

LEGEND

PALEOZOIC

LATE DEVONIAN

- SEAL ISLAND PLUTON (Dsbm): grey, coarse-grained, inequigranular to porphyritic; biotite monzogranite with megacrysts of K-feldspar
- BARRINGTON PASSAGE PLUTON (and related plutons): grey, medium-grained, strongly foliated to equigranular biotite tonalite to quartz diorite and granodiorite; rare hornblende, locally layered (Dsb1); massive, unrecrystallized pegmatite (Dsbj)

EARLY CAMBRIAN TO EARLY ORDOVICIAN

- GOLDENVILLE GROUP**
- GOVERNMENT POINT FORMATION (MCGpp): grey, thin- to thick-bedded metasediments with minor calc-silicate nodules and rare manganese nodules; laminated, green to greyish-green to purple metasediments and rare black slate; trace fossils common

Symbols*

Outcrop, float, Felsenmeer	Anticline (assumed, approximate, defined)
Quarry (opening, abandoned)	Overturned anticline (assumed, defined)
Mine abandoned	Syncline (assumed, approximate, defined)
Shaft	Overturned syncline (assumed)
Fossil	Shear zone
Drift (see Fisher, 2006)	Historical gold district (after Fisher, unpublished)
Mineral occurrence (modified after O'Reilly et al., 2009)	Area of concentrated drilling
U-Pb zircon, monazite, titanite, zircon monazite	
40Ar/39Ar gas, biotite, hornblende, muscovite	
207Pb/235U (or whole rock)	
Bedding, tops known (inclined, vertical, overturned)	
Fold axis, first generation (dip style unknown, in fold, horizontal)	
Fold axis, second generation (dip style unknown, in fold, horizontal)	
Fold axis, third generation (dip style unknown, horizontal)	
Cleavage, first generation (inclined, vertical)	
Cleavage, second generation (inclined, vertical)	
Geological contact (assumed, approximate, defined)	
FAUR (assumed, approximate, defined)	
Rock in water	
Arterial highway	
Trunk highway	
Collector highway	
Hard surface road	
Loose surface/resource access road	
Trail, footpath, cart track	
Railway (active, inactive)	
Coastline	
River, stream	
County boundary	
Transmission line (multi, single line)	
National Park	
Wetlands	
Lake/ocean	

* Note: Compiled symbols list for Open File Maps ME 2012-077 to 2012-101. All symbols may not appear on each map.

** References for Selected Radiometric Age Dates

[4] Dalrymple, R. D. and Kipple, J. D. 1987. Polyphase late Paleozoic tectonothermal evolution of the southwestern Meguma Terrane, Nova Scotia: evidence from ⁴⁰Ar/³⁹Ar mineral ages. *Canadian Journal of Earth Sciences*, v. 24, p. 1242-1254.

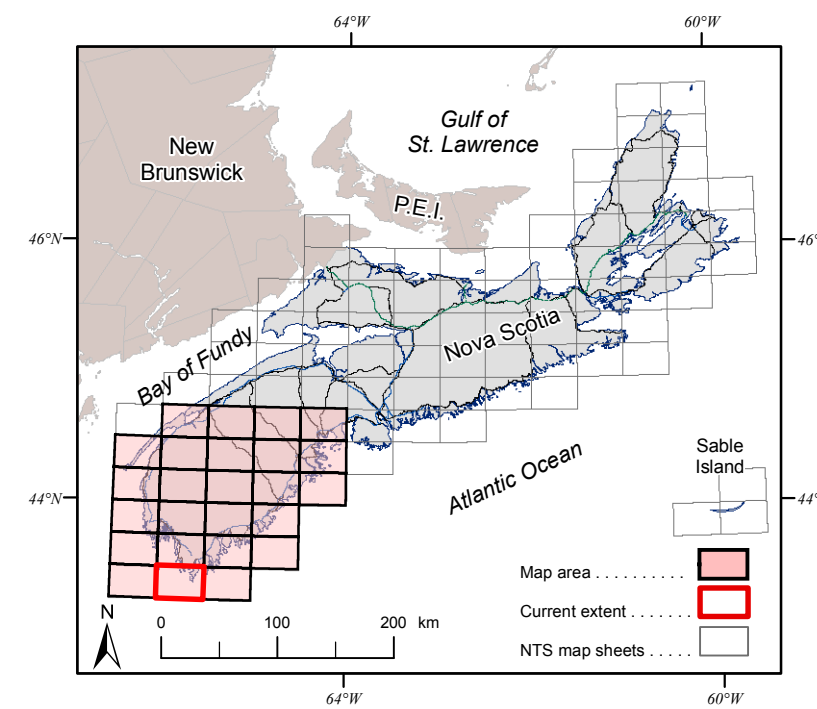
[5] Dalrymple, R. D. and Kipple, J. D. 1988. Superposed late Paleozoic thermal events in the southwestern Meguma Terrane, Nova Scotia, Maritime Sediments and Atlantic Geology, v. 24, p. 157-169.

[6] Kipple, J. D. and Dalrymple, R. D. 1995. Late Paleozoic collision, delamination, short-lived magmatism, and rapid denudation in the Meguma Terrane (Nova Scotia, Canada): constraints from ⁴⁰Ar/³⁹Ar isotopic data. *Canadian Journal of Earth Sciences*, v. 32, p. 644-659.

[16] Moran, P. C., Barr, S. M., White, C. E. and Hamilton, M. A. 2007. Petrology, age, and tectonic setting of the Seal Island Pluton, offshore southwestern Nova Scotia. *Canadian Journal of Earth Sciences*, v. 44, p. 1467-1478.

[18] Mawick, G. K., Elias, P. and Reynolds, P. H. 1988. Hercynian/Alpine overprinting of an Acadian terrane: ⁴⁰Ar/³⁹Ar studies in the Meguma Zone, Nova Scotia, Canada. *Chemical Geology (Isotope Geoscience Section)*, v. 73, p. 159-167.

[20] Reynolds, P. H., Elias, P., Mawick, G. K. and Grant, A. M. 1987. Thermal history of the southwestern Meguma Zone, Nova Scotia, from an ⁴⁰Ar/³⁹Ar and fission track dating study of intrusive rocks. *Canadian Journal of Earth Sciences*, v. 24, p. 1952-1965.



Descriptive Text

In 1998 the Nova Scotia Department of Natural Resources initiated a program of geological mapping of the Meguma Terrane of southwestern Nova Scotia. The principal goals of this project are to produce a series of 1:50 000 scale geological bedrock maps of the area, to describe and interpret the sedimentary, igneous, metamorphic and deformational history of the Cambrian to Early Devonian metamorphic rocks, and to evaluate the area's economic potential. This map represents the twenty-fourth in a series of 25 maps highlighting the bedrock geology of southwestern Nova Scotia.

These new maps, combined with stratigraphic, geochemical, geochronological, paleontological and isotopic data (White, 2010; White and Barr, 2010), have highlighted the need to produce a new stratigraphic paradigm together with the 1:50 000 scale geological maps for the Meguma Terrane.

Disclaimer

The information on this map may have come from a variety of government and nongovernment sources. The Nova Scotia Department of Natural Resources does not assume any liability for errors that may occur. This map is intended for use at the published scale of 1:50 000.

Map Notes

GIS databases, cartography and reproduction by Angie Ehler, Brian Fisher and Jeff McKinnon of the Nova Scotia Department of Natural Resources, Geoscience Information Services Section, 2009-2012. The GIS databases and map were developed using ArcGIS/ESRI 9.3.

Universal Transverse Mercator Projection (UTM), Zone 20, Central Meridian 63°07' West.

North American Datum (NAD) 1983 Canadian Spatial Reference System (CSRS) 98.

Base and digital data derived from the Nova Scotia Topographic Database (NSTDB). Copyright Her Majesty the Queen in Right of the Province of Nova Scotia. The NSTDB is available from Service Nova Scotia and Municipal Relations (SNMRL), Land Information Services Division (LIS), Nova Scotia Geomatics Centre (NSGC), Amherst, Nova Scotia.

Shaded relief image derived from a 25 m Digital Elevation Model of the Province of Nova Scotia, DIP ME 50, version 2, 2006. Azimuth of 0°, sun angle of 45° and a vertical exaggeration of 5.

Nova Scotia Department of Natural Resources
Mineral Resources Branch

Open File Map ME 2012-100

Bedrock Geology Map of the Cape Sable Island Area, NTS Sheet 20P/05, Shelburne and Yarmouth Counties, Nova Scotia

C. E. White

Scale 1:50 000

Map area: Nova Scotia
Current extent: 2012
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Recommended Citation

White, C. E. 2012. Bedrock geology map of the Cape Sable Island area, NTS sheet 20P/05, Shelburne and Yarmouth counties, Nova Scotia. Nova Scotia Department of Natural Resources, Mineral Resources Branch, Open File Map ME 2012-100, scale 1:50 000.

Selected References

Fisher, B. E. 2006. Nova Scotia drillholes database. Nova Scotia Department of Natural Resources, Digital Product ME 3. <http://www.gov.ns.ca/nal/mdb/download/0603.asp> [ISBN:185357].

Fisher, B. E., unpublished. Nova Scotia historical gold district boundaries: Nova Scotia Department of Natural Resources, Digital Product ME 304.

O'Reilly, G. A., DeMont, G. J., Fisher, B. E. and Prole, J. C. 2009. Nova Scotia mineral occurrence database. Nova Scotia Department of Natural Resources, Digital Product ME 2. <http://www.gov.ns.ca/nal/mdb/download/0902.asp> [ISBN:18752].

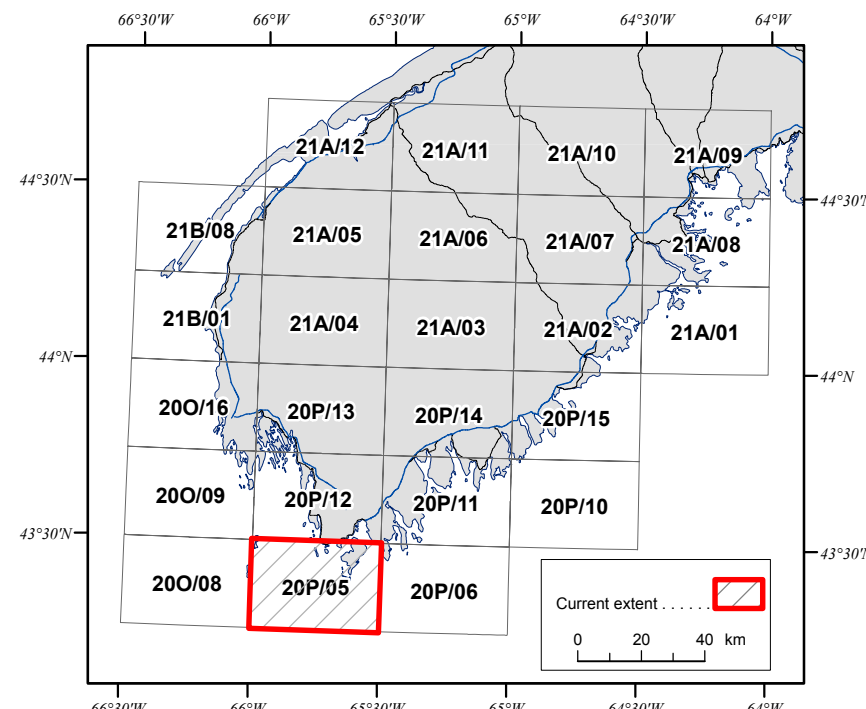
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White, C. E. 2010. Stratigraphy of the lower Paleozoic Goldenville and Halifax groups in southwestern Nova Scotia. *Atlantic Geology*, v. 46, p. 136-154.

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† Internal Search Number (ISN) is a unique identifier used by Nova Scotia's Geoscience Maps and Publications Database. The ISN can be used to retrieve a digital version of the listed citation - <http://www.gov.ns.ca/nal/mdb/download/0902.asp>



Open File Map ME 2012-100
Oct 10, 2012