

ARTICLE VIII.—*Note on the faunal resemblance between the Cretaceous formations of New Jersey, and those of the Gulf States.* By R. P. WHITFIELD.

In working over a very limited collection of Cretaceous fossils from Alabama, Mississippi and Texas, in the American Museum of Natural History, I have been somewhat surprised at the very large number of species which are identical with those from the Cretaceous green marls of New Jersey, which I have recently worked over for the geological survey of that State. The collection in question consists very largely of specimens, principally of internal casts, from Prairie Bluff, Ala., and a very small number of specimens from Texas and Mississippi. Were it possible to compare a more extended collection from the two latter States, I have no doubt that a much greater number of identical species would be found. At the request of Dr. C. A. White, of the National Museum at Washington, I have concluded to publish the accompanying list at the present time, although I should have preferred to wait until a more thorough study of larger collections could have been made. There is sufficient evidence here, however, to show the strong faunal relations which exists between the Cretaceous marls of New Jersey and the Cretaceous of the Gulf States. Besides the identical species given in the table, there are a number of closely allied forms in the two regions, such as *Rostellites Texanus*, Conrad, and *R. texturatus*, Whitf. from New Jersey, which increase the resemblance. The greater number of identical species shown between the Prairie Bluff beds and the New Jersey marls, than is shown in the Texas or Mississippi regions, may arise largely from the fact that the collections from the latter localities which I have been able to study, are so limited, rather than that no others exist.

Without drawing any very definite deductions from the showing, here presented, at the present time, I give the following table of species, and reserve further observations to a more favorable opportunity.

[*March*, 1889.]

Table showing the species of New Jersey Cretaceous Molluscan fossils which have been recognized in Alabama, Mississippi, Texas or Dakota :

	Ala.	Miss.	Tex.	Dak.
<b>BRACHIOPODA :</b>				
Terebratula floridana, Morton.....	*			
<b>LAMELLIBRANCHIATA :</b>				
<i>Monomyaria.</i>				
Ostræa falcata, Morton = O. larva Lam..	*			
Gryphæa vesicularis, Lam.....	*		*	*
G " " var. navia, Roemer.	*		*	
Exogyra costata, Say.....	*			
Amusium simplicum, Con.....	*			
Camptonectes Burlingtonensis, Gabb...	*			
Neithea quinquescostata, Sow.....	*		*	
Dianchora echinata, Morton.....	*			
Plicatula urticosa, Morton.....	*			
Radula pelagica, Mort. sp.....	*			
R " acutiradiata, Con.....	*			
<i>Heteromyaria.</i>				
Lithodomus affinis, Gabb. = L. Ripley- ana, G.....		*		
Inoceramus Barabini, Morton.....	*			*
I " Vanuxemi, Tuomey.....	*			*
I " Sagenensis, Owen.....				*
Pinna laqueata, Con.....			*	
<i>Dimyaria.</i>				
Nemodon Eufaulensis, Gabb.....	*			
Idonearca Tippana, Conrad ..	*			
I " vulgaris, Morton sp.....	*			
Cibota rostellata, Morton sp.....	*			
Nucula Slackiana, Gabb.....			*	
Nuculana longifrons, Conrad.....	*			
Trigonia Eufaulensis, Gabb.....	*			
Crassatella vadosa, Morton.....	*			
C " lintea, Con.....	*			
C " cuneata, Gabb.....	*			
Vetericardia octolirata, Gabb.....	*			
Cardium Eufaulensis, Conrad ..	*			
C. (Criocardium) multiradiatum, Gabb...	*			
Leiopistha protexta, Con.....	*			
Isocardia Conradi, Gabb.....	*			

[March,

	Ala.	Miss.	Tex.	Dak.
<b>LAMELLIBRANCHIATA : <i>Dimyaria</i>.—Continued.</b>				
Veniella Conradi, Morton.....	*	.....	*	*
Dosinia Gabbi, Whitf. ....	*			
Callista, Delawarensis G. = Venus Ripleyana, Gabb?.....	*			
Aphrodina Tippana, Conrad.....		*		
Cyprimeria densata, Conrad.....	*			
Tellimera eborea, Conrad.....	*			
Linearia metastrata, Conrad.....	*			
Ænona Eufaulensis, Conrad.....	*			
Valeda lintea, Conrad.....	*			
Leptosolen biplicata, Conrad.....	*	*		
Legumen ellipticum, Conrad.....	*			
L " planulatum, Con.....	*			
Clavagella armata, Morton.....	*			
Teredo tibialis, Morton.....			*	
<b>GASTEROPODA :</b>				
Pyropsis trachyformis, Tuomey.....	*			
P " Reileyi, W.....	*			
P " octolirata, Conrad.....	*			
P " ? obesa, W.....	*			
P " (Rapa ?) Corrine, W.....	*			
Pyrifusus cuneus, W.....	*			
? P " Mullicaensis, W?.....	*			
Odontofusus medians, W.....	*			
Volutoderma Gabbana, W.....	*			
? V " mucronata, Gabb.....	*			
Volutomorpha Conradi, Gabb.....	*			
V " Abbotti, Gabb.....	*			
V " Kanei, Gabb.....	*			
Turbinopsis major, W.....	*			
Cithara crosswickensis, W.....	*			
? C " Mullicaensis, W.....	*			
Anchura pennata, Morton.....	*			
Rostellaria? Hebe, W.....	*			
Natica abyssina, Morton.....	*			
Gyrodes petrosa, Morton.....	*			
Morea cancellata, Conrad.....		*		
Amauopsis Meekana, W.....	*			
Margarita abyssina, Gabb.....	*			
Delphinula lapidosa, Morton.....	*			
Xenophora leprosa, Mort. sp.....	*			
Scalaria Sillimani, Morton.....	*			

	Ala.	Miss.	Tex.	Dak.
<b>GASTEROPODA.—Continued.</b>				
T	Turritella	vertebroides, Morton.....	*	
T	"	granulicostata, Gabb. —.....	*	
		T. planilateralis, Con.....		
T	"	encrinoides, Morton.....	*	
<b>CEPHALOPODA:</b>				
	A	Ammonites complexus, Hall & Meek.....		*
	A	" dento-carinatus, Roemer.....	*	
	A	" (Placenti.) lobatus, Tuomey..	*	
	A	" ( " ) placenta, Morton..		*
	S	Scaphites Conradi, Morton.....	*	
	S	" iris, Conrad.....	*	
	B	Baculites aspera, Morton.....	*	
	B	" ovatus, Morton.....	*	

NOTE.—On account of the delay by the lithographers in printing the plates, the date of issue should be April instead of March. Author's copies of Articles VI. and VII. were distributed March 22d. R. P. W.