

- ### LEGEND
- TRIASSIC**
- H₃ Sandstone, buff, reddish-brown, or maroon sandstone, siltstone, and conglomerate
- CARBONIFEROUS**
- C Sandstone, conglomerate, limestone
- CARBONIFEROUS OR OLDER**
- C₁ Epidotized and brecciated basalt, minor siltstone and limestone (fault zone rocks)
- CAMBRIAN (?)**
- C₂ Maroon quartz pebble conglomerate, siltstone

- ### SYMBOLS
- Rock outcrop, area of outcrop
 - Geological boundary (defined, approximate, assumed)
 - Bedding (inclined, vertical, overturned)
 - Flow in intrusive rocks (inclined, vertical)
 - Fracture (inclined, vertical)
 - Discontinuity (inclined, vertical)
 - Lineation
 - Axis of minor fold
 - Fault (defined, approximate, assumed)
 - Mineral prospect (abandoned)
 - Mineral occurrence: Copper-Cu, Pyrite-Py, Limestone-Lim

- ### LATE HADRYNIAN - EARLY CAMBRIAN
- MECHANIC SETTLEMENT FLUTON:**
- HC_{20a} Lepreolite gabbro, diorite
- BONNELL BROOK PLUTON:**
- HC_{20b} Spherulitic rhyolite
 - HC_{20c} Granophyric agnognite
 - HC_{20d} Syenogranite
 - HC_{20e} Diorite

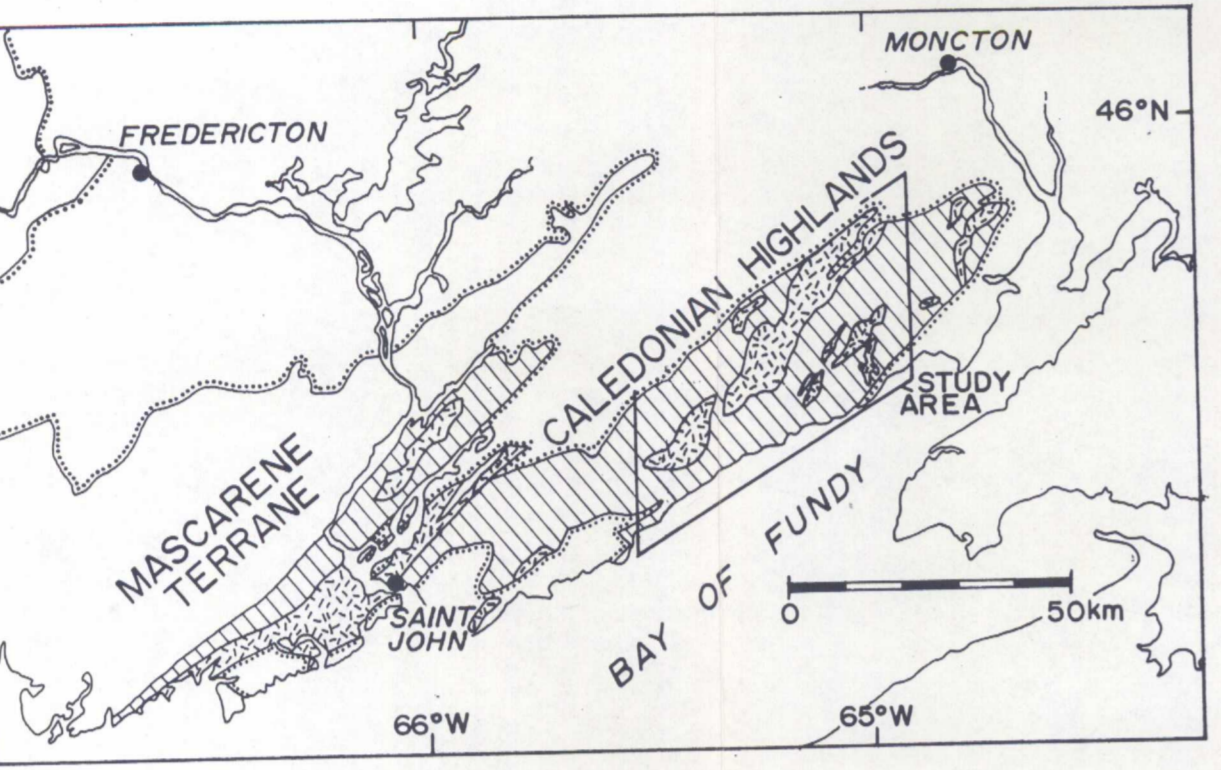
- ### VOLCANIC-SEDIMENTARY SEQUENCE B (stratigraphic sequence inferred)
- H₂₀ Epiclastic volcanogenic conglomerate and breccia
 - H₂₁ Lapilli-crystal tuff, typically black in colour, mineral chert, siltstone and shale
 - H₂₂ Sedimentary rocks: mainly laminated fine-grained siltstone and chert, green to grey in colour; rare black lapilli tuff and breccia
 - H₂₃ Sedimentary rocks: mainly volcanogenic conglomerate, laminated siltstone and chert, locally arkosic siltstone
 - H₂₄ Interbedded basaltic and rhyolitic tuffs and flows
 - H₂₅ Massive to augenoidal basalt, with less abundant mafic tuff-basaltic lava in or on other units
 - H₂₆ Rhyolite and rhyolitic tuff (ignimbrites) minor laminated siltstone and chert
 - H₂₇ Red, maroon, and grey slate, phyllite, arkosic meta-siltstone and metaconglomerate, minor quartzite

- ### LATE HADRYNIAN OR YOUNGER
- MINOR INTRUSIVE UNITS:**
- HC_{21a} plagioclase porphyry
 - HC_{21b} granodiorite
 - HC_{21c} granite, agnrite
 - HC_{21d} diorite
 - HC_{21e} gabbro, diorite

- ### LATE HADRYNIAN
- POINT MOLFE RIVER PLUTON:**
- H_{28a} granite porphyry
 - H_{28b} Blueberry Hill granite
 - H_{28c} Old Sheppod Road granite/granodiorite
 - H_{28d} Microdiorite/granodiorite (H_{28d1})
 - H_{28e} Pointe River granodiorite
 - H_{28f} Quartz monzodiorite/tonalite
 - H_{28g} Quartz diorite/tonalite
- FORTYFIVE RIVER PLUTON: Granodiorite**
- H₂₉
- ALBA PLUTON: varied dioritic rocks**
- H_{30a}
- GOOSE CREEK LEUCOTONALITE**
- H_{30b}

- ### VOLCANIC-SEDIMENTARY SEQUENCE A (stratigraphic sequence uncertain)
- H₁₀ Mafic meta-tuff, schist, and phyllite
 - H₁₁ Crystalline meta-tuff, abundant grey pigniferous felsite
 - H₁₂ Intermediate lithic meta-tuff (phyllitic)
 - H₁₃ Mafic and felsic meta-tuff (interbedded); abundant pyrite-rich felsic layers; sheets of quartz-rich granitoid rock
 - H₁₄ Meta-arkosic siltstone, sandstone, and conglomerate
 - H₁₅ Turfaceous phyllite, chloritic schist, slate, felsite, meta-arkosic
 - H₁₆ Mafic schist, phyllite, and meta-tuff (argillite and lithic)

- ### HELIKIAN(?)
- H₁₇ Schist and gneiss, minor marble (GREENHEAD GROUP OR BROOKVILLE ONDITE)



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Natural Resources and Energy / Ressources naturelles et Énergie
New Brunswick / Nouveau-Brunswick

Energy, Mines and Resources Canada / Énergie, Mines et Ressources Canada



REVISED GEOLOGICAL MAP OF THE CENTRAL CALEDONIAN HIGHLANDS, SOUTHERN NEW BRUNSWICK (PARTS OF 21K/5, 6, 10, 11, 12, 14, 15)
by S.M. Barr and C.E. White

MARGINAL NOTES

During the summer of 1988, areas to the south and west of those covered by Barr and White (1988a, b) were added as part of an ongoing study of the geology of the Caledonia Highlands east of Saint John, New Brunswick. This new mapping, combined with radiometric dating reported by Barr and White (1988) and other geological studies reported by Barr and White (1989) resulted in revision of the geological map of the area. The accompanying maps cover the central Caledonia Highlands (Fig. 1) and include the new areas mapped in 1988 as well as the area covered by Barr and White (1988b), and incorporate the revised stratigraphy. The map should be considered in conjunction with Barr and White (1988a, b) and Barr and White (1989).

The central Caledonia Highlands of southern New Brunswick consist mainly of orogenic-belt-related or sub-orogenic-belt-related volcanic, sedimentary, and plutonic rocks generally considered to be of Proterozoic age (see Barr and White, 1988a, b and White, 1989) and radiometric dating (Barr, 1988). These rocks in the central Caledonia Highlands have been dated from two contrasting tectonic settings: the older group, apparently formed in an arc front environment, the older group, apparently formed in an arc front environment, the older group, apparently formed in an arc front environment, the older group, apparently formed in an arc front environment.

In contrast, the other group of rocks appear to be about 550 Ma in age and consists of arkosic meta-siltstone, felsic lapilli tuff and chert, basaltic flows, laminated siltstone, felsic lapilli tuff, conglomerate, and other rocks of mainly mafic and syenitic composition. These units typically are much less deformed and metamorphosed than the other group of units. The volcanic and plutonic rocks appear to be co-genetic, having formed in a continental-obduction-related tectonic setting that they formed in a continental-obduction-related tectonic setting.

Details concerning unit lithologies, petrography, and geochemistry are presented by Barr (1987) and Barr and White (1988a, b, 1989).

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Scale 1:50 000 - Echelle 1:50 000

Universal Transverse Mercator Projection / Projection universelle méridienne de Mercator

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