

Marys species occur without the State, only 70% of these are confined to the Chesapeake group, and hence are available as horizon markers. The forms which have not, as yet, been reported from above or below the St. Marys are as follows:

Murex conradi Dall.
Urosalpinx rusticus Conrad.
Calliostoma humile Conrad.
Calliostoma reclusum Conrad.
Fissuridea alticosta Conrad.
Sportella pelex Dall.
Astarte symmetrica Conrad.
Arca virginiae Wagner.

"Of these eight forms *Astarte symmetrica*, though very rare in Maryland, has been the most valuable diagnostic species in the North Carolina work. The gastropods and the three species of *Arca* are rare south of the Virginia line, while *Sportella pelex* is a small form and very easily overlooked in any but the most detailed examination of a fauna.

"Collections from the St. Marys of North Carolina have been made at 76 localities, and though the determinative work is only partially completed, the preliminary lists give the dominant characteristics of the fauna. The general aspect is fairly constant throughout the region. The forms are for the most part well preserved, though at certain points along the Meherrin they are too soft and friable to be separated from the matrix. In the North Carolina St. Marys the most common pelecypods are *Mulinia congesta*, numerous species of *Pecten*, especially *jeffersonius* and its varieties; *Ostrea compressirostra* and *Ostrea sculpturata* in about equal numbers, *Crassatellites*, *Venus rileyi* and the massive variety *tridacnoides*, *Glycymeris subovata*, more rarely *Glycymeris americana*, *Dosinia acetabulum*, several species of *Phacoides* and *Yoldia laevis*. *Astarte symmetrica*, which has not as yet been found outside of the limits of the St. Marys, occurs throughout the area, though less profusely than *Astarte undulata*. The minute forms make up a much smaller percentage of the total fauna than in the later Tertiary. *Corbula inaequalis* is abundant, as is also *Leda acuta*. *Gemma* occurs, but not commonly. *Nucula* is rare at most of the localities, though at Hamilton Bluff it is the most conspicuous fossil. Of the gastropods, *Turritella variabilis* is, by far, the most abundant. In Maryland this form is confined to the St. Marys. Outside of the State it occurs at higher horizons, but usually with variations. The larger species of *Fulgur*, so common at Yorktown, are rather rare and usually fragmentary. *Polynices duplicatus*, *Crepidula aculeata*, and *Crepidula fornicata* are extremely abundant, while numerous species of *Calliostoma*, *Crucibulum*, *Fissuridea*, the *Nassidae* and the *Buccinidae*, together with *Ecphora quadricostata*, are found in relatively few numbers. The small gastropods, like the small pelecypods, are limited in species and in individuals. The scaphopods are best represented by *Dentalium attenuatum*, which is almost universal in its occurrence throughout the area.

This rapid reconnaissance may serve to bring out the general features of the St. Marys fauna in North Carolina. The characteristics which distinguish it from the Yorktown will be discussed under the latter formation. Two criteria serve to differentiate the North Carolina Chesapeake from the Maryland