

RECOVERY OF NEW DINOSAUR AND OTHER FOSSILS FROM THE EARLY
CRETACEOUS ARUNDEL CLAY FACIES (POTOMAC GROUP) OF CENTRAL
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The dinosaurs of the Arundel Clay (Aptian) are both enigmatic and poorly known. This is because most of the fossils recovered are fragmentary and disarticulated. Much of the Arundel genera currently known were first recognized by O. C. Marsh (collected by John Bell Hatcher) and A. B. Bibbins in 1887-88 and 1894, respectively. Later, R. S. Lull in 1911 and Charles Gilmore in 1920, reexamined the material but since that time, there have been no attempts to recover Arundel material on a large scale for over a century. Sadly only isolated, random finds have been reported in the last few decades. Consequently, we owe much to these scholars for our understanding of Arundel faunal diversity with its implications on the overall Early Cretaceous biota of the east coast of North America. There is still much confusion regarding what dinosaurs actually occur in the Arundel Clay and the nomenclatural priority of certain genera are still the subject of debate.

In the past six years I have assembled a large collection of Arundel remains from two unique localities, in a continuing effort to secure new dinosaur and other fossils for study. The ultimate goal this field work is 1) to supplement the older museum collection with new material in the hopes of increasing our understanding of the dinosaurs currently known to be present in the Arundel, 2) to elucidate lingering debate on the systematic standing of disputed and questionable genera, and 3) to help synthesize a composite reconstruction of Early Cretaceous paleoecology and biodiversity of eastern North America based on contemporaneous deposits from other states and their various taphonomic and depositional factors that bias the paleontological record. Such data would be of valuable use in the study of the origination and evolution of taxa prior to the isolation of eastern and western North America by the Western Interior Seaway of the Late Cretaceous. Here I present some of the more intriguing finds to date. These may in fact represent the most significant examples of Arundel-age life to come to light on a large scale in the nearly one hundred years. While emphasis is focused upon the dinosaurian fossils, important non-dinosaurian material will also be shown. For example, the teeth and possible spine of a Hybodont shark will be presented which may be the first report of sharks in the Arundel and suggest close a depositional proximity to the sea during the Aptian. Finally, plant remains in an excellent state of preservation remains from a second locality which produced only a fossil flora are shown. Of the two "unique localities" mentioned above, only one site remains accessible. It is the last known place in Maryland where such a fauna may be found and for the sake of future research, must remain anonymous.