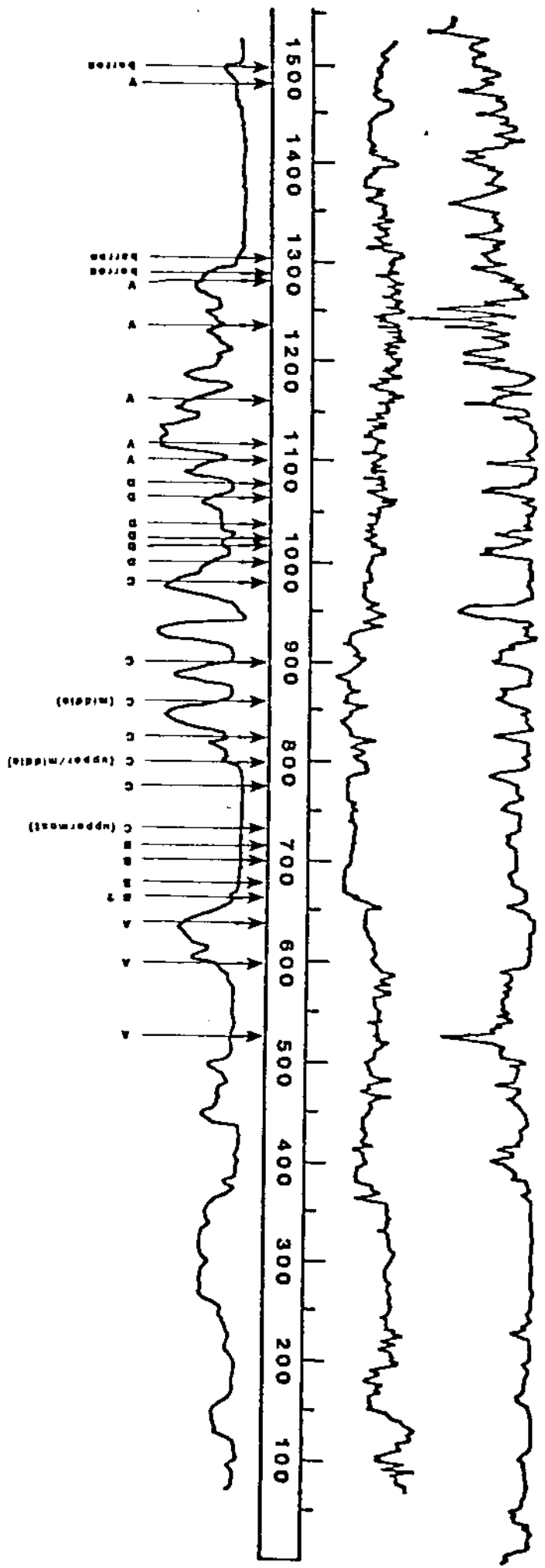
Ludy

HBT

ADNATOSPHERIDIUM sp.
CORDOSPHERIDIUM FIBROSPINOSUM MURATODINIUM FIMBRIATUM
DIPHYES COLLIGERUM
ZEOCLADOPYXIS sp. 1
HEMICYSTODINIUM ZOHARYI
HYSTRICHOLOPOMA RIGAUDIAE
LITTLE DEFLANDREA group sp.
LINGULODINIUM sp. 1
MURATODINIUM FIMBRIATUM
PENTADINIUM FAVATUM
PENTADINIUM GONIFERUM
PHTHANOPERIDIUM COMATUM
SPINIFERITES spp.
WEITZELIELLA ARTICULATA/LUNARIS a

259 feet -- This is middle Eocene. It correlates with the Lisbon. There is only one problem, which you may think is interesting. It contains species which do not overlap in western Alabama. PENTADINIUM FAVATUM there is confined to the Tallahatta and lower Lisbon and PENTADINIUM GONIFERUM is confined to the sellaeformis zone Lisbon. Hence you have two possibilities -- this sample is of an age represented by the Lisbonensis Zone-sellaeformis Zone unconformity, or this sample is right around your elusive contact. Take your pick. The sample contains --

EUROPEAN STAGE		FORMATIONAL EQUIVALENT	
Maestrichtian	Middle	Providence Sand	?
	Lower	Ripley Formation	
Campanian	Upper	Gusseta Sand	
	Lower	Blufftown Formation	
Santonian		Eulaw Formation	



REPORT ON REFERRED FOSSILS

SHIPMENT NUMBER	REGION	DATE RECEIVED	STATUS OF WORK	DATE REPORTED
MR-81-3	Pulaski	5 82	complete	6 3082

STRATIGRAPHIC RANGE
 GENERAL LOCALITY
 QUADRANGLE OR AREA
 KINDS OF FOSSILS
 REFERRED BY
 REPORT PREPARED BY

Lower Eocene
 Georgia
 Westlake 7.5 min. quad.
 Dinoflagellates
 Dave Provell
 Lucy Edwards

Project 9510-02389

Here is what I have found out about the 2 additional samples from the Arrow head core, located just northwest of Ga. Rte. 126 along the Pulaski-Bleckley Co. line, lat. 32 deg., 22 min., 46 sec. N., long. 83 deg., 29 min., 02 sec. W., Pulaski Co., Georgia. The wellhead elevation is 332 feet. The two samples are from 385 and 360 feet. Both are carbonaceous clayey sand.

385 feet -- This is a nice sample. It is clearly early Eocene in age. It is a great match florally with the Potomac Member of the Nanjemoy formation in Virginia and thus should be NP 10/11. It also seems to correlate with Greg Gohn's new Fishburne formation (Clubhouse Crossroads core at 434 ft) and your Midville samples at 510 and 508 ft. By the way, is this sample core or cuttings? The sample contains --

- ADNATOSPHAERIDIUM MULTISPINOSUM
- APECTODINIUM HOMOMORPHUM
- ASCOSTOMOCYSTIS HYDRIA
- CATILLOPSIS ABDITA
- CORDOSPHAERIDIUM FIBROSPINOSUM
- CORDOSPHAERIDIUM cf. C. GRACILE
- CORDOSPHAERIDIUM MULTISPINOSUM
- CYCLOPSIELLA cf. C. VIETA
- DIPHYES COLLIGERUM
- FIBROCYSTA BIPOLARE
- GONYAULACYSTA sp.
- HAFNIASPHAERIDIUM GOODMANII (=SPINIFERITES n. sp.)
- KALLOSPHAERIDIUM BREVIABRATUM
- MURATODINIUM FIMBRIATUM
- OPERCULODINIUM CENTROCARPUM
- SPHTHANOPERIDIUM AMOENUM
- cf. QUADRINA PALLIDA
- RHOMBODINIUM cf. R. GLABRUM
- SPINIFERITES sp.
- TURBIOSSPHAERA MAGNIFICA
- WETZELIELLA/WILSONIDIUM
- WETZELIELLA spp.

360 ft.--This is a second run on this sample. The first time it was barren. This time it had 5 (count 'em) dinoflagellate specimens and fragments. These are CORDOSPHAERIDIUM GRACILE, KISSELLOVIA COLEOTHRYPHA, and WETZELIELLA spp. The WETZELIELLAS still look like early Eocene forms and the KISSELLOVIA suggests an age of NP 12 (or latest NP 11) or younger. I will work on your Midville samples next.

Lucy Edwards
 K.M.D.

REPORT ON REFERRED FOSSILS

1 XX

[Handwritten signature]

STRATIGRAPHIC
GENERAL LOCALITY
QUADRANGLE
OR AREA
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REFERRED BY
REPORT

Paleocene-Eocene

Georgia

Westlake 7.5 min. quad

Dinoflagellates

D. Powell and H. Gill

Lucy Edwards

Project - Water Resources Division

Here is all I know about 7 samples from your Arrowhead core, located just northwest of Ga. rte. 126 along the Pulaski-Bleckley County line, lat. 32.3794 deg. N., long. 83.4838 deg. W., Pulaski Co., Georgia. Wellhead elevation is 332 ft.

458 ft. - Preservation is pretty bad but the assemblage appears to be early Paleocene (Danian, Midwayan) in age.

ADNOTOSPHAERIDIUM sp.
CORDOSPHAERIDIUM FIBROSPINOSUM
DANEA CALIFORNICA
DEFLANDREA MAGNIFICA
DEFLANDREA PULCHRA
DEFLANDREA group sp.
FIBROCYSTA sp.
PALAEOCYSTODINIUM sp.
SENEGALINIUM OBSCURUM
SPINIDINIUM DENSISPINATUM
SPINIFERITES spp.

441 ft. - Age is the same as 608 in your Wrightsville core. This is to say the sample is Midwayan but it could be late in the early Paleocene or early in the late Paleocene and should correlate to NP 3 or NP 4.

ADNOTOSPHAERIDIUM sp.
CORDOSPHAERIDIUM FIBROSPINOSUM
DEFLANDREA cf. D. DIEBELII
sensus Drugg 1967
DEFLANDREA MAGNIFICA
DEFLANDREA N. SP.
PALAEOPERIDIUM PYROPHORUM
SENEGALINIUM OBSCURUM

360 ft. - No dinos, too bad.

300 ft. - Age is earlier half of middle Eocene. This is equivalent in age to the upper Tallahatta or the lower one-third of the Lisbon.

ECOLADOPYXIS N. SP.
GONYAULACYSTA N. SP.
HYSTRICHOLOPOMA RIGAUDIAE
OPERCULODINIUM cf. CENTROCARPUM
PENTADINIUM N. SP. A
WETZELIELLA ARTICULATA
SPINIFERITES PSEUDOFURCATUS
SPINIFERITES sp.
THALASSIPHORA PATULA (=M.
FIMBRIATUM)

REPORT ON REFERRED FOSSILS

MR-81-3

SHIPMENT NUMBER	REGION	DATE RECEIVED	KINDS OF FOSSILS	STRATIGRAPHIC
DATE REPORTED	LOCALITY	STATUS OF WORK	QUADRANGLE OR AREA	GENERAL
BY	LOCALITY	DATE RECEIVED	OR AREA	LOCALITY
REFERRED BY	QUADRANGLE	STATUS OF WORK	QUADRANGLE OR AREA	QUADRANGLE
REPORT PREPARED BY	LOCALITY	DATE RECEIVED	OR AREA	QUADRANGLE

241 ft. - No dinos here either. There is some pollen.
 189 ft. - Age is probably late Eocene. There is not too much to go on.
← CHANGED TO MIDDLE Eocene by Lucy Edwards 2/9/83

AREOSPHERIDIUM ARCUATUM
 MEMBRANOPHORIDIUM ASPINATUM
 PENTADINIUM PLATICINCTUM

102 ft. - Age is late Eocene. This is equivalent to the Eocene part of the Cooper formation in South Carolina. (And strangely enough it looks just like Cooper, right down to the fact that all the dinos look like they were individually smashed with a microhammer.)

BATIACASPHERA COMPTA
 CORDOSPHERIDIUM FUNICULATUM
 HOMOTRYBLIUM PLECTILUM

MEMBRANOPHORIDIUM ASPINATUM
 PENTADINIUM LATIINCTUM

1102-301E S
 5-7-Ca6-M-L
 Top of ...

~~Lucy E. Edwards~~
 New
 ✓

Lucy E. Edwards

1982

I will work on your Midville samples next.

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- ADNATOSPHAERIDIUM MULTISPINOSUM
- APETODINIUM HOMOMORPHUM
- (=SPINIFERITES n. sp.)
- KALLOSPHAERIDIUM BREVIABRABATUM
- MURATODINIUM FIBRARIATUM
- OPERCULODINIUM CENTROCARPUM
- SPHANTANOPERIDIUM AMOENUM
- cf. QUADRINA PALLIDA
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- SPINIFERITES sp.
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Project 9510-02389

Lucy Edwards

Dave Powell

Dinoflagellates

Westlake 2.5 min. quad.

Lower Eocene

REPORT NUMBER: MR-81-3

DATE RECEIVED: 5 82

STATE OF WORK: complete

DATE REPORTED: 6 3082

REPORT

DATE

STATE

DATE

REPORT

NUMBER

Project--WRD and 9510-02389

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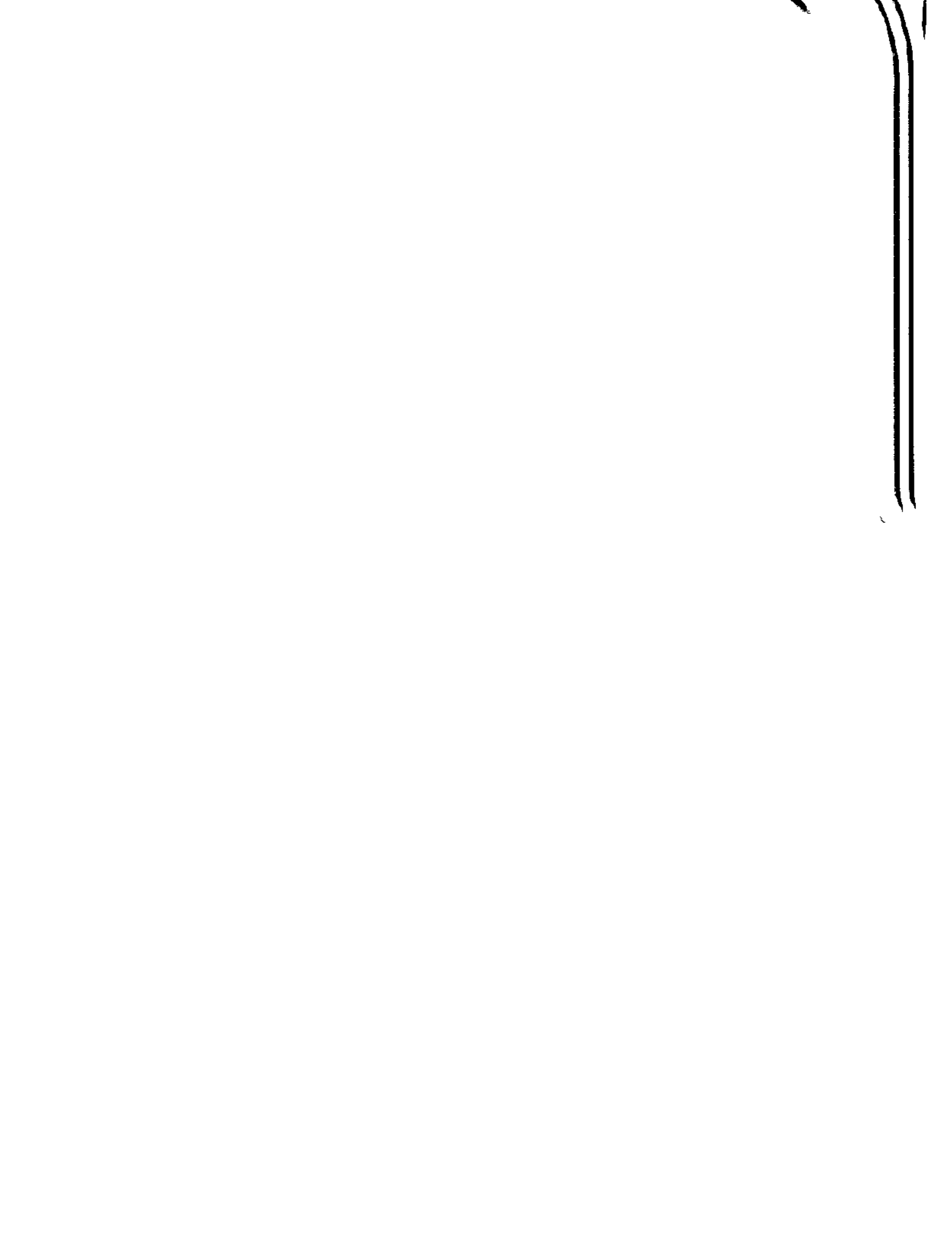
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ACHILLEODINIUM BIFORMIDES
AEOLIGERA sp.
PENTADINIUM FAVATUM
SPINIFERTES sp.
TURBIOSPHAERA sp. (= Drugg's LANOSUM)
MEZZELIELLA ARTICULATA @

SHIPMENT NUMBER	REPORT	DATE RECEIVED	STATUS OF WORK	DATE REPORTED	PREPARED BY
WR-81-3	Pulaski Co	2/83, 4/83	incomplete	05 03 83	Lucy Edwards
	Georgia				D. Prowell and H. Gill
	Paleogene				Dinoflagellates
					Westlake 7.5 min. quad



259 feet -- This is middle Eocene. It correlates with the Lisbon. There is only one problem, which you may think is interesting. It contains species which do not overlap in western Alabama. PENTADINIUM FAVATUM there is confined to the Tallahatta and lower Lisbon and PENTADINIUM GONIFERUM is confined to the sellaeformis Zone Lisbon. Hence you have two possibilities -- this sample is of an age represented by the Lisbonensis Zone-sellaeformis Zone unconformity, or this sample is right around your elusive contact. Take your pick. The sample contains --

- ADNATOSPHAERIDIUM sp. 1
- CORDOSPHAERIDIUM FIBROSPINOSUM FIMBRIATUM
- DIPHYES COLLIGERUM
- TEOCLADOPYXIS sp. 1
- HEMICYSTODINIUM ZOHARYI
- MYSTRICHOXOLPOMA RIGAUDIAE
- little DEFLANDREA group sp.
- LINGULODINIUM sp. 1
- MURATODINIUM FIMBRIATUM
- PENTADINIUM FAVATUM
- PENTADINIUM GONIFERUM
- PHITHANOPERIDIUM COMATUM
- SPINIFERITES spp.
- WETZELIELLA ARTICULATA/LUNARIS @

Ludy Edwards

Ludy

HTH

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 EOLADOPYXIS N. SP.
 GONYAULACYSTA N. SP.
 MYSTRICHOKOLPOMA RIGAUDIAE
 OPERCULODINUM cf. CENTROCARPUM
 PENTADINUM N. SP. A
 SPINIFERITES PSEUDOFURCATUS
 SPINIFERITES sp.
 THALASSIPHORA PATULA (=M.
 FIMBRIATUM)
 WETZELIELLA ARTICULATA

441 ft. - Age is the same as 608 in your Wrightsville core. This is to say the sample is Midwayan but it could be late in the early Paleocene or early in the late Paleocene and should correlate to NP 3 or NP 4.
 ADNATOSPHAERIDIUM sp.
 CORDOSPHAERIDIUM FIBROSPINOSUM
 DEFLANDREA cf. D. DIEBELII
 sensu Drugg 1967
 DEFLANDREA N. SP.
 PALAEOPERIDIUM PYROPHORUM
 SENGALINUM OBSCURUM
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 CORDOSPHAERIDIUM FIBROSPINOSUM
 DANEA CALIFORNICA
 DEFLANDREA MAGNIFICA
 DEFLANDREA PULCHRA
 DEFLANDREA group sp.
 FIBROCYSTA sp.
 PALAEOCYSTODINUM sp.
 SENGALINUM OBSCURUM
 SPINIDINUM DENSISPINATUM
 SPINIFERITES spp.
 Project - Water Resources Division

REPORT NUMBER	DATE RECEIVED	STATUS OF WORK	DATE REPORTED	REPORTED BY
MR-81-3	4/81	Incomplete	5/8/81	Lucy Edwards
				D. Frowell and H. Gill
				Dinoflagellates
				Box no. 7.5 min. quad
				Paleocene-Eocene

~~134~~ _____ Lucy E. Edwards

102 ft. - Age is late Eocene. This is equivalent to the Eocene part of the Cooper formation in South Carolina. (And strangely enough it looks just like Cooper, right down to the fact that all the dinos look like they were individually smashed with a microhammer.)

BATIACASPHERA COMPTA
CORDOSPHERIDIUM FUNICULATUM
HOMOTRYBLIUM PLECTILUM

MEMBRANOPHORIDIUM ASPINATUM
PENTADINIUM LATICINCTUM

189 ft. - Age is probably late Eocene. There is not too much to go on.

AREOSPHERIDIUM ARCUATUM
MEMBRANOPHORIDIUM ASPINATUM
PENTADINIUM PLATICINCTUM

RHOMBODINIUM GLABRUM
SYSTEMATOPHORA sp.

241 ft. - No dinos here either. There is some pollen.

REPORTED
DATE

STATUS
OF WORK

DATE
RECEIVED

NUMBER
118-81-2

MR-81-3
 Pulaski Co.
 DATE RECEIVED 4/81
 STATUS OF WORK Incomplete
 DATE REPORTED 5/8/81

Edwards
 and H. Gill
 quad
 name-Edwards

I know about 7 samples from your Arrowhead Core, located
 northwest of Ga. rte. 126 along the Pulaski-Bleckley County line,
 N. 30.7754 deg. N., Long. 83.4838 deg. W., Pulaski Co., Georgia.
 Their elevation is 332 ft.

The preservation is pretty bad but the assemblage appears to be
 late Paleocene (Danian, Midwayan) in age.

- FIBROCYSTA sp.
- PALAEOCYSTODINUM sp.
- SENEGALINUM OBSCURUM
- SPINIDINUM DENSISPINATUM
- SPINIFERITES spp.
- FLANDRIA group sp.
- FLANDRIA PULCHRA
- FLANDRIA MAGNIFICA
- FLANDRIA CALIFORNICA
- DOSTHAERIDIUM FIBROSPINOSUM
- DOSTHAERIDIUM sp.
- DOSTHAERIDIUM FIBROSPINOSUM

The age is the same as 608 in your Wrightsville core. This is
 to say the sample is Midwayan but it could be late in the early
 Paleocene or early in the late Paleocene and should correlate to NP 3

- DEFLANDREA MAGNIFICA
- DEFLANDREA N. SP.
- PALAEOPERIDINUM PYROPHORUM
- SENEGALINUM OBSCURUM
- ATOPHAERIDIUM sp.
- DOSTHAERIDIUM FIBROSPINOSUM
- DEFLANDREA - cf. DIEBELLI
- 1967

The age is about half of middle Eocene. This is equivalent
 to the upper Tullahoma or the lower one-third of the Lisbon.

- DEFLANDREA MAGNIFICA
- DEFLANDREA N. SP.
- PALAEOPERIDINUM PYROPHORUM
- SENEGALINUM OBSCURUM
- ATOPHAERIDIUM sp.
- DOSTHAERIDIUM FIBROSPINOSUM
- DEFLANDREA - cf. DIEBELLI
- 1967

~~Lucy E. Edwards~~
1964

MEMBRANOPHORIDUM ASPINATUM
 PENTADININUM LATINCINCTUM
 STACAPHAERA COMPTA
 MEMBRANOPHORIDUM FUNICULATUM
 PENTADININUM LATINCINCTUM
 RHOBOBODININUM GLABRUM
 SYSTEMATOPHORA sp.
 MEMBRANOPHORIDUM ASPINATUM
 PENTADININUM LATINCINCTUM
 RHOBOBODININUM GLABRUM
 SYSTEMATOPHORA sp.

Age is late Eocene. This is equivalent to the Eocene of the Cooper formation in South Carolina. (And strangely enough local just like Cooper, right down to the fact that all the dinos are like they were individually smashed with a microhammer.)

Age is probably late Eocene. There is not too much to go on.

No dinos here either. There is some pollen.

SHIPMENT NUMBER
 REGION
 DATE RECEIVED
 STATUS OF WORK
 DATE REPORTED

WR-81-3

[Handwritten signature]

We need paleontological analysis of the samples from the Pulaski drill hole to help correlate eastern and western Georgia Coastal Plain sections.

State (Name of State), Information (Agency, etc.)

SYSTEM(S) AND STAGES	DOMINANT BIOLOGIC GROUP(S)

U.S. GEOLOGICAL SURVEY

Pulaski + sample depth	FIELD LOCALITY NUMBER(S)
LITHOLOGIC UNIT(S)	SECTION

<p>Samples are from a WFD test well (Arrowhead Well) located just northwest of State R. 126 along the Pulaski-Eleckley Co. boundary line. Well hole collar elevation is 530', above sea level.</p>	<p>SECTION</p>
<p>WESTBROOK</p>	<p>WELL DEPTH</p>
<p>32° 22' 46" N 88° 29' 02" W</p>	<p>COORDINATES</p>
<p>438</p>	<p>WELL NO.</p>

<p>WESTBROOK 7.5'</p>	<p>WELL DEPTH</p>
<p>WELL NO.</p>	<p>WELL DEPTH</p>

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<p>WELL NO.</p>	<p>WELL DEPTH</p>
<p>WELL NO.</p>	<p>WELL DEPTH</p>

1-14

1-14

1-14

1500 ft.
1302 ft.
1285 ft.

Three other samples were examined, but were barren of palynomorphs. These barren samples came from depths of

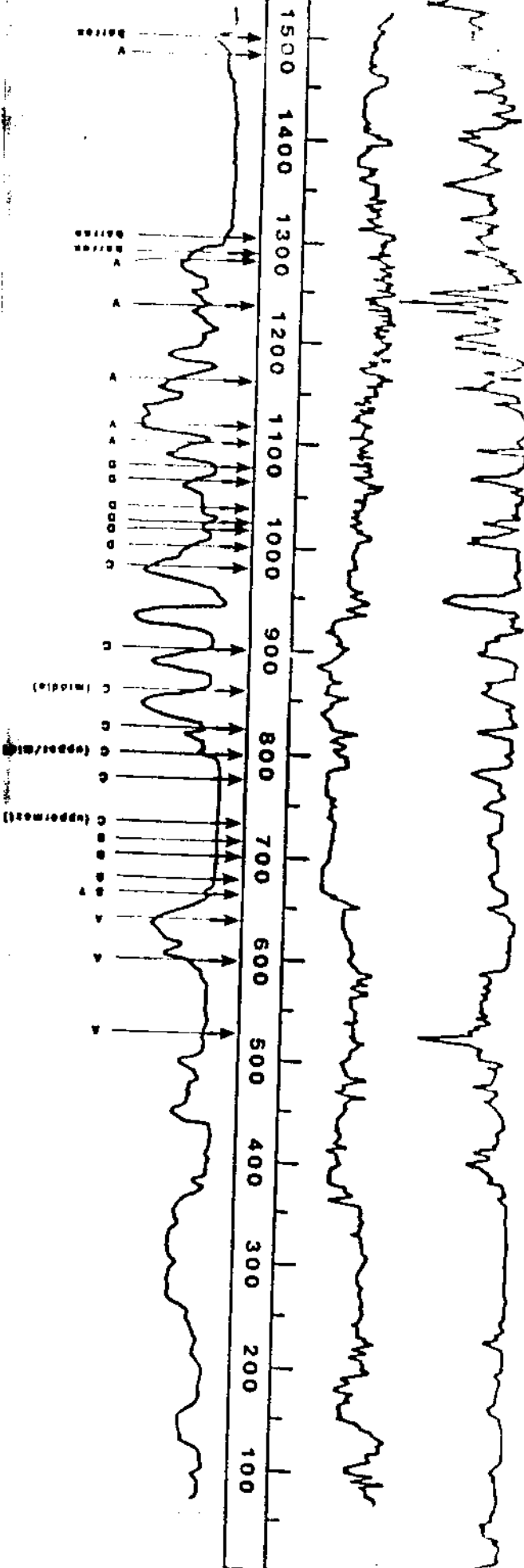
FORCOLPOLLENITES spp. (many more species are present, but this one is the key to recognizing the zone. Others will be reported later).

Species

sample at 1481 ft. - assigned to pollen zone V.

(included from WR-81-3)

SHIPMENT NUMBER	REGION	DATE RECEIVED	STATUS OF WORK	DATE REPORTED	REPORTED BY	EXAMINED BY
WR-81-3a						



FORMER STAGE	CAMPANIAN		DEONTIAN
	Upper	Lower	
MASTURCHIAN	Middle	Lower	Blufftown Formation
	?	?	
	?	?	
FORMATIONAL EQUIVALENT	Providence Sand	Ripley Formation	Cusseta Sand
	?	?	