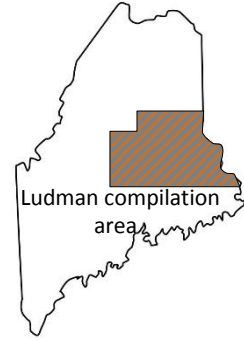


BASIC GEOLOGIC MAPPING

My work in Northern Appalachian geology began in 1966 in central Maine and shifted eastward a decade later. I was responsible for compiling one of the largest areas for the 1985 Maine Bedrock Geologic Map (right) and my students and I have carried out detailed mapping in eastern and east-central Maine since 1985 to update that map.



Initial mapping was of 15' quadrangles at a scale of 1:62,500 but the 7½' standard introduced by the USGS in the 1980s permitted more detailed work at 1:24,000. Mapping is slow work, particularly in a previously unstudied area where the stratigraphy has not been defined and age relationships are at best uncertain. It took 4+ years to finish a 15' quadrangle, and now 2 years for a 7½' quadrangle.

Time constraints required that geology of most of the compilation area shown above was based on reconnaissance. My current goal is to produce 1:24,000 scale detailed maps of that area and in pursuing that goal the 1985 bedrock map has been revised significantly. The Maine Geological Survey is developing bedrock maps at 1:100,000 scale and as I finish 7½' quadrangles, I am also compiling their information into four such map sheets.

These maps have helped Maine agencies, the USGS, academic researchers, local companies and residents to mitigate environmental problems, assess earthquake hazards, identify mineral and gravel resources locate groundwater sources, maximize veneer lumber harvesting, and has had many other applied uses.

Click on the following for examples of my mapping at each of these different scales.

[<1:500,000: Osberg, P.H., Hussey, A.M. II, Boone, G.M., 1985, Bedrock Geologic Map of Maine; Maine Geological Survey, Augusta, ME.>](#)

[<1:100,000: Ludman, A., and Berry, H.N. III, 2003, Bedrock geology of the Calais 1:100,000 quadrangle, Maine; Maine Geological Survey Open File Report 03-97.>](#)

[<1:62,500: Ludman, A., 1990, Bedrock geology of the Big Lake 15' quadrangle, Maine; Maine Geological Survey Open File Report 90-26. \(with geologic report\)>](#)

<1:24,000: Ludman, A., 2003, Bedrock geology of the Dill Hill 7½' quadrangle, Maine; Maine Geological Survey Open File Report 03-93 (with geologic report)>