Upper Devonian plant-bearing strata from Cape Breton Island, Nova Scotia

[1]*W.H. Forbes*, [2]*A.K. Kasper*, [3]*R.A. Jamieson, M.C. Blanchard-Williamson*
[1]*Department of Geology, University of Maine, Presque Isle, Me. 04769*
[2]*Department of Botany, Rutgers University, Newark, New Jersey 07102*
[3]*Department of Geology, Dalhousie University, Halifax, N.S. B3H 4J1*

Plant-bearing sandstones from Cape Breton Island, Nova Scotia, represent the first report of Upper Devonian continental strata for the Province. The thinly laminated greenish-gray fine-grained sandstones are exposed along a woods road north of Forest Glen Brook, east of Cheticamp, Cape Breton Island. These sandstones are interbedded with rhyolitic breccias and flows, that in turn are overlain by beds of probable early Carboniferous age. The igneous rocks have yielded a wide range of radiometric dates. The plant fossils are assigned to the genus, *Archaeopteris* of the Division Progymnspermophyta - the progymnosperms. Species of *Archaeopteris* are characteristic of Upper Devonian continental strata in the Escumanic Formation of Gaspe Peninsula, in the Perry Formation of eastern Maine and in Upper Devonian beds of the central Appalachians of the U.S. Plants assigned to this taxon were arborescent with large trunks of conifer anatomy. Vegetative foliage consisted of branch systems bearing fan-shaped laminar leaves with dichotomous venation. Reproductive foliage consisted of non-laminar divided leaves with numerous sporangia. The specimens assigned to *Archaeopteris* consists of both sterile and fertile foliage. The presence of this genus in sandstones from Cape Breton Island is the first evidence of Upper Devonian continental strata in Nova Scotia.