Fresh-water fauna and flora assemblage from the Devonian La Garde Formation of northern New Brunswick

[1]*W.H. Forbes and* [2]*A.E. Kasper, Jr.*
[1]*Department of Geology, University of Maine, Presque Isle, Me. 04769*
[2]*Department of Botany, Rutgers University, Newark, New Jersey 07102*

The oldest recorded fresh-water fossil assemblage of animals and plants is reported from the Campbellton Formation of northern New Brunswick, Canada. These continental rocks outcrop along the south shore of the Restigouche River at Campbellton and are of Lower/Middle Devonian age. The unique association of plants and animals occurs within a calcareous mudstone dike cross-cutting a rhyolite breccia. The reddish-brown slightly calcareous siliceous mudstone readily weathers to a light buff color accentuating the carbonaceous plant and animal material on its surface. The plant assemblage contains several well-characterized species, *Leclercqia complexa, Psilophyton princeps, Drepanophycus spinaeformis* and numerous unidentified plant remains. *Leclercqia complexa* is known from the Middle Devonian Panther Mountain Formation of New York State; the other species are long-ranging. The strata have also yielded the following fish: *Cephalaspis acadica, C. campbelltonensis whiteaves, C. jexi, Phyllctaenaspis acadia. P. atholi.* In addition this mudstone dike contains the following invertebrate fossils: ostracodes, gastropods and occasional segments of eurypterids. The paleoenvironment was probably a pond containing fish, snails and ostracodes with vascular plants growing along its periphery. The environment of deposition was most likely over-bank deposits produced by periodic flooding. The presence of the Middle Devonian plant, *Leclercqia complexa,* suggests that the age of the formation be restricted to Middle Devonian.