## Late Devonian mafic-felsic magmatism in the Meguma Zone

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The Meguma Zone of southern Nova Scotia is the most outboard lithotectonic terrane of the northeastern Appalachians. Peraluminous granitoid plutons dominate a late Devonian episode of magmatic activity, but minor mafic intrusive bodies of roughly the same age also occur in the Meguma Terrane. We propose to classify the granitoid plutons as: (i) Central Plutons, including the South Mountain Batholith, which are *ca.* 372 my old, late- to post-tectonic, predominantly unfoliated, emplaced into low-grade metamorphic host rocks, generally not spatially associated with mafic intrusions, exclusively peraluminous with polymetallic Sn-W-Mo-U greisen- and vein-dominated mineral deposits, and entirely crustally-derived (sub-Meguma Group source rocks and Meguma Group contamination), that probably owe their origin to crustal thickening associated with the collision of the Meguma terrane against the Avalon terrane; and (ii) Peripheral Plutons, at the northeastern and southwestern extremities of the Meguma Zone, which may be slightly older (≥376 my old), late-tectonic, moderately foliated, emplaced into higher-grade metamorphic host rocks, spatially associated with late Devonian mafic intrusions (LDMIs), mostly peraluminous with only limited Be-pegmatite mineralization, and of mixed derivation (sub-Meguma Group source rocks and mantle-derived mafic magmas), that probably owe their origin to the lower to mid-crustal emplacement of subduction-related mafic magmas intruded prior to the final emplacement of the Meguma terrane.

This integration and synthesis of the field relations, geochronology, petrology, geochemistry, and mineralization for the felsic and mafic magmatism represents a new petrogenetic and tectonic paradigm for the Meguma Zone in the late Devonian.