

Key Harbour Gneiss Association (units 2 to 5)

- Intermediate to Mafic Migmatitic Rocks
Multicomponent layered gneiss and migmatite, minor amphibole
Intermediate to Felsic Gneiss
Layered, pink to grey quartz-feldspar-biotite paragneiss, locally with garnet-hornblende and garnet-kyanite and sillimanite gneiss; minor quartzite, calc-silicate gneiss
Mafic Rocks
Mafic gneiss; minor metagabbro, anorthositic gneiss
Mafic monzonitoid gneiss

Metasedimentary Rocks

- Layered, pink to grey quartz-feldspar-biotite paragneiss, locally with garnet-hornblende and garnet-kyanite and sillimanite gneiss; minor quartzite, calc-silicate gneiss
Unit 1a, with minor amounts of unstratified polydeformed and metasedimentary gneiss
Stratified and mylonitic gneiss derived from units 1a and/or 1b

Metasedimentary Rocks

- Mostly medium-grained, moderately foliated to gneissic, migmatitic, granodiorite to tonalite containing metamorphosed mafic-dike (amphibole). No leucosome older than the dike is observed
Unit 1a, with minor amounts of unstratified polydeformed and metasedimentary gneiss
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SYMBOLS

- Compositional layering and/or parallel tectonic foliation; unknown generation (trend only, inclined, vertical)
Fault, interpreted; trend only
Lineament, interpreted; trend only
Foliation (inclined)
Lineation (with plunge, subhorizontal)
Intersection (with plunge)
Fold axis; minor fold, m-asymmetric (with plunge)
Geological contact (interpreted)
Limit of mapping (dashed line; area mapped during this survey)
Location of isotopic age determination

ABBREVIATIONS

- Be = beryllium
fd = feldspar
gr = garnet
Ni = nickel
Nb = niobium
Rt = rutile
St = staurolite
Th = thorium
Ti = titanium
U = uranium
Zr = zircon

dk = biotite A/R date, in Ma
ha = hornblende A/R date, in Ma
hk = potassium feldspar A/R date, in Ma
ka = potassium A/R date, in Ma
kk = potassium feldspar R/R date, in Ma
mb = muscovite A/R date, in Ma
du = biotite U/Pb date, in Ma
ml = monazite U/Pb date, in Ma
tl = titanite U/Pb date, in Ma
Zr = zircon U/Pb date, in Ma
UW = uranium Pb/Pb date, in Ma

PARAUTOCHTHON SOUTH OF PARRY SOUND DOMAIN

Lower Go Home Domain (units 15 to 18)

- 18 Felsic Rocks
18a Pink to grey leucocratic gneiss
18b Pink to grey, migmatitic leucocratic to granodiorite
17 Intermediate to Felsic Rocks
17a Unstratified granitoid orthogneiss
17b Monzonitic to granitic orthogneiss
16 Mafic Rocks
Mafic orthogneiss
15 Metasedimentary Rocks
15a Unstratified paragneiss
15b Marble; may be associated with rusty graphitic schist
15c Calc-silicate gneiss

PARAUTOCHTHON NORTH OF PARRY SOUND DOMAIN

Britt Domain (units 1 to 14)

- 14 Migmatitic Rocks
Grey, migmatitic, leucocratic hornblende-biotite orthogneiss of granodioritic to monzonitic composition
13 Felsic Rocks
Grey, leucocratic, migmatitic hornblende-biotite-garnet orthogneiss of tonalite to granodioritic composition
12 Metasedimentary Rocks
Unstratified paragneiss
11 Metasedimentary Rocks
Pink, layered, leucocratic paragneiss
10 Metasedimentary Rocks
Rusty weathering, graphitic paragneiss
9 Metasedimentary Rocks
Grey, migmatitic, leucocratic garnet-biotite paragneiss, locally with sillimanite, pink leucosome, may contain garnet, muscovite, magnetite

Bayfield Gneiss Association (units 6 to 8)

- 8 Intermediate to Felsic Intrusive Rocks
Pink, sugary leucocratic gneiss
7 Intermediate to Felsic Intrusive Rocks
7a Unstratified grey and pink, variably layered, highly strained orthogneiss, in places with recrystallized potassium feldspar megacrysts
7b Grey, leucocratic, migmatitic hornblende-biotite-garnet orthogneiss of tonalite to granodioritic composition
6 Metasedimentary Rocks
6a Grey, leucocratic mesocratic garnet-biotite paragneiss, commonly with sillimanite; locally graphitic and rusty weathering
6b Calc-silicate and amphibolite gneiss associated with garnet-biotite paragneiss of unit 6a

Parry Sound Domain (interior) (units 36 to 41)

- 41 Felsic Rocks
Buff to pink weathering, leucocratic granulite
40 Intermediate to Felsic Granulites
Unstratified, grey to buff weathering, orthopyroxene-bearing intermediate (granodiorite, tonalite to diorite) orthogneiss containing evidence of retrogression from a granulite facies precursor (e.g., unit 39 or 40); pegmatite veins may be common
39 Intermediate to Felsic Granulites (layered)
Unstratified, buff to grey weathering, layered, feldspathic granulite
38 Intermediate to Felsic Granulites (retrogressed)
Unstratified, grey, foliated to gneissic, intermediate (granodiorite, tonalite to diorite) orthogneiss containing evidence of retrogression from a granulite facies precursor (e.g., unit 39 or 40); pegmatite veins may be common
37 Mafic Rocks
Unstratified, layered, predominantly mafic two-pyroxene granulite or gneissic metagabbro
36 Metasedimentary Rocks
36a Layered paragneiss, garnet-rich granulite
36b Marble, calc-silicate tectonic breccia

LEGEND

- PHANEROZOIC
CENOZOIC
QUATERNARY
RECENT
Lake, stream and swamp deposits
PLEISTOCENE
57 Glacial deposits; sand and gravel, clay and silt
UNCONFORMITY

PALEOZOIC

- ORDOVICIAN
56 Chemical Sedimentary Rocks
Unstratified; includes Gull River Formation (light brown-grey to blue-grey interbedded limestone and dolomite, grey to white subdiagenetic to lithographic limestone) and Shadow Lake Formation (calcareous red and green arkosic sandstone, pebbly sandstone, siltstone and shale)
UNCONFORMITY

PRECAMBRIAN

- NEOPROTEROZOIC
55 Mafic Intrusive Rocks (Grenville diabase dike swarm (90 Ma))
Brown weathering, fine- to medium-grained diabase

MESOPROTEROZOIC

- HIGH-GRADE METAMORPHISM WITHIN THE GRENVILLE PROVINCE
54 Mafic Rocks
54a Weakly foliated to gneissic mafic rocks of unknown protolith and of varied age, subjected to eclogite facies metamorphism and variably retrogressed
54b Unit 54a, with associated anorthositic and gabbro pods and sivers
53 Mafic Intrusive Rocks, Correlative Metagabbro Suite (circa 1165 Ma)
Dark green to black, weakly foliated to gneissic, medium- to coarse-grained, locally optically textured, metagabbro

"SINGLE CYCLE PLUTONIC ROCKS", VARIABLY DEFORMED AND MIGMATITIC ORTHOGNEISS, COMMONLY CONTAINING GARNET

- 52 Felsic Intrusive Rocks
52a Pink, leucocratic granite, locally potassium feldspar megacrystic
52b Pink, leucocratic granite and quartz monzonite, commonly potassium feldspar megacrystic
52c Unit 52a, strongly foliated to protomylonitic
51 Felsic to Intermediate Intrusive Rocks
51a Weakly foliated to gneissic, pink monzonite, minor gabbro
51b Unit 51a, with associated granite and monzonite
50 Intermediate to Felsic Intrusive Rocks
50a Weakly foliated to gneissic, grey hornblende-biotite granodiorite, locally potassium feldspar megacrystic, minor tonalite
50b Unit 50a, with associated pink granite and grey granodiorite

Intermediate Intrusive Rocks

- 49 Weakly foliated to gneissic, grey tonalite with associated granodiorite and monzonite
48a Weakly foliated to gneissic, pink monzonite, primary igneous texture commonly preserved
48b Hornblende diorite, gabbro
48c Small outcrops of unit 48a or 48b hosted by adjacent country rock units (indicated by dots)

Mafic Intrusive Rocks

- 48a Weakly foliated to gneissic metagabbro, primary igneous texture commonly preserved
48b Hornblende diorite, gabbro
48c Small outcrops of unit 48a or 48b hosted by adjacent country rock units (indicated by dots)

Mafic Intrusive Rocks

- 47a Anorthositic gabbro; anorthositic, minor gabbro
47b Weakly foliated to gneissic, mafic intrusive complex consisting of anorthositic and dioritic rocks
47c Small outcrops of unit 47a or 47b hosted by adjacent country rock units (commonly found along tectonic boundaries) (indicated by triangles)

EARLY MESOPROTEROZOIC TO LATE PALEOZOIC

INTRUSIVE CONTACT

ALLOCHTHON

Moon River Subdomain (units 42 to 46)

- 46 Felsic to Intermediate, Layered or Migmatitic Rocks
46a Pink, sugary, layered leucocratic gneiss
46b Grey, migmatitic layered gneiss
45 Intermediate to Felsic Rocks
Grey, migmatitic tonalite to granodiorite orthogneiss
44 Mafic and Metasedimentary Rocks
44a Mafic orthogneiss
44b Amphibolite
44c Interlayered amphibolite, semi-pelitic gneiss and quartzite
44d Quartzite

Blackstone Lake Gneiss Association (units 42 and 43)

- 43 Intermediate to Felsic Rocks
43a Pink, sugary, layered leucocratic gneiss
43b Grey biotite leucogneiss of granodioritic composition
42 Mafic Rocks
Amphibolite

Tectonic Contact with Subjacent Parry Sound Domain (Interior)

- 41 Felsic Rocks
Buff to pink weathering, leucocratic granulite
40 Intermediate to Felsic Granulites
Unstratified, grey to buff weathering, orthopyroxene-bearing intermediate (granodiorite, tonalite to diorite) orthogneiss containing evidence of retrogression from a granulite facies precursor (e.g., unit 39 or 40); pegmatite veins may be common
39 Intermediate to Felsic Granulites (layered)
Unstratified, buff to grey weathering, layered, feldspathic granulite
38 Intermediate to Felsic Granulites (retrogressed)
Unstratified, grey, foliated to gneissic, intermediate (granodiorite, tonalite to diorite) orthogneiss containing evidence of retrogression from a granulite facies precursor (e.g., unit 39 or 40); pegmatite veins may be common
37 Mafic Rocks
Unstratified, layered, predominantly mafic two-pyroxene granulite or gneissic metagabbro
36 Metasedimentary Rocks
36a Layered paragneiss, garnet-rich granulite
36b Marble, calc-silicate tectonic breccia

Parry Sound Domain (interior) (units 36 to 41)

- 41 Felsic Rocks
Buff to pink weathering, leucocratic granulite
40 Intermediate to Felsic Granulites
Unstratified, grey to buff weathering, orthopyroxene-bearing intermediate (granodiorite, tonalite to diorite) orthogneiss containing evidence of retrogression from a granulite facies precursor (e.g., unit 39 or 40); pegmatite veins may be common
39 Intermediate to Felsic Granulites (layered)
Unstratified, buff to grey weathering, layered, feldspathic granulite
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37 Mafic Rocks
Unstratified, layered, predominantly mafic two-pyroxene granulite or gneissic metagabbro
36 Metasedimentary Rocks
36a Layered paragneiss, garnet-rich granulite
36b Marble, calc-silicate tectonic breccia

Parry Sound Domain (interior) (units 36 to 41)

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Buff to pink weathering, leucocratic granulite
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Unstratified, grey to buff weathering, orthopyroxene-bearing intermediate (granodiorite, tonalite to diorite) orthogneiss containing evidence of retrogression from a granulite facies precursor (e.g., unit 39 or 40); pegmatite veins may be common
39 Intermediate to Felsic Granulites (layered)
Unstratified, buff to grey weathering, layered, feldspathic granulite
38 Intermediate to Felsic Granulites (retrogressed)
Unstratified, grey, foliated to gneissic, intermediate (granodiorite, tonalite to diorite) orthogneiss containing evidence of retrogression from a granulite facies precursor (e.g., unit 39 or 40); pegmatite veins may be common
37 Mafic Rocks
Unstratified, layered, predominantly mafic two-pyroxene granulite or gneissic metagabbro
36 Metasedimentary Rocks
36a Layered paragneiss, garnet-rich granulite
36b Marble, calc-silicate tectonic breccia

THRUST CONTACT WITH PARRY SOUND DOMAIN (BASAL), LOCATED WITHIN THE PARRY SOUND SHEAR ZONE

Parry Sound Domain (basal) (units 30 to 35)

Armer Bay Gneiss Association (units 34 and 35)

- 35 Mafic Rocks
Pink, sugary, layered leucocratic gneiss and quartzite
34 Mafic and Metasedimentary Rocks
Quartzite, minor associated orthogneiss and para-amphibolite
Lighthouse Gneiss Association (units 31 to 33)
33 Intermediate to Felsic Rocks with Metabasaltic Dikes
33a Layered, migmatitic, grey tonalite, minor trondyjenite, granodiorite orthogneiss
33b Quartzite, minor associated paragneiss
32 Mafic Rocks
Amphibolite
31 Mafic and Metasedimentary Rocks
Para-amphibolite and unstratified paragneiss; includes pelitic and garnet-rich gneiss interlayered with quartzofeldspathic gneiss and minor quartzite

Gneissic Rocks Structurally Below the Lighthouse Gneiss Association (unit 30)

- 30 Metasedimentary Rocks
Grey biotite-muscovite-garnet-kyanite gneiss and schist
Tectonic Contact (suspect) with the Shawanaga Domain, located within the Parry Sound Shear Zone
Upper Go Home Domain (units 25 to 29)
29 Intermediate to Felsic Rocks
29a Grey, migmatitic, leucosome-rich (>25%), migmatitic granodioritic gneiss
29b Grey, migmatitic tonalitic and granodioritic orthogneiss

Mafic Rocks

- 26 Mafic orthogneiss, amphibolite
27 Metasedimentary Rocks
Layered to porous calc-silicate gneiss
26 Felsic Rocks
Pink, sugary leucocratic granite gneiss
25 Intermediate to Felsic Rocks
Grey, migmatitic tonalitic and granodioritic orthogneiss

Tectonic Contact with Subjacent Lower Go Home Domain: Allochthon-Parautochthon Boundary

Shawanaga Domain (units 19 to 24)

- 24 Intermediate to Felsic Rocks
Grey, layered quartzofeldspathic gneiss containing hornblende, biotite, epidote
23 Felsic Rocks
Pink, migmatitic, sugary leucocratic gneiss and subordinate grey, migmatitic leucogneiss
22 Intermediate Rocks
22a Grey tonalitic orthogneiss, possible hypabyssal intrusion (circa 1450 Ma)
22b Grey, migmatitic tonalitic and granodioritic orthogneiss

Sand Bay Gneiss Association (units 21 to 24)

- 24 Intermediate to Felsic Rocks
Grey, layered quartzofeldspathic gneiss containing hornblende, biotite, epidote
23 Felsic Rocks
Pink, migmatitic, sugary leucocratic gneiss and subordinate grey, migmatitic leucogneiss
22 Intermediate Rocks
22a Grey tonalitic orthogneiss, possible hypabyssal intrusion (circa 1450 Ma)
22b Grey, migmatitic tonalitic and granodioritic orthogneiss
21 Metasedimentary Rocks
21a Mostly medium-grained, moderately foliated to gneissic, migmatitic, granodiorite to tonalite containing metamorphosed mafic-dike (amphibole). No leucosome older than the dike is observed
21b Pink to grey marble
21c Calc-silicate gneiss
21d Para-amphibolite gneiss
21e Quartzite

Ojibway Gneiss Association (units 19 and 20)

- 20 Intermediate to Felsic Rocks
Unstratified pink and grey leucocratic gneiss
19 Migmatitic Rocks
19a Grey metatexite with pink, hornblende-epidote-bearing leucosome
19b Grey, migmatitic, tonalitic to granodioritic gneiss with varied amounts of pink leucosome
19c Grey, migmatitic, tonalitic to granodioritic orthogneiss

Tectonic Contact with Subjacent Britt Domain (Nadeau Island Gneiss Association): Allochthon-Parautochthon Boundary

Parautochthon South of Parry Sound Domain

Lower Go Home Domain (units 15 to 18)

- 18 Felsic Rocks
18a Pink to grey leucocratic gneiss
18b Pink to grey, migmatitic leucocratic to granodiorite
17 Intermediate to Felsic Rocks
17a Unstratified granitoid orthogneiss
17b Monzonitic to granitic orthogneiss
16 Mafic Rocks
Mafic orthogneiss
15 Metasedimentary Rocks
15a Unstratified paragneiss
15b Marble; may be associated with rusty graphitic schist
15c Calc-silicate gneiss

Parautochthon North of Parry Sound Domain

Britt Domain (units 1 to 14)

- 14 Migmatitic Rocks
Grey, migmatitic, leucocratic hornblende-biotite orthogneiss of granodioritic to monzonitic composition
13 Felsic Rocks
Grey, leucocratic