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HOUSTON, TEXAS

CABLE ADDRESS SHELPETCO ST. LOUIS

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Dr. H. B. Stenzel  
Bureau of Economic Geology  
University of Texas  
Austin, Texas

Dear Dr. Stenzel:

The following is all the evidence I think of on the age of Neocardioceras septem-seriatim (Cragin):

- I have notes from Dr. J. B. Reeside on the section in southeast Colorado as follows:

Carlile (Upper):	)	
<u>Alectryonia lugubris</u>	)	Fauna of Beds
<u>Prionotropis hyatti</u>	)	2-8 at Chispa
<u>Prionocyclus</u>	)	Summit, all or
<u>Scaphites warreni</u> (?)	)	part
	)	(See below)
Carlile (Lower):	)	
<u>Prionotropis woollgari</u>	)	
cf. <u>Puzosia</u>	)	
<u>Scaphites larvaeformis</u>	)	
Greenhorn (= ?Salmurian, WSA)	)	
<u>Thomasites</u> sp.	)	
" <u>Acanthoceras kanabense</u> " (= <u>Neocardio-</u>	)	Fauna of
<u>ceras septem-seriatim</u> WSA)	)	Chispa
" <u>Acanthoceras</u> " <u>coloradense</u> = new genus	)	Summit
<u>Helicoceras</u> ( <u>Allocrioceras</u> WSA) <u>pariense</u> )	)	Bed la
<u>Metioceras whitei</u>	)	
Upper Graneros	)	
<u>Metioceras whitei</u>	)	
<u>Inoceramus labiatus</u>	)	
Lower Graneros (?Cenomanian, Tarrant	)	
fm WSA)	)	Not lo-
<u>Acanthoceras rotomagense</u>	)	cated at
<u>Mammites</u>	)	Chispa
<u>Engonoceratid</u> (truncate venter)	)	Summit
<u>Turrilitid</u> sp.	)	

I certainly would not claim that the Greenhorn is Cenomanian, without better evidence.

2. See University of Texas Bulletin 3232, p. 437:

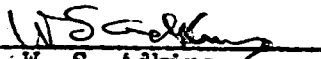
As I now see it, although it may be true, there is insufficient evidence for the sentence "Zone 1a is interpreted as Upper Cenomanian", for the reason that in central Texas only the Tarrant flags (Acanthoceras spp., Scaphites aequalis, Turrilites costatus, etc.) are definitely alleged to be Upper Cenomanian, although there may be still more Cenomanian as yet undetected in the post-Tarrant or post-flaggy limestone portion of the lower Eagle Ford. In any event, the Tarrant equivalent was not definitely located at Chispa Summit nor were any of the diagnostic species just mentioned. They may still be found there, just above the Buda limestone.

Likewise in central Texas I am not aware that any Neocardioceras has been found in the Tarrant flags or in the lower one-fourth, say, of the Eagle Ford.

Therefore I can only state that I know of no Neocardioceras in what we call Cenomanian in Texas. In Europe, this genus and Metoicoceras pontieri (= aff. irwini Moreman) occur, I think, in what is called basalmost Tinonian, though the succession there may be more incomplete than in Texas (see Bull. 3232, p. 437, and Spath Geol. Mag., Vol. 63, pp. 77-83, 1926, especially table opposite p. 80).

In this connection it would be useful to know whether the locality of your crustacea is definitely above the level of the Tarrant limy flagstones.

Very truly yours,

  
W. S. Adkins

Geologist, Shell Oil Co., Inc.

WSA:MAB