

**EXPLANATION OF UNITS**

**INTRUSIVE ROCKS**

*Devonian*  
**Dwg** Biotite granite of the Webhannet Pluton. Light gray, medium-grained to coarse-grained, biotite granite with sphene and epidote.

**STRATIFIED ROCKS**

*Silurian*  
**Sb** Berwick Formation. Medium-bedded, medium brownish gray, feldspathic quartz-biotite granofels, greenish calc-silicate granofels, and subordinate quartz-biotite schist.

*Silurian-Ordovician*  
**SOk** Kittery Formation. Variably thin-bedded to thick-bedded, buff-weathering feldspathic and calcareous metawacke. Characterized by well-developed primary sedimentary structures including graded bedding, channel cut-and-fill structure, small scale cross-bedding, flame structure, and flute casts.  
**SOe** Eliot Formation. Generally thin-bedded, medium gray, calcareous and ankeritic quartz-biotite-chlorite phyllite and metasilstone, and dark gray biotite-chlorite-muscovite phyllite.

**REFERENCES**

- Hussey, A. M., II, 1962. The geology of southern York County, Maine. Maine Geological Survey, Bulletin 14, 67 p., map, scale 1:62,500.
- Hussey, A. M., II, Bothner, W. A., and Thompson, P. J., 2008. Bedrock geology of the Kittery 1:100,000 quadrangle, Maine and New Hampshire. Maine Geological Survey, Geologic Map 08-78, scale 1:100,000.
- Fargo, T. R., and Bothner, W. A., 1995. Polydeformation in the Merrimack Group, southeastern New Hampshire and southwestern Maine. In Hussey, A. M., II, and Johnston, R. A. (editors), Guidebook to field trips in southern Maine and adjacent New Hampshire. New England Intercollegiate Geological Conference, Brunswick, Maine, p. 15-29.

**EXPLANATION OF SYMBOLS**

Note: Structural symbols are drawn parallel to strike or trend of measured structural feature. Barb or tick indicates direction of dip, if known. Annotation gives dip or plunge angle. For planar features, symbol is centered at observation point. For linear features, tail of symbol is at observation point. Multiple measurements at a site are represented by combined symbols.

- Outcrop of mapped unit (small exposure, large area of exposure)
- ⌘ Bedding, tops unknown (inclined, vertical)
- ⌘<sub>20</sub> Inclined bedding, tops known (upright, overturned)
- ⌘<sub>20</sub> Compositional layering (inclined)
- ⌘<sub>20</sub> Metamorphic foliation (inclined)
- ⌘<sub>20</sub> Cleavage (inclined)
- ⌘<sub>20</sub> Cleavage, younger than dominant foliation (inclined)
- ⌘<sub>20</sub> Foliation plane (s) in s-c fabric (inclined)
- ⌘<sub>20</sub> Shear plane (c) in s-c fabric (inclined)
- ⌘<sub>20</sub> Fold axis, undifferentiated
- ⌘<sub>20</sub> Axis of fold related to crenulation cleavage
- ⌘<sub>20</sub> Hinge of fold related to dominant foliation, left-handed asymmetry
- ⌘<sub>20</sub> Minor fault, displacement unknown (inclined)
- ⌘<sub>20</sub> Joint (inclined)
- Hornfels or granofels, in contact metamorphic aureole of a pluton (schematic).

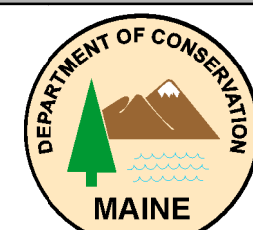
**EXPLANATION OF LINES**

- Contact between mapped units. Interpreted to be of stratigraphic or intrusive origin. Location is constrained by bedrock outcrops indicated by symbols on the map, or inferred by projecting rock units from adjacent areas. (See regional map by Hussey and others, 2008.) Additional information may have been used. Solid line where precisely located. The location of some contacts is not well constrained.
- ▲-▲-▲- Inferred thrust fault. Tecton upper plate. (approximately located)
- ▲-▲-▲- Contact of uncertain nature. Interpreted as a stratigraphic contact farther northeast, and as a ductile strike-slip fault farther southwest, in New Hampshire (Hussey and others, 2008).
- ..... Projection of mapped fault into area of poor bedrock exposure (see Hussey and others, 2008). (schematic)

**Bedrock Geology of the Dover East Quadrangle, Maine**

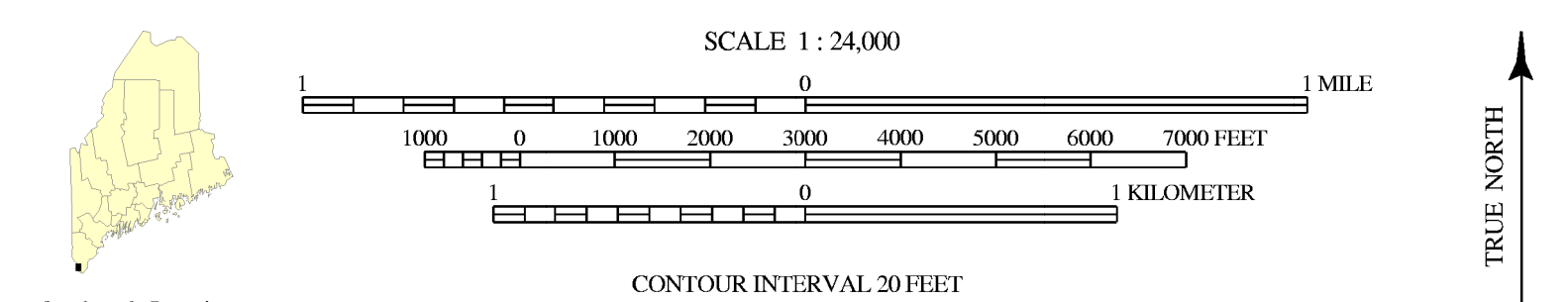
Bedrock geologic mapping by  
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**Progress Map 12-27  
 2012**



**SOURCES OF INFORMATION**  
 Field work by A. M. Hussey II (1970-2003), W. A. Bothner (1969-2004), and T. R. Fargo (1990-1991).  
 Topographic base from U.S. Geological Survey Dover East, N.H.-Maine, quadrangle, scale 1:24,000, using standard U.S. Geological Survey topographic map symbols.  
 The use of industry, firm, or local government names on this map is for location purposes only and does not imply responsibility for any present or potential effects on the natural resources.

GEOLOGIC TIME SCALE		
Geologic Age		Absolute Age*
Cenozoic Era		
Mesozoic Era	Cretaceous Period	65-142
	Jurassic Period	142-200
	Triassic Period	200-253
Paleozoic Era		
	Permian Period	253-300
	Carboniferous Period	300-360
	Devonian Period	360-418
	Silurian Period	418-443
	Ordovician Period	443-489
	Cambrian Period	489-542
Precambrian time		
		Older than 542

\* In millions of years before present. (Okulitch, A. V., 2004. Geological time chart, 2004: Geological Survey of Canada, Open File 3040 (National Earth Science Series, Geological Atlas)-REVISION.)