Bedrock Geologic Map of the North Grantham 7.5' Quadrangle, New Hampshire



Topographic basemap from the USGS 1998 North Grantham 7.5' quadrangle Projection: North American Datum 1983 New Hampshire State Plane Feet.

1000 meter grid in UTM zone 19 North, Contour Interval 6 m

Hillshade produced from high resolution (1 meter) LiDAR data

- Schist member of Clough (Silurian) Lustrous, fine- to coarse-grained quartz-muscovite-sillimanite +/- garnet schist locally with thin quartzite layers up to 20 cm thick. Mapped separately where schist is sufficiently thick. Best observed NE of Smith Pond and along dirt road between Miller Pond and Chase Pond. Previously
- Cobble conglomerate member of Clough (Silurian) Quartzite clasts in a quartzite matrix at the base of a 27 m thick exposure of Clough Quartzite, found only west of Eastman Hill Road at the north edge of the quadrangle. Cobbles are flattened in bedding planes and stretched into dagger-shaped ellipsoids up to 30 cm long,
- Partridge Formation (Ordovician) Rusty-weathering, black to dark gray carbonaceous, sulfidic, fine- to medium-grained schist, with or without garnet, locally phyllitic where S2 is strongly developed. Can be difficult to distinguish from Littleton, which is generally more lustrous, less carbonaceous and less rusty. Locally contains thin light gray silty layers and felsite lenses and layers, too thin to map, which may represent ash fall horizons. Local metadiabase dikes, as in Sc and Sf. Best exposed in
 - Felsic metavolcanic member of the Partridge Formation (Ordovician) Rusty tan weathering, light gray to white felsite, indistinguishable from Oaf, but
- Ammonoosuc Volcanics (Ordovician) Dominated by pale green chlorite schist in the NW part of the quadrangle and darker green to black hornblende schist and gneiss east of a NE-trending line, west of East Plainfield. This line would correspond to the garnet isograd in pelitic rocks. The isograd apparently loops around north and northwest, barely entering the Enfield quadrangle, where most mafic rocks contain hornblende and Partridge schists contain garnet (Thompson, 2014). It then heads southwest into the North Hartland quadrangle (Walsh, 2016). Well exposed at bend on Great Brook Road and at bridge near Daisy Hill Road/Rt. 120 intersection, where
 - Felsic metavolcanic member of the Ammonoosuc (Ordovician) Rusty tan weathering, light gray to white felsite, indistinguishable from Opf, but associated with mafic metavolcanics. Well exposed on the hills south of East Plainfield. Zircons from a rhyolite sample within Ammonoosuc, collected in the North Hartland
 - Magnetite-bearing metavolcanic member of the Ammonoosuc (Ordovician) Distinctive 50 m-thick layer within Oaf: fine-grained dark green chlorite schist with



NORTH

Interpretive Cross Section A - A' (No Vertical Exaggeration)



Interpretive Cross Section B - B' (No Vertical Exaggeration)



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