

Report on small Foraminifera from well No. 7, Albany, Ga.

By J. A. Cushman

Although I have made notes on each sample, most of them are probably of little value. The upper part seems to be Jackson Eocene in age. From 464' down to 830' the age seems to be probably Claiborne or Wilcox, but there is nothing distinctive in the few specimens. At 830' - 840' there is a distinct change, and the presence of Gumbelina and Globotruncana would seem to indicate Cretaceous rather than Tertiary. At 940'-950' the large "Palymorphina"-like form might be cushmani, which would indicate Midway, or cayleri, which would indicate Navarro. It is not well preserved as to surface details, however. At 1000'-1010' the fauna is decidedly suggestive of Cretaceous and just below is distinctively Navarro. The fauna of those parts called Claiborne? Wilcox? and Midway? do not seem to have the same things as in the other long well (Parris Island, S.C.) already reported on.

If it is worth while, perhaps an examination of the original material from 830'-850' and below would reveal something more definite in the smaller species to fix the Tertiary or Cretaceous age of this part of the section. (Reexamination of these samples made no change.)

September 1, 1945

Memorandum to M. A. Warren, Water Resources

Through Doctor Reeside and the Chief Geologist.

Re the larger Foraminifera in the Albany No. 7 well
for water, Dougherty County, Ga.

The three samples that represent depths 42 to 51 and 57 to 60 feet, contain fragments of lepidocyclinids and a few operculinids. I would not like to make an age determination on these particular specimens closer than Oligocene or upper Eocene.

A fauna that indicates Ocala, Eocene age, characterizes 12 out of the 19 samples from 60 to 118 feet depth. The material in the other 7 samples within those depths is indeterminable. This fauna includes Operculinoides willcoxi (Heilprin), S. floridensis (Heilprin), O. vauhani, (Cushman) Heterostegina ocalana Cushman, Lepidocyclina (Lepidocyclina) sp., L. (L.) ocalana Cushman, L. (L.) murtoni? Cushman and Gypsina sp., besides other species.

Though the three samples from 118 to 127 feet depth resemble those above the material in two samples is too poor for an age determination, and the species in the other will require an investigation (that I cannot make at this time) to decide whether it is significant or not.

The specimens in the remaining samples below are generally poorly preserved and limited in variety. I have had several sections made but am not satisfied with the identifications. The samples from 134 to 155 feet depth seem to be upper Eocene, but those from 161 to 176, and from 185 to 194 feet are certainly determinable as upper Eocene. In Sample 186 to 191 feet a fragment of Operculinoides vauhani? Cushman was found which would indicate Ocala age, but the specimen may have come from a higher horizon.

The samples representing depths 221 to 224, 227 to 230, 239 to 245, 248 to 251, and 262 to 266, may be middle Eocene, but the evidence is very uncertain.

(signed) Lloyd G. Henbest.

Albany well No. 7, Dougherty County, SW Georgia.

Lot No.	Depth in feet	
1824	27-30	Coarse brownish quartz grit and white limestone. Few fragments of mollusks and bryozoans.
25	30-33	Like last, but finer. Very few fossils of any kind seen.
26	33-36	Coarse brownish quartz grit; very little limestone. No fossils seen.
27	36-39	Equal parts quartz, grit, and white limestone. A very few small foraminifers.
28	39-42	Like 1826. No fossils seen.
29	42-48	Creamy-white granular limestone, with minor admixture of brown coarse quartz sand. A few fragments of mollusks and orbitoids.
30	48-51	Like 1829. A few bryozoans; fragments of orbitoids.
31	51-54	Like 1829, but sand is finer and more abundant. Very few fossils of any kind.
32	54-57	Like 1829. Very few fossils of any kind.
33	57-60	Like 1829. Fragments of mollusks, bryozoans, echinoids, and orbitoids.
34	60-63	Like 1829 with very little sand. Fragments of mollusks and orbitoids.
35	63-66	Like 1834. Fragments of orbitoids.
36	66-68	Like 1834. A few fragments of mollusks, echinoids, bryozoans, and orbitoids.
37	68-70	Like 1834. A few fragments of mollusks, bryozoans, and orbitoids.
38	70-72	Like 1829. A few fragments of orbitoids.
39	72-74	Like 1829. Fragments of bryozoa and orbitoids, <i>Terebratulina</i> sp.
40	74-76	Like 1829. Fragments of mollusks, bryozoans, and orbitoids.
41	76-78	Like 1829. Fragments of mollusks, bryozoans, and orbitoids.
42	78-80	Like 1829. Fragments of mollusks and orbitoids.
43	80-82	Like 1829. Fragments of mollusks, bryozoans, and orbitoids.
44	82-84	Like 1829. Fragments of mollusks, bryozoans, and orbitoids.
45	84-86	Like 1829. Fragments of mollusks, bryozoans, and orbitoids.
46	86-88A	Like 1829. Fragments of mollusks, bryozoans, and orbitoids.
47	86-88B	Like 1829. Fragments of mollusks, bryozoans, and orbitoids.
48	88-91	Like 1829. Fragments of mollusks, bryozoans, and orbitoids.
49	91-94	Like 1829. Fragments of mollusks, bryozoans, and orbitoids.
50	94-97	Like 1829. Fragments of mollusks, bryozoans, and orbitoids.
51	97-112	Like 1829. Fragments of mollusks, bryozoans, and orbitoids.
52	112-115	Like 1829. Fragments of mollusks, bryozoans, and orbitoids.
53	115-118	Like 1829, but with very little sand. Fragments of mollusks, bryozoans, echinoids, crinoids and orbitoids.
54	118-121	Like 1853. Fragments of mollusks, bryozoans, echinoids, and orbitoids.
55	121-124	Like 1853. Fragments of mollusks, bryozoans, echinoids, and orbitoids.
56	124-127	Like 1853, but rather brownish. Fragments of mollusks, bryozoans, and orbitoids.
57	128	Mixture of dark shale and gray-white limestone. No fossils seen.
58	128-131	Sample largely iron-stained quartz grains, with minor amount of reddish limestone. Very few fossils of any kind.
59	131-134	Like 1856. Very few fragments of fossils seen.
60	134-137	Like 1856. Very few fragments of fossils seen. A few fragments of orbitoids.
61	137-140	Like 1856. Fragments of mollusks and orbitoids.
62	140-143	Like 1856. A few fragments of mollusks and orbitoids.
63	143-146	Like 1856. A few fragments of mollusks, echinoids, and orbitoids. A few small foraminifers.

Lot No.	Depth in feet	
1864	146-149	Like 1856. A few fragments of mollusks, echinoids, and orbitoids. A few small foraminifers seen but not picked out.
65	149-152	Like 1856. A few fragments of mollusks, echinoids, bryozoa, and orbitoids. A few small foraminifers.
66	152-155	Like 1856. A few fragments of mollusks, echinoids, and orbitoids. A very few small foraminifers seen but not picked out.
67	155-158	Like 1856. Very few fossils of any kind seen.
68	158-161	Like 1856. A few fragments of mollusks and crinoids. A few small foraminifers..
69	161-164	Like 1856. A few fragments of mollusks, echinoids, and orbitoids. A few small foraminifers seen, none picked out.
80	164-167	Like 1856. Fragments of mollusks, echinoids, crinoids, bryozoans, and orbitoids. A very few small foraminifers.
71	167-170	Like 1856. Fragments of mollusks, bryozoans, and orbitoids. A few small foraminifers.
72	170-173	Like 1856. Fragments of mollusks. A few small foraminifers seen, but not picked out.
73	173-176	Like 1856. A few fragments of mollusks and orbitoids. A few small foraminifers.
74	176-179	Like 1856. Fragments of mollusks, bryozoans, crinoids, echinoids. A very few small foraminifers.
74B	179-182	Like 1856, but more brownish quartz sand than limestone. Very few fragments of fossils of any kind.
75	182-185	Like 1874B. Very few fossils of any kind.
76	185-188	Like 1856. A few fragments of mollusks and orbitoids. A very few small foraminifers.
77	188-191	Like 1856. A few fragments of mollusks and orbitoids. A very few small foraminifers.
78	191-194	Like 1874B. A few fragments of mollusks, echinoids, orbitoids.
79	194-197	Like 1874B. Few fossils of any kind.
80	197-200	Like 1874B. A few fragments of mollusks, echinoids, orbitoids.
81	200-203	Like 1874B. A few fragments of bryozoans and echinoids.
82	203-206	Like 1856, but limestone is grayer and more earthy. A few fragments of mollusks and bryozoans.
83	206-209	Like 1882. A few fragments of mollusks and bryozoans. A very few small foraminifers.
84	209-212	Like 1882. A few fragments of mollusks. A few small foraminifers.
85	212-215	Like 1882. Fragments of mollusks, bryozoans, echinoids, crustaceans. A few small foraminifers.
86	215-218	Like 1882. Fragments of mollusks, bryozoans, echinoids, ophiurans, and asteroids. <u>Terebratulina</u> . A few small foraminifers.
87	218-221	Like 1882. Fragments of mollusks, bryozoans, echinoids. A few small foraminifers.
88	221-224	Like 1874B. Fragments of mollusks, bryozoans, echinoids, orbitoids,. A few small foraminifers.
89	224-227	Like 1874B. A few fragments of mollusks and bryozoans. A few small foraminifers seen, none picked out.
90	227-230	Like 1882. A few fragments of mollusks, bryozoans, orbitoids. A few small foraminifers.
91	230-236	Like 1882. Fragments of mollusks and bryozoans. A few small foraminifers.
92	236-239	Like 1882. Fragments of mollusks and bryozoans. A few small foraminifers.
93	239-242	Like 1882. Fragments of mollusks and bryozoans. One orbitoid. A few small foraminifers.

Lot No.	Depth in feet	
1894	242-245	Like 1874B. Fragments of mollusks, bryozoans, orbitoids. A few small foraminifers.
95	245-248	Like 1882. Fragments of mollusks, bryozoans, echinoids. A few small foraminifers.
96	248-251	Like 1882. Fragments of mollusks, bryozoans, <u>Terebratulina</u> sp. A few small foraminifers.
97	251-254	Light gray sandy limestone and sandstone with limestone cement; little brownish free sand. A few fragments of echinoderms, and bryozoans. A few small foraminifers.
98	254-257	Like 1897, with some glauconite grains. Very few fragments of macrofossils. A few small foraminifers.
99	257-260	Like 1897, with some glauconite grains. A few fragments of mollusks, bryozoans, echinoids. A very few small foraminifers.
1900	260-263	Like 1897. A few fragments of mollusks, bryozoans, echinoids. Almost no small foraminifers seen.
1	263-266	Like 1897. A few fragments of mollusks, bryozoans, echinoids. Orbitoids? A few small foraminifers.
2	266-269	Like 1897. A few fragments of mollusks, bryozoans, echinoids. Almost no small foraminifers seen.
3	269-272	Like 1897. A few fragments of mollusks, bryozoans, echinoids. Almost no small foraminifers seen.
4	272-275	Like 1897, with considerable colorless quartz sand. Fragments of mollusks, echinoids, <u>Myliobatis</u> . Almost no small foraminifers seen.
5	275-278	Like 1897. Fragments of mollusks and bryozoans. A very few small foraminifers.
6	278-281	Like 1897. Fragments of mollusks. <u>Ostrea</u> sp. Almost no foraminifers seen.
7	281-284	Like 1897, with some brown sand. Fragments of mollusks and bryozoans.
8	284-287	Like 1897, with some brown sand. Fragments of mollusks and bryozoans.
9	287-290	Like 1897, with some brown sand. Fragments of mollusks and bryozoans. A few small foraminifers.
10	290-293	Light-gray calcareous midstone and sandy limestone; almost no quartz sand. Fragments of ostreid shell. A very few small foraminifers.
11	293-296	Like 1910. No larger fossils seen. Almost no small foraminifers seen.
12	296-299	Like 1907. Fragments of ostreid shell. No other fossils seen.
13	299-302	Like 1907. Fragments of mollusks, bryozoans; <u>Terebratulina</u> , chiton plate. A very few small foraminifers.
14	302-305	Like 1907. A few fragments of mollusks and echinoids. A few small foraminifers.
15	305-308	Brownish, hard limestone and much coarse water-white quartz sand. Fragments of mollusks and bryozoans.
16	308-311	Like 1915. Fragments of mollusks and bryozoans. A very few small foraminifers.
17	311-314	Like 1915, with some glauconitic limestone. Fragments of mollusks and bryozoans.
18	314-317	Like 1915, with some glauconitic limestone. Fragments of mollusks and bryozoans. A few small foraminifers.
19	317-320	Like 1915. Fragments of mollusks and bryozoans; <u>Ostrea</u> . A very few small foraminifers.
20	320-323	Like 1915. Fragments of mollusks and bryozoans. Almost no small foraminifers seen.

Lot No.	Depth in feet	
1921	323-326	Like 1915, with some glauconitic limestone. Fragments of mollusks and bryozoans; <u>Ostrea</u> , <u>Serpula</u> . Almost no small foraminifers seen.
22	326-329	Like 1915. Fragments of mollusks and bryozoans; <u>Ostrea</u> , <u>Pecten</u> . Almost no small foraminifers seen.
23	329-332	Like 1915. Fragments of mollusks and bryozoans.
24	332-335	Like 1915. Fragments of mollusks and bryozoans.
25	335-338	Like 1915. Fragments of mollusks and bryozoans.
26	338-340	Like 1915. Fragments of mollusks and bryozoans.
	core	
27	340-355	Very hard gray fine-grained sandstone with calcareous cement. <u>Serpula</u> . Sp.
	core	
28	355-376	Medium-gray silt containing fine water-white quartz sand. A few very small, poorly preserved foraminifers seen; none picked out.
	Core	
29	376-376	Light-gray hard siltstone. No fossils seen.
	Cuttings	
30	376-418	Brownish-gray clay with containation of limestone and quartz grit. No fossils seen.
	core	
31	376-418	Light-gray silt, like 1929, but with some hard masses. No fossils seen.
	top core	
32	418-464	Light-gray sandstone, hard, with calcareous cement. No fossils seen.
	middle core	
33	418-464	Like 1932. No fossils seen.
	bottom core	
34	418-464	Coarse ferruginous brown silt containing quartz pebbles up to 6 mm and mud pellets. No fossils seen.
	cuttings	
35	460-470	Conglomerate of quartz containing shark teeth and phosphate(?); pebbles up to 6 mm. No invertebrates seen.
	top core	
36	464-487	Dark-gray calcareous silt, hard, glauconitic, filled with fragments of mollusks.
	middle core	
37	464-487	Like 1936.
	bottom core	
38	464-487	Medium-gray fine micaceous silt. A few ostracodes. A very few small foraminifers.

Lot No.	Depth in feet	
	cuttings	
1939	470-480	Like 1935. Shark teeth only fossils seen.
	cuttings	
40	480-490	Like 1935. Shark teeth only fossils seen.
	top core	
41	487-510	Like 1938. A few ostracodes; a few very small foraminifers, not picked out.
	bottom core	
42	487-510	Like 1938. A small fauna of very small foraminifers. A few ostracodes.
	cuttings	
43	490-500	Like 1935. Shark teeth only fossils seen.
44	500-510	Medium-gray silt like 1938, contaminated with various rocks from above. A few small foraminifers seen; none picked out.
45	510-520	Like 1944. No fossils seen.
46	520-530	Like 1944, with much glauconite. No fossils seen; none picked out.
47	530-537	Like 1944, with pyrite and glauconite. A very few small foraminifers seen; none picked out.
48	537-560	Like 1935. Shark teeth only fossils seen.
49	560-580	Like 1946. A few small foraminifers.
50	510-575	Like 1946. A very few small foraminifers.
51	575-591	Clean medium-gray fine silt. No fossils seen.
52	575-610	Like 1946. Almost no small foraminifers seen; none picked out.
53	610-620	Mostly medium-gray fine glauconitic silt, with small contamination. No fossils seen.
54	620-630	Like 1953. No fossils seen.
55	630-640	Like 1953; some pyrite. No fossils seen.
56	640-650	Like 1953; some pyrite. A very few small foraminifers.
57	650-660	Like 1953. A very few small foraminifers.
58	660-670	Like 1953; some pyrite. Two small foraminifers.
59	670-680	Like 1953; a few small foraminifers.
60	680-690	Sample large gray-white fine-grained limestone; a little quartz. A few fragments of mollusks and bryozoans.
61	690-700	Like 1960. Fragments of mollusks and bryozoans. A few small foraminifers.
62	700-710	Like 1960. Fragments of mollusks and bryozoans. Almost no small foraminifers seen.
63	710-720	Like 1960. Fragments of mollusks and bryozoans. A few small foraminifers.
64	720-730	Like 1960. Fragments of mollusks.
65	730-740	Like 1960. Fragments of mollusks, bryozoans, <u>Serpula</u> .
66	740-750	Like 1960. Fragments of mollusks, bryozoans, <u>Serpula</u> .
67	750-760	Like 1960. Fragments of mollusks, bryozoans, <u>Serpula</u> .
68	760-770	Like 1960. Fragments of mollusks, bryozoans, <u>Serpula</u> .
69	770-780	Like 1960. Fragments of mollusks, bryozoans.
70	780-790	Like 1960. Fragments of mollusks, bryozoans, <u>Serpula</u> .
71	790-800	White sandy limestone - sand coarse. Fragments of mollusks, bryozoans, <u>Serpula</u> .

Lot No.	Depth in feet	
1972	800-810	Sample largely water-white quartz sand, with a little white sandy limestone. Fragments of echinoids. A few small foraminifers.
73	810-820	Like 1972. Fragments of echinoids. A few small foraminifers.
74	820-830	Sample half light-gray sandy limestone and half white quartz. No macrofossils. A few small foraminifers.
75	830-840	Like 1974. No macrofossils seen. A few small foraminifers.
76	840-850	Sample medium-gray silt, with a little white limestone (contamination). No macrofossils seen. Fair fauna of small foraminifers.
77	850-860	Like 1976. A few fragments of <u>Ostrea</u> and echinoid spines. Fair fauna of small foraminifers.
78	860-870	Almost clean sample gray-white fine-grained limestone. A few fragments of mollusks and crinoids.
79	870-880	Like 1978, with some sandy limestone. A few fragments of mollusks, echinoids, crinoids.
80	880-890	Like 1978, with some water-white quartz sand. A few fragments of mollusks. Almost no small foraminifers.
81	890-900	Like 1980. A few fragments of mollusks and echinoids.
82	900-910	Sample half gray-white sandy limestone, half water-white quartz sand. A few fragments of mollusks.
83	910-920	Like 1982. A few fragments of mollusks and echinoids.
84	920-930	Like 1982. A few fragments of mollusks and echinoids.
85	930-940	Like 1982. A few fragments of mollusks and echinoids.
86	940-950	Like 1982, with perhaps more sand. A few fragments of mollusks and echinoids. A very few small foraminifers.
87	950-960	Like 1986. A few fragments of mollusks and echinoids.
88	960-970	Sample mostly loose water-white quartz sand, with a little white limestone. No fossils seen.
89	970-980	Like 1982. A few fragments of mollusks and echinoids. A very few small foraminifers.
90	980-990	Like 1986. A few fragments of mollusks. One orbitoid. A very few small foraminifers.
91	990-1000	Like 1988. A few fragments of mollusks. A few small foraminifers.
92	1000-1010	Like 1988. A few fragments of mollusks. Small fauna of small foraminifers.
93	1010-1020	Like 1988. A few fragments of mollusks and echinoids. Small fauna of small foraminifers.
94	1020-1030	Like 1988. Fragments of mollusks and echinoids. Small fauna of small foraminifers.
95	1030-1040	Like 1988, with much mica. Fragments of <u>Ostrea</u> . Fair fauna of small foraminifers.
96	1040-1050	Like 1995. Almost no macrofossils seen. Fair fauna of small foraminifers.
97	1050	Sample a medium-gray fine micaceous silt. No macrofossils seen. Fair fauna of small foraminifers.
98	1050-1100	Like 1897. No macrofossils seen. Small fauna of small foraminifers.
	Core	
99	1100-1110	Like 1897. No macrofossils seen. Small fauna of small foraminifers.
	core	
2000	1110-1120	Like 1897. No macrofossils seen. Small fauna of small foraminifers.

Lot No.	Depth in feet	
	core	
2001	1120-1130	Like 1897. No macrofossils seen. Small fauna of small foraminifers
	core	
2	1130-1140	Like 1897. No macrofossils seen. Fair fauna of small foraminifers.
	core	
3	1140-1150	Like 1897. No macrofossils seen. Small fauna of small foraminifers
	core	
4	1150-1160	Like 1897. No macrofossils seen. Good fauna of small foraminifers.
	core	
5	1160-1170	Like 1897. No macrofossils seen. Good fauna of small foraminifers.
	core	
6	1170-1180	Like 1897. No macrofossils seen. Small fauna of small foraminifers
	core	
7	1180-1200	Like 1897. No macrofossils seen. Fair fauna of small foraminifers.