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PALEOBIOGEOGRAPHY AND BIOSTRATIGRAPHY OF THE PENNSYLVANIAN  
FLORAS FROM THE NARRAGANSETT BASIN: A REVIEW

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Fossil floras of Pennsylvanian age from the Narragansett Basin in Rhode Island and Massachusetts have been known and described since the first half of the last century. More detailed biostratigraphic assignment has varied, but it is clear that plants characteristic of the Westphalian and Stephanian Series are present. In Appalachian lithostratigraphic terms the beds in the Narragansett Basin are time equivalents to the Kanawha (?), Allegheny, Conemaugh, and Monongahela formations/groups. Older beds may also be present.

Large collections of plant fossils were made around the turn of the century when mines were active and tunnels built. The Brown University collection (currently on extended loan to the University of Pennsylvania) consisting of approximately 4000 specimens gives a good overview over species present and quantitative composition. Collections from stratigraphically critical outcrops may augment this information.

Evaluation of species composition and quantitative counts of floras indicate that late Westphalian D and Stephanian floras are especially well represented. Ferns, pteridosperms, and sphenopsids are the dominant plant groups. These floras resemble age equivalent ones from Europe more than those from North America. The Stephanian floras of the Narragansett Basin are especially similar in their generic composition to those from intermontane basins in western Europe. The presence of endemic forms and overlap of biogeographic ranges led to an earlier conclusion that the Narragansett Basin was part of the paleobiogeographic Acadian subprovince that existed between North America and Europe during Pennsylvanian time.