



PETROLEUM AND ITS PRODUCTS

# GULF OIL CORPORATION

NEW YORK EXPLORATION DIVISION

17 BATTERY PLACE · NEW YORK 4, N.Y.

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DIVISION MANAGER

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ADDRESS ALL CORRESPONDENCE IN CARE OF  
P. O. BOX 35, BOWLING GREEN STATION  
NEW YORK 4, N. Y.

Dr. H. B. Stenzel  
3726 Colquitt Street  
Houston, Texas

Dear Dr. Stenzel:

This past weekend I found time to look over our mollusk collection. I am enclosing a list of all the oysters in the collection as I interpret their labels. I will be glad to send you all or any of these species. There is no rush about returning them, if ever. As you can see, three of the species, viz. Ostrea bellovacina Lamarck, O. cubitus Deshayes and O. angusta Deshayes, are ones you requested. Unfortunately, however, none appear to be from the desired localities. The O. bellovacina has no age or locality given, and it is labelled as such only on a piece of newspaper. All others are provided with good original labels in French giving the name, age and locality.

I also came across a pelecypod with much matrix containing small gastropods labelled Thersitea contortus DeFrance--Thanetien--Butte de la Justice, Bracheux, Oise. I recall your telling me about this locality, and I mention it here on the possibility that this was the locality where you were not able to find a certain fossil. Perhaps, you were referring to another locality or some oyster; I don't remember. Nevertheless, if you are interested in it I will send it along with the others.

Last week I received a circular from the newly-formed Atlantic Coastal Plain Geological Association. They have organized a field trip for the weekend of October 8-9th, and the itinerary seems to be excellent. You have probably already received their notice, but in case you didn't I am enclosing a copy of it. It would be good if you could come along on this trip, but if you can't I would like to offer to try to make any collections for you that you may have in mind. So, please let me know by Friday, October 7th.

I became curious about Barker's having noticed Vaginulina robusta Plummer (non Berthelin & Chapman, 1894, nec Galloway & Wissler, 1927), now properly called Vaginulinopsis midwayana (Fox & Ross), in the type Littig, so I investigated the possibility of there being very similar forms in the upper Navarro which may have become redeposited in the Littig. There are at least two Navarro forms that seem to be good prospects for being confounded with V. midwayana and also occurring in a stratigraphic position susceptible to this possibility. In other words, they are suspects because they are not only morphologically similar to V. midwayana but also because they occur in situ high in the Navarro. They are (1) Vaginulina cretacea Plummer, the type locality of which is about five feet below the basal Midway on Walker Creek in Milam County, and Cushman (1946, p. 80) reports it from high in the Navarro from Webberville; and (2) Marginulina plummerae Cushman which should be referred also to Vaginulinopsis, and which Mrs. Plummer (1931, p. 146, pl. 10, figs. 1-4) called Hemicristellaria ensis (Reuss), is even more similar to V. midwayana. Cushman (idem, p. 63) records it from the Kemp clay in Travis County (226-T-20), and Mrs. Plummer (1931, p. 147, pl. X, figs. 2-4) illustrates it from the uppermost Navarro "to show development and slight variations.", (165-T-4). This last locality is also the type locality for her Vaginulina cretacea. In fact, these two Navarro forms may be simply variants of the same species.

In any case, all three forms are laterally compressed and have a slightly to moderately coiled beginning. To distinguish the Navarro forms from the Midway species, the sutures are the most diagnostic character. Mrs. Plummer (1927, p. 172, pl. II, fig. 8), speaking of V. cretacea, notes that, "This form frequent in Navarro clay in Texas is distinguished from the type of the species [meaning V. gracilis Plummer, a Midway species and presumably ancestral to V. midwayana] in the basal Midway strata by its thickened sutural nodes." This means that the broad sides of the compressed test of V. cretacea exhibit a thickening of the sutures, which is her "thickened nodes." Strictly speaking, I would not refer to this thickened part of the suture as nodes because they are broad and there is only one, each on the broad sides of the test. When one speaks of nodes I visualize, perhaps wrongly, a series of bumps, but in this form it is a matter of a single broad "whelp" on each of the broad sides of the test. This type of sutural limbation is also found in the other Navarro form, V. plummerae [= Hemicristellaria ensis (Reuss)], as well as some others, but I wish to point out further that Mrs. Plummer (1931, p. 147, pl. X, fig. 1) in discussing the variability of this species, illustrates and recognizes a specimen of this species "where the sutural thickenings are weakly developed." On the other hand, the indigenous Midway species, V. midwayana exhibits a series of beads along and completely around each suture except for some specimens in which the sutures may be depressed between the last few chambers. (cf. Plummer, 1927, pp. 112-113).

\* Cushman (1951, p. 28) also records this species from two localities low in the Midway: (1) Clayton formation, Cholybest limestone member (loc. 9), and (2) Midway formation, part (loc. 20).

I believe that Barker is a very fine micropaleontologist and quite capable of recognizing these subtleties, but if his work with vaginulines has been mostly limited to Midway vaginulines, then it would seem that he may have overlooked the fact that very similar Navarro vaginulines may have been redeposited and mistaken for certain Midway vaginulines. Of course, I don't know that this is so; and Barker may well know more about all these forms than I ever thought about knowing. Nevertheless, it won't hurt to call your attention to this possibility. Because I have much faith in Mrs. Plummer's observations, and because I would be disappointed if some sort of a gradual morphologic change in a Midway lineage of one thing or another could not be worked out and see a good bet go down the drain, I suggest that these forams be looked at again, taking into consideration ~~with~~ what I have had to say here.

Unfortunately, I did not have an opportunity to visit the type ~~Littig~~ when I returned to Austin. But I still have a carbontet-separation of some of Mrs. Plummer's material from there, and when I get around to looking at it, I will let you know what I have found that may be of significance. Of course, in the meantime, I would welcome some Littig material from you or more specifically specimens of the so-called Littig V. midwayana.

I always enjoy seeing you and talking to you, and I only wish that last time I had more time. Thanks again for the Marliere and Meijer references; they will be useful to me after I have digested them.

Best regards,



Noel K. Brown, Jr.

#### References

- Cushman, J. A. (1946) Upper Cretaceous Foraminifera of the Gulf Coastal Region: U. S. Geol. Survey, Prof. Paper 206.  
\_\_\_\_\_ (1951) Paleocene Foraminifera of the Gulf Coastal Region of the United States and Adjacent Areas: *ibid.*, Prof. Paper 232.  
Plummer, H. J. (1927) Foraminifera of the Midway formation in Texas: Univ. Texas, Bull. 2644 (1926).  
\_\_\_\_\_ (1931) Some Cretaceous Foraminifera in Texas: *ibid.*, Bull. 3101.

*Ostrea cucullaris* Lmk. --- Bart. --- Auvers.  
*O. subplana* d'Orb. --- Bart. --- Auvers.  
*O. hybrida* Desh. --- Bart. --- Auvers.  
*O. dorsata* Desh. --- Bart. --- Auvers.  
*O. cubitus* Desh. --- Bart. --- Auvers.  
*O. gryphina* Desh. --- Bart. --- Auvers.  
*O. gryphina* Desh. --- Bart. --- Verville.  
*O. defrancei* Desh. --- Bart. --- Bonqueval. . .  
*O. plicata* Sol. [Solander] --- Bart. --- Auvers.  
*O. plicata* Sol. --- Lut. --- Chammon [?]  
*O. profunda* Desh. --- Lut. --- Chammont  
*O. elegans* Desh. --- Lut. --- Chammont  
*O. elegans* Desh. --- Lut. moy. --- Throuville. . .  
*O. submissa* Desh. --- Cuis. --- Herouval [?]  
*O. angusta* Desh. --- Cuise --- Cuise. . .  
*O. multicosata* Desh. --- Cuise --- Cuise  
*O. sp.* --- Sparn. --- Tourcy  
*O. sp.* --- Bart. --- Auvers.  
*O. bellovacina* Lmk. ---