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GEOLOGICAL SURVEY OF CANADA

DEPARTMENT OF MINES ND TECHNICAL SURVEYS

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ROCKS AND MINERALS FOR THE COLLECTOR: BAY OF FUNDY AREA

(Report, figure, and 8 plates)

Ann P. Sabina

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Ann P. Sabina

DEPARTMENT OF MINES AND TECHNICAL SURVEYS

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ROCKS AND MINERALS FOR THE COLLECTOR: BAY OF FUNDY AREA

INTRODUCTION

The Bay of Fundy region of New Brunswick and Nova Scotia has long been a popular mineral collecting area for the amateur mineralogist and lapidarist. The deposits are many and varied and most are easily accessible by car from the main highway or by boat. This book describes localities where rocks and minerals may be found and tells how to reach them.

Boats are needed for some localities and may usually be rented at the nearest town or village. Parts of the Bay of Fundy are treacherous and the services of an experienced sailor or guide can be useful. Tide tables are needed in most cases when planning trips along the shoreline. To obtain copies see page 90.

Most of the old mines have not been worked for many years and it may be dangerous to enter shafts, tunnels, and other workings.

Directions to reach each of the occurrences are given in the text and are designed to be used with the official road maps. More detailed information is provided by the appropriate topographic and geological maps available from the agencies listed on page 89.

During the summer of 1963, the localities were visited by the author ably assisted by Miss L.J. Woodley. The field investigation was facilitated by information received from Dr. W.E. Hale of the Department of Geology, University of New Brunswick, Mr. E. George of Parrsboro, and Dr. D.G. Kelley, Geological Survey of Canada. Their assistance is gratefully acknowledged.

A BRIEF GEOLOGICAL HISTORY

The Bay of Fundy area is part of the Appalachian Mountain structure system that extends from the southeastern United States to Newfoundland. The earliest recorded geological event in the area was the accumulation of sedimentary and volcanic rocks of the St. John region in Precambrian time. Granite pebbles in these rocks indicate that there was also at least one period of granitic emplacement.

During the early part of the Palaeozoic era, sedimentary and volcanic material was deposited in a long, narrow subsiding basin - the Appalachian geosyncline - of which the Fundy area is a part.

TABLE I

AGE Millions of years	ERA	PERIOD	ROCKS FORMED	WHERE TO SEE THEM
		Recent	Alluvium, sand, gravel	In streams, rivers, tidal flats, beaches throughout area.
Ç	Cenozoic	Pleistocene	Gravels, sand, till	Saint John Harbour, Rothesay, Truro, Shubenacadie areas.
3			Basalt	Grand Manan Island (western part) North Mountains, Partridge Island Two Islands, Five Islands, Cape d'Or.
230	Mesozoic	Triassic	Sandstone, conglomerate, shale	Maces Bay-Point Lepreau area, Cobequid Bay area, Cape Blomidon, Dennis Beach (near Waterside, N.B.).
		Pennsylvanian	Sandstone, conglomerate, shale	Shepody Beach, Alma Beach, Joggins, Little Lepreau Basin (north shore), Taylor Peninsula, Dorchester and New Horton copper deposits, Springhill coal deposits.
			Conglome rate, sandstone, limestone, gypsum, anhydrite	Hillsborough, Walton-Cheverie, Windsor, Shubenacadie, Mahone Bay areas.
	Palaeozoic	Mississippian	Bituminous shale Shell limestone	Hillsborough-Moncton area. Admiral Rock.
			Conglomerate, sandstone, shale	St. Andrews area, Blacks Harbour.
	_		Granite, diorite	Oak Bay, St. George, Shelburne, Yarmouth, Nictaux areas.
		Devonian	Slate, quartzite, iron- formation	Torbrook area,
			Peridotite	St. Stephen.

			Silurian	Volcanics, sandstone, shale, conglomerate, limestone	Back Bay–Letite area, Letang Peninsula, Passamaquoddy Bay (east side).
		1		Staurolite-mica schist, slate, quartzite	Moores Mills-Oak Bay area.
				Shale	Saint John: south side of bridge over Reversing Falls; Navy Island.
		Palaeozoic	Ordovician	Staurolite-andalusite schist	Port La Tour, Shelburne, Jordan Falls areas.
				Gold-bearing slate, quartzite	Most gold mines in Nova Scotia.
				Argillite, slate	Lunenburg Bay area.
00			Cambrian	Sandstone, limestone, shale, conglomerate	Saint John: Rockwood Park, Seely Street; West Saint John: Lancaster Street.
	1	1		Volcanic tuffs, breccias	Kennebecasis River (north shore) northeast of Saint John, shore of Ludgates Lake, Grand Manan Island(east side of Whale Cove to Fish Head and Swallow Tail).
0	rian Ers	Proterozoic		Chlorite schist, andesite, dacite, basalt	Bay of Fundy shore: Martin Head to Point Wolfe.
 	l recsmbi			Quartzite, argillite, schist	Grand Manan Island (east side from North Head to Red Head), Dipper Harbour (south side).
9	d	Archaean		Crystalline limestone	Green Head Peninsula, Torryburn quarries, Musquash Harbour (east side).
1	1				

Later, in the Ordovician and Devonian periods, there was folding, faulting, metamorphism and granitic emplacement. As the era drew to a close, the processes of deposition and deformation were repeated and deposits of gypsum, anhydrite, salt and coal were formed.

During part of the Mesozoic era - the Triassic period - the area was again the site of sedimentation and volcanism. It is the Triassic volcanic rocks, with their deposits of agate, jasper and zeolites, that have made the area popular with collectors. During the Ice Age, glaciers swept in a southeasterly direction altering the topography and leaving deposits of sand, gravel, and till.

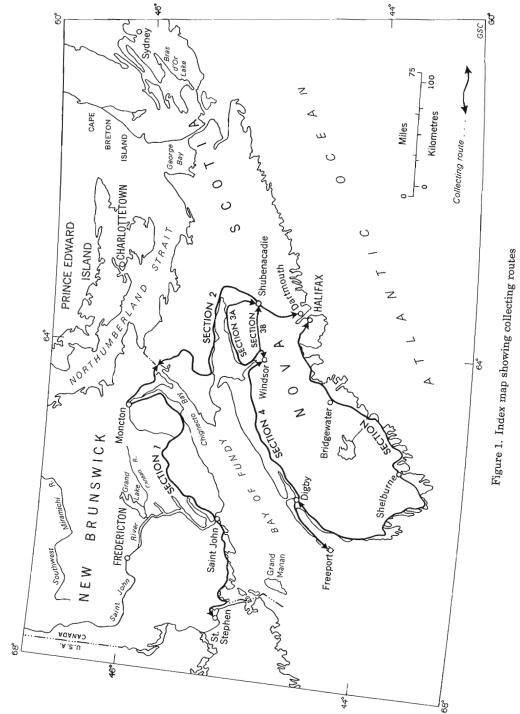
The geological history with examples of the rocks formed is summarized in Table I.

COLLECTING ALONG THE ROUTE

The route, as shown on Figure 1, is divided into 5 sections: (1) St. Stephen to Nova Scotia border including Grand Manan Island, via Highways 1, 2 and 14; (2) New Brunswick border to Halifax, via Highway 2; (3) Shubenacadie to Windsor, via (A) Highway 15 and (B) Highway 14; (4) Windsor to Freeport, via Highways 1 and 17; (5) Digby-Yarmouth-Halifax, via Highways 1 and 3.

Information on each collecting locality is systematically listed in the text as follows: mileage along the highways starting at the beginning of each section; name of the locality or deposit; minerals or rocks of interest to the collector - shown in capital letters; mode of occurrence; brief notes on the locality with specific features of interest to the collector; location and access; references to other publications, indicated by a number and listed at the end of the book; references to maps of the National Topographic series (T) and to geological maps of the Geological Survey of Canada (G).

Many of the localities are on private property and the fact that they are listed in this book does not imply permission to visit them. Please respect the rights of property owners at all times.



Section 1

ST. STEPHEN - NOVA SCOTIA BORDER

Mile 0 - St. Stephen; junction Highways 1 and 3. Proceed east along No. 1

St. Stephen Nickel Mine

PYRRHOTITE, CHALCOPYRITE, SERPENTINE

In gabbro.

The sulphides occur in massive form or as disseminations; serpentine is found along shear- and fracture-planes with the ore. The deposit has been worked at intervals since it was first known in 1880; it was last worked in 1960. The shaft and dumps remain.

Road log from St. Stephen:

- Mile 0 Junction Highways 1 and 3; proceed north along Highway 3.
 - 0.8 Junction Hall Road; turn left (west).
 - 1.9 Junction Basswood Ridge-St. Stephen Road; turn right (north).
 - 2.2 Fork; follow left (west) fork.
 - 2.6 Mine at end of road.

Ref.: 22 pp. 24-27.

Maps (\overline{T}) : 21 G/3 W St. Stephen

(G): 1096A St. Stephen

Blakeney Mine

PYRITE, QUARTZ (crystals)

In quartz veins cutting graphitic schist and arkose.

The quartz crystals, about 1/2 inch across and an inch long, grade from milky to transparent at the tips. The property is a former gold prospect. The pits are now mostly overgrown.

Road log continuing from turn-off to St. Stephen nickel mine:

- Mile 2.2 Fork; take right fork proceeding north toward Basswood Ridge.
 - 9.6 Junction; turn right (east).
 - 9.7 Junction; turn left (north) and proceed about 200 yards to the junction of a trail on the right. Follow the trail for 700 yards along the side of a ridge to the pits on the south east side.

Ref.: 22 pp. 33-34.

Maps (T): 21 G/6 W Rolling Dam (G): 1097A Rolling Dam

Road-cut

SERPENTINE, MAGNETITE

In fractures in peridotite.

The minerals occur in veins about 1/2 inch wide.

The road-cuts are on the west side of Highway 3 at a point 1.6 miles north of its junction with Highway 1.

Maps (T): 21 G/3 W St. Stephen

(G): 1096A St. Stephen

Mile 4.7 - Junction Oak Bay Road

Charlotte County Granite Company Quarry

GREY GRANITE

The rock is currently being used locally as a building and monument stone. The Company's office is in St. Stephen.

Road log from Highway 1:

- Mile 0 Junction Highway 1 and Oak Bay Road; proceed south along Oak Bay Road.
 - 4.0 Junction; turn left (east).

Mile 4.1 Fork; take right fork.

- 4.7 Junction quarry road; turn left (north).
- 4.8 Quarry.

Maps (T): 21 G/3 E St. Stephen

(G): 1096A St. Stephen

Mile 4.7 - Junction Oak Bay Road

Road-cuts

STAUROLITE, GARNET

In grey mica schist.

The staurolite prisms are dark brown and about 1/2 inch long; pink garnets are mostly 1/8 inch across.

Road log from Highway 1:

- Mile 0 Junction Highway 1 and Oak Bay Road; proceed north along Oak Bay Road.
 - 0.8 Junction Oak Bay-Tower Hill Roads; turn left (north).
 - 6.4 Junction Moores Mills Road; turn left (west).
 - 7.7 Junction Central Tower Hill Road; turn right (north).
 - 8.1 Road-cuts on both sides of road.

Maps (T): 21 G/6 E Rolling Dam

(G): 1097A Rolling Dam

Mile 8.2 - Junction Highway 41

Mount Pleasant Mines Limited

CASSITERITE, MOLYBDENITE, WOLFRAMITE, ARSENOPYRITE, CHALCOPYRITE, SPHALERITE, STANNITE, PYRITE, MARCASITE, PYRRHOTITE, TETRAHEDRITE-TENNANTITE, GALENA, GLAUCO-DOT, SIDERITE, BISMUTH (native), FLUORITE.

With quartz in volcanics (porphyry, breccia and silicified tuffs).

Good crystal specimens of blue transparent fluorite have been obtained from the kaolin zone. The individual crystals measure up to 3 inches across and sometimes grade from a light blue to a deep ink-blue along the edges of the cubes. Fine-grained colourless, green and purple fluorite is associated with the metallic minerals. Underground exploration for tin was commenced in 1962. Specimens of the ore and fluorite (green, purple) can be found in the dumps.

Road log from Highway 1:

- Mile 0 Junction Highways 1 and 41; proceed north along 41.
 - 7.0 Junction Rollingdam Road; turn right.
 - 9.2 Rollingdam crossroads; continue straight ahead.
 - 13.2 Junction Pleasant Ridge Road; turn right.
 - 16.5 Fork; bear right.
 - 18.3 Junction Pomeroy Ridge Road; turn right.
 - 21.4 Turn-off (left) to Kedron Brook; continue straight ahead for Mount Pleasant mine.
 - 27.1 Mount Pleasant mine. (The head office of the company is in St. Andrews).

Ref.: 18 pp. 20-29.

Map (T): 21 G/7 W McDougall Lake

Kedron Brook Deposit

SPHALERITE, PYRITE, GALENA, PYRRHOTITE, CHALCOPYRITE, STANNITE

With quartz in metamorphosed siltstone.

The deposit is exposed at water level along Kedron Brook about 600 feet above the point where the road crosses it (W.E. Hale, personal communication). The road crosses the brook 0.8 mile from the turn-off at Mile 21.4 on the way to the Mount Pleasant mine.

Map (T): 21 G/7 W McDougall Lake

Mile 10.9 - Turn-off to H. Murray property

while 10.7 - I din-on to 11. Wallay prop

'Black Granite' Quarry

DIORITE

The rock was formerly quarried for use as a building and monument stone.

The quarry is on the property of Mr. H. Murray on the west side of Highway 1 at Mile 10.9.

Maps (T): 21 G/3E St. Stephen

(G): 1096A St. Stephen

Mile 15.5 - Junction Highway 1A (west end) to St. Andrews dock and ferry to Grand Manan Island

Mile 16.1 - Junction Highway 1A (east end)

Grand Manan Island

(a) SCOLECITE, HEULANDITE, LAUMONTITE, ANALCITE, NATROLITE, EPISTILBITE, THOMSONITE, STILBITE, QUARTZ CRYSTALS, COPPER (native), HEMATITE, CHLORITE; (b) MAGNETITE

(a) In amygdaloidal cavities in basalt; (b) in beach sands.

The zeolites occur as crystal aggregates and as radiating fibres in cavities and seams; some have been removed from the rock by weathering and may be found as pebbles along the shoreline. Colourless to amethystine quartz crystals, chalcedony, earthy red hematite, and greenish brown chlorite are often present. Native copper, as nodules and wires, has been reported from the north and south ends of the Island; many years ago an attempt at mining copper was made along a cliff south of Dark Harbour. The zeolite-filled amygdules are larger and more numerous along the coastline known as the Seven Days Work (the west side of Whale Cove to Ashburton Head) than at any other part of the Island.

Magnetite is found in the sand at Red Point.



Zeolite-bearing basalt cliffs along Seven Days Work, Grand Manan Island.



Scolecite in amygdaloidal basalt, from Seven Days Work, Grand Manan Island.

The only collecting sites accessible by road are Seven Days Work, Northern Head, Dark Harbour and Red Point. Access to other points along the western shore is by boat from North Head where arrangements for boat trips may be made with local fishermen. Collect at low tide.

Road log to Seven Days Work and Northern Head:

- Mile 0 North Head village; at junction main highway and Whistle road; proceed north along Whistle road.
 - 2.3 Bridge over Eel Brook.
 - 2.4 Trail on right leading to Seven Days Work (about 1/2 mile).
 - 2.9 End of road at Northern Head. Walk to shore.

To reach Seven Days Work from Mile 2.4, follow the trail to the shoreline, then bear right and walk south along the shore. The cliffs here are referred to as the Seven Days Work. The south end of the cliffs may be reached from Whale Cove which is accessible by the Swamp road (0.7 mile) leading north from the main highway about 100 yards east of the junction with the Whistle road.

Access to Dark Harbour is by a 5-mile gravel road leading west from the main highway at Castalia.

Access to Red Point (Head) is by a road 1.3 miles long, leading east from the main highway at the north end of Seal Cove village. The magnetite-bearing sand is along the beach at the end of the road.

Grand Manan Island is reached by regular ferry services from St. Andrews and Saint John.

Ref.: 24 pp. 210-212

Maps (\overline{T}) : 21 B/10 E, W Grand Manan 21 B/15 E, W Campobello

(G): 965A Grand Manan

Mile 25.6 Bridge over Digdeguash River

Mile 28.3 Junction Elmsville road

Atlantic Black Granite Company Quarry (Digdeguash Lake)

GABBRO

The gabbro is sold commercially under the name 'black gabbro' and is used locally as a monument and building stone. The head office of the company now operating the quarry is in Sussex.

Road log from Highway 1:

- Mile 0 Junction Elmsville road; proceed north.
 - 4.7 Junction quarry road; turn right (east).
 - 5.7 Quarry.

Maps (T): 21 G/2 W St. George

(G): 1094A St. George

Mile 33.2 St. George (at bridge over Magaguadavic River)

Mile 33.8 Junction Deer Island Ferry-Second Falls road at St. George

St. George Granite Quarry

Salmon-coloured to red granite was formerly quarried here.

Road log from St. George:

- Mile 0 Junction Highway 1 and Deer Island Ferry-Second Falls road; proceed north along Second Falls road.
 - 1.4 Fork; take right (east) fork.
 - 2.3 Crossroad; continue straight ahead along gravel road.
 - 3.0 Quarry on right side of road.

Maps (T): 21 G/2 W St. George

(G): 1094A St. George

Road-cut

MARINE FOSSILS

In black slate.

Road Log from St. George:

- Mile 0 Junction Highway 1 and Deer Island Ferry-Second Falls road; proceed south along Ferry road.
 - 1.2 Fork; take left fork.
 - 1.8 Road-cuts on both sides of road.

Maps (T): 21 G/2 W St. George

(G): 1094A St. George

Letang Limestone Deposit

CRYSTALLINE LIMESTONE

The limestone is in shades of pink, pale green, grey, buff and cream-white, and includes mottled and banded varieties. It is suitable for ornamental objects such as paper weights, ash-trays and book-ends.

Road log continuing from marine fossil occurrence:

Mile 1.8 - Marine fossil occurrence.

- 4.0 Junction Letang Road; turn left.
- 5.5 Wharf at end of Letang Peninsula; bear right and walk northwest along the shoreline for about 75 yards to the limestone exposures.

Maps (T): 21 G/2 W St. George

(G): 1094A St. George

Mile 50.9 - Highway bridge over New River

Mile 55.1 - Junction New River road

New River Iron Deposit

MAGNETITE

As bands up to 4 inches wide in rhyolitic rock.

Road log from Highway 1:

Mile 0 - Junction New River road; proceed west along New River road.

Mile 1.4 F.J. Wright farmhouse on right; from here an overgrown trail leads northwest about 3/4 mile to the pits.

Ref.: 4.

Maps (\overline{T}) : 21 G/2 E St. George

(G): 1094 A St. George

Mile 55.8 - Junction (west) Scenic Coastal Route (Highway 1A); follow this highway for the next three occurrences.

Mile 59.3 - Junction Highway 1A and gravel road leading west to shore,

Rock Exposures

FOSSIL PLANTS

In red sandstone.

Road log from Highway 1A:

Mile 0 - Junction gravel road at schoolhouse; turn right (west).

- 0.5 Fork; take left fork.
- 1.0 End of road at shore; bear left and walk south to the sandstone exposures. Collect at low tide.

Ref.: 3.

Maps (\overline{T}) : 21 G/1 W Musquash (G): 1084 A Musquash

Mile 61.0 - Turn-off to Maces Bay shoreline.

Rock Exposures

EPIDOTE

As pebbles and boulders in conglomerate and as coating on granite boulders.

The boulders, up to 2 feet across, are composed of epidote with some calcite and quartz and could be used for ornamental objects and jewelry. The epidote coating on the granite is about 1/4 inch thick.

Walk the short distance to the shoreline from the turn-off at Mile 61.0 (5.2 miles south of the junction of highways 1 and 1A). Access is at low tide only.

Maps (T): 21 G/1 W Musquash

(G): 1084A Musquash

Mile 76.9 - Junction Highway 1A and South Musquash road

Dolan Gold Property

PYRITE

In quartz vein cutting diabase

Road log from Highway 1A:

Mile 0 - Junction South Musquash road; follow this road east.

- 3.5 South Musquash; turn right at church.
- 5.8 Fork; bear left.
- 5.9 House on left side of road; the trenches, visible from the road, are on the left side of the road behind the house.

Maps (T): 21 G/l E Musquash (G): 1084A Musquash

Mile 77.3 - Junction (east) Highways 1 and 1A; return to Highway 1.

Mile 84.0 - Junction Burchill road.

Frenchman Creek Lead-Zinc Deposit

SPHALERITE, GALENA, TETRAHEDRITE

As specks and small masses in white crystalline limestone.

Road log from Highway 1:

Mile 0 - Junction Burchill road; proceed south along Burchill road.

1.6 Fork; take left fork.

Mile 1.8 Walk across meadow on left to overgrown pits at edge of wooded area about 100 yards east of the road.

Maps (T): 21 G/1 E Musquash (G): 1084A Musquash

Mile 88.1 - Lancaster; junction Highway 2

Mile 91.1 - Lancaster; Church Avenue and Highway 1-2

Green Head Quarries

LIMESTONE, PYRITE, CHERT

The limestones include calcium, magnesian and dolomitic varieties in shades of pale blue, cream-white and grey. Some of the cream-white variety is streaked with pink to red calcite and, when polished, makes an attractive stone for ornamental purposes. Bluish chert nodules and pyrite crystals are sometimes associated with the limestone.

Road log from Highway 1-2 (Manawagonish Road):

- Mile 0 Corner Manawagonish Road and Church Avenue; proceed north along Church Avenue following signs to "Dominion Park".
 - 4.6 Junction Dominion Park Road and Green Head Road; follow Green Head Road.
 - 4.8 Fork; follow left fork 0.1 mile to a trail on right leading 200 yards to an abandoned quarry; follow right fork 0.1 mile and 0.4 mile to abandoned quarries on left side of road.

Ref.: 14 pp. 151-156.

Maps (T): 21 G/8 E Saint John

(G): 497A Saint John

Mile 91.5 - Lancaster; at intersection Main Street (Highway 1-2), Lancaster Avenue and Bridge Road,

Saints Rest (Taylor Peninsula) Deposits

PLACER GOLD, EPIDOTE

In beach sand.

Gold has been reported from the beach sands at high tide level (W.E. Hale, personal communication). Epidote occurs as pebbles along the beach and as coating up to 3/4-inch thick on loose granite blocks along the shore; pink feldspar veins up to 5 inches wide cut the granite. Some of the epidote is suitable for polishing.

Road log from Lancaster (Highway 1-2):

- Mile 0 Main Street-Bridge Road-Lancaster Avenue intersection; proceed east along Lancaster Avenue.
 - 0.3 Turn right onto Sand Cove Road.
 - 3.0 End of road at Saints Rest beach. The shore is accessible at low tide.
- Maps (T): 21 G/1 E Musquash (G): 497A Saint John

Navy Island Concretions

PYRITE

In black shale.

The concretions up to an inch in diameter, are composed of massive pyrite and of aggregates of tiny pyrite crystals.

Road log from Lancaster (Highway 1-2):

- Mile 0 Main Street-Bridge Road-Lancaster Avenue intersection; proceed east along Lancaster Avenue.
 - 0.4 Turn left onto Prince Street.
 - 1.1 Turn right onto Market Street.
 - 1.2 Turn left onto King Street.
 - 1.5 Gate at Navy Island; road continues beyond gate to shore (about 500 yards). The concretion-bearing shale is exposed along the shore at low tide.
- Maps (T): 21 G/8 E Saint John
 - (G): 497A Saint John

Mile 91.9 - Bridge over Reversing Falls (east end); continue along Highway 2 (Douglas Avenue, Main Street, Rockland Road, Wall Street, City Road, Haymarket Square).

Mile 93.5 - Junction Cranston Street.

Snowflake Lime Limited Quarry

SERPENTINE

Dark green massive serpentine is associated with white and bluish grey crystalline limestone. Some of the serpentine is the verdantique variety and specimens large enough for smaller ornamental objects such as ash trays, book-ends, and paper weights can be obtained. Similar serpentine-bearing limestone is exposed by numerous road-cuts along Mount Pleasant Drive and other roads in the vicinity of Rockwood Park. The quarry is currently being worked for limestone.

Road log from Highway 2 in Saint John:

- Mile 0 -Junction Highway 2 (Rockland Road) and Cranston Street; proceed north along Cranston Street.
 - 0.05 Turn left onto Barker Street.
 - 0.1 Turn right onto Somerset Street.
 - 1.2 Quarry on right side of road.

Ref.: 14 pp. 159-165.

Maps (\overline{T}) : 21 G/8 E Saint John

(G): 497A Saint John

Mile 94.6 - Junction Highway 29 (Rothesay and Thorne avenues, St. John).

Mile 96.5 - Junction Highway 2 Alt. (west end); follow 2 Alt.

Mile 97.3 - Turn-off on left to Adams Lime Works Quarry,

Adams Lime Works Quarry

CRYSTALLINE LIMESTONE

The limestone is white bluish and greenish grey sometimes with pink to red streaks. Small crystals of pyrite occur in some of the limestone. The deposit is being worked at present. The quarry is on the east side of Highway 2 Alt., 0.8 mile northeast of its junction with Highway 2.

Ref.: 14 pp. 165-170.

Maps (T): 21 G/8 E Saint John (G): 497A Saint John

Mile 98.2 - Torryburn limestone quarry on right side of road.

Torryburn Limestone Quarry

The deposit is similar to that of the Adams Lime Works quarry. The quarry, now inactive, is at the roadside at a point 0.9 mile northeast of the Adams quarry.

Maps (T): 21 G/8 E Saint John

(G): 497A Saint John

Mile 105.3 - Junction Quispamsis road

Quispamsis Lead-Zinc Deposit

PYRITE, SPHALERITE, GALENA

As small crystals and masses in crystalline limestone.

Road log from Highway 2 Alt.:

Mile 0 - Junction Quispamsis road; proceed north.

0.7 Railway bridge; walk east along the tracks for about 450 yards to old pits on the right side of the railway.

Ref.: 2 p. 47.

Maps (T): 21 H/5 W Loch Lomond

(G): 478A Loch Lomond

Mile 107.2 - Junction Highway 2; return to the main highway.

Mile 116.5 - Hampton (at bridge over Kennebecasis River)

Mile 119.0 - Turn-off (left) to Hampton Uranium deposit,

Hampton Uranium Deposit

URANIUM-BEARING HYDROCARBON

Vein in sedimentary rocks (shale, argillite, conglomerate, dolomite).

The hydrocarbon is brittle, jet-black with a conchoidal fracture. The vein is exposed at the base of the southeast side of a steep hill near an old mine shaft at the end of a partly-overgrown tractor trail leading north from the Highway, and in the creek bed about 260 feet north of the deposit near the mine shaft. Attempts at mining the hydrocarbon for fuel were made at the beginning of this century; exploration for uranium was conducted in 1953-54.

The tractor road (1/2 mile long) follows the east side of a creek and leaves the Highway at Mile 119.0 (at the second mail-box opposite the farm house on the south side of the highway).

Ref.: 15 pp. 12-14.

Maps (\overline{T}) : 21 H/12 W Sussex

(G): 845A Sussex

Mile 138.4 - Sussex Corner; junction Highway 29,

Markhamville Manganese Mine

PYROLUSITE, MANGANITE, BRAUNITE, PSILOMELANE, GOETHITE, HEMATITE, CALCITE, BARITE

In grey limestone.

The manganese minerals occur as botryoidal or nodular masses, and as veins with calcite, barite and hematite.

The mine was last worked in 1895; it consists of numerous pits on the farm of Mr. H. Scott of Markhamville.

Road log from Highway 2 at Sussex Corner:

Mile 0 - Junction Highway 29; proceed south along 29.

6.1 Jeffrey Corner; turn left (east) onto Markhamville road.

Mile 7.6 Fork; bear right.

- 8.8 Markhamville; turn left onto Spencer road.
- 8.9 H. Scott farmhouse on right; the mine is on the left side of the road about 200 yards east of the farmhouse.

Ref.: 16 pp. 87-90.

Maps (\overline{T}) : 21 H/11 W Waterford

(G): 829A Waterford

Chambers Deposit

ALBERTITE

Vein in shale.

The deposit has been exposed by a few pits on the Chambers farm near Urney.

Road log from Highway 2 at Sussex Corner:

- Mile 0 Junction Highway 29; proceed south along 29.
 - 0.3 Junction Waterford road; turn left (east).
 - 4.8 Junction Urney road; turn left.
 - 7.9 Junction Piccadilly road; continue straight ahead.
 - 8.5 Chambers farmhouse on left (the road ends here).

Ref.: 10

Maps (T): 21 H/11 W Waterford

(G): 829A Waterford

Mile 141.8 - J.M. Thomson farmhouse on north side of Highway 2.

Plumweseep Salt Spring

The salt is composed of sodium chloride (85%) with calcium sulphate and calcium, magnesium and potassium chlorides.

Manufacture of salt for table and dairy use from this deposit was commenced late in the 18th century. It was recovered by evaporation using furnaces and large kettles; the annual production was about 150 barrels. The deposit was last worked at about the turn of this century. It is just north of the highway on the J.M. Thomson property.

Ref.: 7 pp. 19-20.

Maps (\overline{T}) : 21 H/11W Waterford (G): 829A Waterford

Mile 148.3 - Junction Highway 14; proceed along this highway to Moncton.

Mile 157.3 - Junction Mechanics Lake road,

Mechanics (Pollett) Lake Deposit

DIATOMITE

The diatomite covers the bottom of the lake which was partly drained (about 1900) for the removal of the material for use in paint manufacture. Some material may still be found at the east end of the lake where it had been treated and stored.

Access to the east end of the lake is by a 1.2-mile road leading south from Highway 14 at Mile 157.3. From the end of the road walk about 200 yards east to where the material may be found at the base of the spruce trees.

Ref.: 9 pp. 71-72.

Maps (\overline{T}) : 21 H/11 E Waterford (G): 1109A Point Wolfe

Mile 175.4 - Junction Point Wolfe road (Fundy National Park).

Mile 175.7 - Bridge at Alma,

Alma Beach Deposits

EPIDOTE, RHYOLITE, VOLCANIC BRECCIA, PORPHYRITIC DACITE, FOSSILS, PETRIFIED WOOD

The epidote, rhyolite, volcanic breccia and porphyritic dacite occur as pebbles and boulders, some up to 2 feet across along the beach.

They take a good polish and are suitable for ornamental purposes. The epidote is mixed with quartz and sometimes with dark green chlorite. Fine-grained, deep purple rhyolite is streaked with a pink to red quartz-plagioclase mixture; the overall colour of the rock is reddish purple. The volcanic breccia is composed of irregular rounded fine-grained pea-green fragments embedded in brownish purple fine-grained matrix. The porphyritic dacite is composed of irregular white to cream-coloured plagioclase phenocrysts measuring up to 1/2 inch long in a dark green matrix of pyroxene, quartz and feldspar.

Fossil plants and trees occur in grey sandstone. The tree trunks measuring up to 10 inches across, lie horizontally and are partially replaced by white calcite and less frequently by pyrite; the original structure has been preserved and is well displayed on the polished surface.

The shoreline is easily accessible at low tide from the village of Alma. The pebbles and boulders are scattered along the beach on both sides of the mouth of the Alma (Salmon) River; the fossil-bearing rock is exposed along the cliffs on the north side of the mouth and in the vicinity of the lighthouse at Cape Enrage, about 10 miles by road east of Alma.

Maps (T): 21 H/10 W Alma (G): 1109A Point Wolfe

Mile 185.5 - Turn-off (right) to Copp property

Copp Copper Deposit

CHALCOCITE, MALACHITE, CHALCOPYRITE, COVELLITE, AZURITE

In grey sandstone.

The copper minerals occur as veins and as intergrowths with fibres of fossil plants. The most abundant mineral is chalcocite; covellite and azurite are rare. Bright green malachite coats the black copperbearing fossils as well as the sandstone producing colourful and unusual specimens.

The deposit is exposed by numerous pits on the Copp farm near Germantown. From the turn-off at Mile 185.5 on Highway 14, proceed east for 1.7 miles to the crest of a hill; walk to the right (east) across the meadow along the crest of the hill for about 200 yards to the pits.

Ref.: 34 pp. 4-13, 24-29. Maps (T): 21 H/10 W Alma

(G): 648A Albert

Mile 192.3 - Junction New Horton road on right,

New Horton Copper Mine

CHALCOCITE, MALACHITE, CHALCOPYRITE, PYRITE, COVELLITE, AZURITE

The deposit is similar to the Copp deposit. When first worked in 1898 it was known as the Vernon mine; reworked at intervals between 1928 and 1950 the old workings are now inaccessible and not much material remains in the dumps.

The mine is on the west side of the New Horton road at a point 5.4 miles south of its junction with Highway 14 south of Albert.

Ref.: 34 pp. 4-24.

Maps (\overline{T}) : 21 H/10 E Alma (G): 648A Albert

Mile 192.7 - Albert; junction Crooked Creek road on left,

Lumsden Mine

TENNANTITE, CHALCOPYRITE, GALENA, SPHALERITE, PYRITE

With quartz in sheared volcanics.

The deposit was worked for zinc between the First World War and 1928. Specimens may still be found on the dumps.

Road log from Highway 14 at Albert:

- Mile 0 Junction Crooked Creek road; proceed north along this road.
 - 6.5 Fork; bear left.
 - 11.0 Mine. For the last few miles, the road is very rough and may not be accessible to vehicles with low clearance.

Ref.: 1 pp. 67-70.

Maps (T): 21 H/15 W Hillsborough

(G): 647A Hillsborough

Mile 208.2 - Junction Albert Mines road,

Albertite Mine

ALBERTITE

Veins in grey shale.

The albertite is jet-black with a brilliant lustre and conchoidal fracture. The deposit was worked from its discovery in 1849 to sometime before 1888 when it was believed to be exhausted. Good specimens may still be found in the dumps.

Road log from Highway 14:

Mile 0 - Junction Albert Mines road; proceed west along this road.

- 2.4 Albert Mines village. Junction gravel road; turn right.
- 3.4 Mine on right side of road.

Ref.: 17 pp. 16-17.

Maps (\overline{T}) : 21 H/15 E Hillsborough

(G): 647A Hillsborough

Mile 211.0 - Hillsborough

Hillsborough Gypsum Deposits

GYPSUM, ANHYDRITE

Colourless to white and grey fine-grained, massive gypsum is associated with crystalline limestone and anhydrite. Transparent crystals of selenite are often embedded in the massive gypsum. Several quarries in the Hillsborough area are being operated by the Canadian Gypsum Company, Limited; these are not accessible to collectors because of safety regulations. Representative specimens may be obtained from numerous road-cuts in the district.

Ref.: 6 pp. 25-28.

Maps (\overline{T}) : 21 H/15 E Hillsborough

(G): 647A Hillsborough

Mile 212.9 - Junction Turtle Creek road,

Turtle Creek Manganese Deposit

PSILOMELANE, PYROLUSITE, LIMONITE, BARITE

In limestone.

The manganese minerals form nodular masses similar to the deposit at the Markhamville mine.

The mine, now inactive, is on the north side of Berryton Brook, south of Turtle Creek village.

Road log from Highway 14:

- Mile 0 Junction Turtle Creek road; proceed west along this road.
 - 10.8 Turtle Creek crossroads; turn left (south).
 - 16.2 Farmhouse on right (west) side of road in front of bridge over Berryton Brook; turn right onto farm lane. The pits and dumps are behind the house.

Ref.: 16 pp. 78-81.

Maps (\overline{T}) : 21 H/15 W Hillsborough

(G): 647A Hillsborough

Mile 225.5 - Moncton; junction Highway 2 Alt. Proceed east along 2 Alt.

Mile 239.5 - Memramcook (traffic light); junction Highway 2.

East Memramcook Barite Deposit

BARITE, FLUORITE, GALENA, CHALCOCITE, MALACHITE, AZURITE, QUARTZ

In vein cutting red shale.

White barite and green and purple fluorite are the most abundant minerals. Colourless to amethystine quartz forms drusy crystals

cementing brecciated shale near the vein. The deposit has been trenched.

Road log from junction Highway 2:

Mile 0 - Memramcook traffic light; continue straight ahead (east).

- 1.5 Fork; bear left.
- 1.9 Trenches and dumps on hillside on left (north) side of road.

Ref.: 27 p. 5

Maps (T): 21 I/2 E Moncton

(G): 646A Moncton

Mile 247.1 - Dorchester crossroads,

Dorchester Copper Mine

CHALCOCITE, PYRITE, MALACHITE, COVELLITE

In grey sandstone and conglomerate.

Chalcocite with pyrite, quartz and covellite forms nodules up to 2 inches across. It commonly replaces pyrite and fossil plants which retain the original structure. Some of the chalcocite is disseminated in the sandstone. Fine-grained malachite coats the nodules and copper-bearing plant remains.

The deposit, similar to the Copp and New Horton deposits, was first investigated as a copper prospect in 1881 and was worked at intervals until 1917. Good specimens may still be found in the dumps.

Road log from Highway 2 at Dorchester:

- Mile 0 Dorchester crossroads; turn left (northeast). Part of this road passes through Dorchester Penitentiary property; parking is not permitted on that part of the road.
 - 3.7 Crossroads; turn left onto Woodhurst road.
 - 4.3 Road on right leads 150 yards to dumps.
 - 4.4 Road on left leads 100 yards to more dumps.

Ref.: 33 pp. 2-7.

Maps (T): 21 H/16 W Amnerst

(G): 59-12 Southern New Brunswick (scale 1 inch to 2 miles)



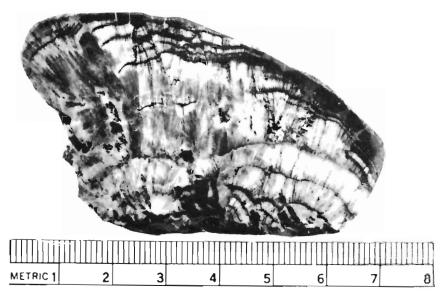
Fossil plants replaced by copper-bearing minerals in grey sandstone, Dorchester copper mine, Dorchester, New Brunswick.

Shepody Beach Deposit

PLANT FOSSILS, PETRIFIED WOOD

In sandstone and shale.

Fossil plants and some trees can be seen in the rock exposed along the cliffs; some of the fossil trees have been partly replaced by white calcite. The deposit is similar to the Alma beach fossils.



Fossil wood (cross-section) replaced by calcite, from Shepody Beach, New Brunswick.

Road log from Highway 2 at Dorchester:

- Mile 0 Dorchester crossroads; proceed south toward Dorchester Cape.
 - 0.6 Fork; bear right.
 - 10.2 Junction Rockport road; turn right and walk short distance to beach. The fossil-bearing rocks outcrop along cliffs southward for about a mile. Collect at low tide.

Ref.: 25 p. 47.

Maps (\overline{T}) : 21 H/15 E Hillsborough

(G): 647A Hillsborough

Mile 262.4 - Nova Scotia border.

Section 2

NEW BRUNSWICK BORDER - HALIFAX

Mile 0 - New Brunswick border; continue along Highway 2.

Mile 3.0 - Amherst; junction Highway 4/6.

Mile 6.8 - Turn-off to Dominion Tar (Dom Tar) properties.

Sifto Salt Limited

The company, a subsidiary of Dominion Tar and Chemical Company, operates a processing plant for the production of salt from brine. Tours through the plant are conducted for visitors at 10 a.m. and at 3 p.m. daily Monday through Friday.

Follow road log to gypsum quarry below.

Dom Tar Gypsum Quarry

GYPSUM, ANHYDRITE

Fine-grained, compact cream-white mottled with pink, yellow, pale green and grey gypsum is associated with grey anhydrite.

Road log from Highway 2:

Mile 0 - Turn-off to Dom Tar properties at Mile 6.8; proceed west.

- 2.1 Sifto Salt Limited plant on right.
- 2.3 Junction dirt road (across railway tracks); turn right.
- 2.5 Superintendent's office; enquire about entering quarry.

Map (T): 21 H/16 E Amherst

Mile 7.8 - Junction Highway 2A (Glooscap Trail)

Brookdale Limestone Quarry

DOLOMITIC LIMESTONE, CALCITE

The limestone is light brown to reddish buff-coloured. Aggregates of tiny light brown calcite crystals form botryoidal masses in small cavities.

Road log from Highway 2:

Mile 0 - Junction Highway 2A; take gravel road leading east.

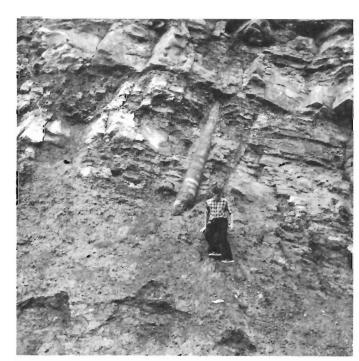
- 0.5 Junction; turn right.
- 1.0 Fork; bear left onto rough dry-weather road.
- 1.5 Quarry (inactive in summer of 1963).

Map (T): 21 H/16 E Amherst

Joggins Deposit

FOSSIL PLANTS

Palaeozoic fossil remains of a forest dating back to the Pennsylvanian period occur along cliffs north of the Joggins wharf. The trees, about 20 inches across and several feet high, stand vertically along the cliffs. Only 4 trees were seen in the summer of 1963, but this number varies from season to season due to erosion of the cliffs. The one-time thick forest contained Sigillaria, Calamites and Stigmaria.



Fossil tree trunk along cliff at Joggins, Nova Scotia.

Road log from Highway 2:

Mile 0 - Junction Highway 2A; proceed west along Highway 2A.

- 5.7 Maccan; turn right (west) onto Joggins road.
- 12.6 River Hébert; abandoned coal mine on right.
- 17.4 Joggins; turn left onto Apple River road.
- 17.6 Junction road to wharf; turn right.
- 18.0 Joggins wharf. Walk northeast along shore (at low tide) for about 3/4 mile to the fossil-bearing strata.

Ref.: 25 pp. 33-37, 47-48.

Maps (T): 21 H/9 W River Hébert

(G): 337A Springhill

Mile 20.1 - Springhill; junction Highway 4.

Mile 22.3 - Springhill coal mine (active) on left.

Mile 48.0 - Junction Highway 9

Horseshoe Cove-Cape d'Or

ANALCITE, STILBITE, LAUMONTITE, APOPHYLLITE, CHABAZITE, THOMSONITE, MESOLITE, NATROLITE, HEULANDITE, JASPER, OBSIDIAN, COPPER (native), CALCITE (crystals)

In amygdaloidal basalt.

The minerals are found in the basalt cliffs along the shore. The zeolites and calcite form crystal groups in the cavities. Native copper occurring as grains and small masses in veins was at one time mined near the shore at Horseshoe Cove.

Road log from Highway 2:

Mile 0 - Junction Highway 9; proceed west along this road.

- 26.5 East Advocate; turn left.
- 26.9 Fork; turn left onto very rough road (may not be accessible for automobiles).

29.2 Horseshoe Cove; the Cape d'Or lighthouse is about a mile south. Collect at low tide.

Ref.: 35 pp. 128-129.

Maps (T): 21 H/7 W Cape Chignecto

(G): 826 Apple River (Map sheets 100, 101)

Mile 49.5 - Parrsboro (Main Street and Eastern Avenue)

West Bay

- (a) GYPSUM; (b) STILBITE, CHALCEDONY (AGATE), QUARTZ CRYSTALS, CHLORITE
- (a) Veins in red sandstone; (b) in basalt.

Transparent, salmon-pink, fibrous gypsum (satin-spar) veins are up to 5 inches wide. Stilbite (white), chalcedony (blue-grey and red) and quartz crystals (colourless, amethystine and white) occur in seams. Greenish-black chlorite forms a coating on the basalt.

Road log from Highway 2 at Parrsboro:

- Mile 0 Main Street and Eastern Avenue; proceed south along Main.
 - 0.2 Monument on left; turn right.
 - 0.3 Fork; take left fork (Whitehall road).
 - 2.4 Fork; bear right.
 - 2.6 Fork; follow right fork for West Bay. (Left fork leads 0.2 mile to Partridge Island).
 - 6.6 Junction West Bay road; turn left.
 - 6.9 West Bay shore; bear right proceeding southwest about 200 yards to the sandstone cliffs and another 150 yards to the basalt cliffs. Collect at low tide.
- Maps (T): 21 H/8 W Parrsboro.
 - (G): 841 Parrsboro (Map sheet 83)



Partridge Island viewed from the east side.

Partridge Island

STILBITE, LAUMONTITE, NATROLITE, HEULANDITE, CHABAZITE, ANALCITE, APOPHYLLITE, QUARTZ CRYSTALS, CALCITE, CHALCEDONY (agate), JASPER

In cavities and seams in basalt.

From the end of the road (see log for West Bay) walk to either side of the island at low tide. The total distance around the island is about a mile.

Refs: 31 p. 28; 35 p. 129.

Maps (\overline{T}) : 21 H/8 W Parrsboro

(G): 841 Parrsboro (Map sheet 83)

Clarke Head

- (a) GYPSUM; (b) CALCITE, DOLOMITE, PYRITE
- (a) Veins in red sandstone as at West Bay; (b) as crystals in grey shale.

The sandstone and shale are exposed in cliffs along the shore of Minas Basin west of Clarke Head.

Road log from Highway 2 at Parrsboro:

- Mile 0 Main Street and Eastern Avenue; proceed south along Main.
 - 0.2 Monument on left; continue straight ahead on road to golf club.
 - 3.4 Walk across meadow on right to the shore (about 300 yards); turn left (east) and walk to sandstone cliffs, then to shale about 200 yards farther east. Collect at low tide.

Maps (T): 21 H/8 W Parrsboro

(G): 841 Parrsboro (Map sheet 83)

Swan's Creek

GMELINITE, CHABAZITE, ANALCITE, APOPHYLLITE, NATROLITE, HEULANDITE, CALCITE CRYSTALS, SILICEOUS SINTER, STILBITE

In amygdaloidal basalt.

Exposed at low tide along the shore of Minas Basin on both sides of Swan's Creek.

Continue east along the golf club road 1 mile beyond the turn-off point for Clarke Head (or, 4.4 miles from the corner of Main Street and Eastern Avenue).

Ref.: 35 p. 129.

Maps (T): 21 H/8 W Parrsboro

(G): 841 Parrsboro (Map sheet 83)

Wasson's Bluff

CHABAZITE, HEULANDITE, STILBITE, GMELINITE, NATROLITE, ANALCITE, CALCITE (Dog-tooth spar), COPPER (native)

In amygdaloidal basalt.

Good crystal specimens of the zeolites occur along the shore-line cliffs.

Access to the shore is through the J. Wasson farm. Prior to visiting the locality, inquire at the Wasson farmhouse on the south side of the golf club road at a point 5.2 miles east of the corner of Main Street and Eastern Avenue. Collect at low tide.

Refs.: 31 p. 28; 35 p. 129.

Maps (T): 21 H/8 E Five Islands

(G): 841 Parrsboro (Map sheet 83)

Two Islands (The Brothers)

GMELINITE, ANALCITE, CHABAZITE, HEULANDITE, NATROLITE, CALCITE, AGATE

In amygdaloidal basalt.

Access is by boat from Parrsboro or by walking along the tidal flats (at low tide) from the shoreline east of Wasson's Bluff (about 1/2 mile).

Refs.: 31 p. 63; 35 p. 129.

Maps (T): 21 H/8 E Five Islands

(G): 841 Parrsboro (Map sheet 83)

McKay (McCoy) Head

ANALCITE, HEULANDITE, SILICEOUS SINTER, CALCITE, QUARTZ CRYSTALS

In amygdaloidal basalt.

Exposed along the shore of McKay Head at low tide.

Road log from Parrsboro:

- Mile 0 Main Street at Eastern Avenue; proceed along Main Street and the golf club road.
 - 4.2 Bridge over Swan Creek.
 - 6.5 Gate- from here the road is not accessible to motor vehicles. Walk straight ahead 500 yards to a brook; turn right continuing 300 yards to shore, then bear left toward McKay Head.

Ref.: 35 p. 129.

Maps (\overline{T}) : 21 H/8 E Five Islands

(G): 841 Pairsboro (Map sheet 83)

Cape Blomidon-Cape Split

(a) APOPHYLLITE, HEULANDITE, NATROLITE, STILBITE, CHABAZITE, ANALCITE, GMELINITE, LAUMONTITE, MESOLITE, THOMSONITE, AMETHYST, JASPER, AGATE, CALCITE; CELADONITE (b) GYPSUM

(a) In amygdaloidal basalt; (b) veins in red sandstone.

The basalt is exposed along cliffs for about 8 miles from Cape Blomidon to Cape Split; the zeolites, agate, jasper and amethyst may be collected at low tide at numerous places along the shore. The collecting sites vary from season to season as they are dependent upon fresh rock slides released by frost action each spring. Fibrous pink to orange gypsum occurs in the sandstone cliffs near the basalt contact at the east end of Cape Blomidon. Zeolite specimens, some measuring several inches across and usually coated with green celadonite, can be found in cavities in the rock or as loose fragments along the beaches. The agate is sometimes banded white with bluish-grey, or it may be bluish-grey, pink, orange or red, patterned with white producing a lacy effect. The amethyst is clear, pale to medium deep purple and is usually associated with chalk-white chalcedony. Jasper varies from cinnamon-coloured to chocolate-brown and sometimes contains yellow, deep green or blue specks.

Easiest access is by boat from Parrsboro where boat rental and guide facilities may be arranged. The shoreline, about 3 1/2 miles east of Cape Split, may also be reached by a partly overgrown 3/4 mile trail leading north from Mr. J. McDonald's farmhouse at the end of the Scots Bay road. The descent down the cliffs - 300 to 400 feet high - at the end of the trail is hazardous and ropes may be required.

Ref.: 35 p. 132.

Maps (T): 21 H/8 W Parrsboro

(G): 841 Parrsboro (Map sheet 83)

Mile 65.3 - Five Islands (at schoolhouse on right).

(a) Pinnacle Island; (b) Moose Island

(a) ANALCITE, CHABAZITE, NATROLITE, SILICEOUS SINTER, STILBITE, HEULANDITE, THOMSONITE, GMELINITE, CALCITE; (b) AGATE

In amygdaloidal basalt.

Pinnacle Island is at the western end of the Five Islands group; Moose Island, at the eastern end, is the largest of the group. Collect along the shores of both islands at low tide.

Access is by boat from Five Islands village where arrangments for boat rental may be made.

Refs.: 31 p. 28; 35 p. 128.

Maps (T): 21 H/8 E Five Islands

(G): 838 Five Islands and Tennycape (Map sheet 75)

Mile 67.4 - Turn-off to Gerrish Mountain pits.

Gerrish Mountain Iron Deposit

MAGNETITE, QUARTZ, CHALCEDONY

In basalt.

Crystalline and fine-grained massive magnetite is associated with white massive quartz and banded white to bluish grey chalcedony.

The occurrence is at the east end of Gerrish Mountain, 5.5 miles west of the bridge over the Economy River. A path 100 yards long leads southwest from the highway at Mile 67.4 (opposite the junction of a dirt road leading northwest) to 2 small pits at the side of a wooded ridge.

Ref.: 32 pp. 61-62.

Maps (\overline{T}) : 11 E/5 W Bass River

(G): 867A Bass River

Mile 89.0 - Great Village; turn-off to Londonderry,

Londonderry Iron Deposit

LIMONITE, HEMATITE (specularite), ANKERITE, PYRITE, SIDERITE

In sedimentary and volcanic rocks.

Numerous iron mines in the Londonderry district were operated between 1849 and 1908; the ore was processed in Londonderry where remains of the ovens and some of the ore may still be seen. The village is 6 miles north of Highway 2 at Great Village.

Ref.: 32 pp. 37-61.

Maps (T): 11 E/5 E Londonderry

(G): 874A Londonderry (out of print)

Mile 92.8 - Glenholme; junction Highway 4

East Mines Iron Deposit

Similar to Londonderry deposit.

Road log from Highway 2:

Mile 0 - Glenholme; proceed north along Highway 4.

- 5.8 Junction gravel road; turn right.
- 6.6 Fork; bear right.
- 7.0 Junction mine road; turn left.
- 7.3 Open pits and dumps at edge of wooded area.

Ref.: 32 pp. 37-61.

Maps (\overline{T}) : 11 E/5 Londonderry

(G): 874A Londonderry (out of print)

Mile 107.1 - Junction road to Clifton, Black Rock.

Black Rock Manganese Deposit

PYROLUSITE, MANGANITE, LIMONITE, HAUSMANNITE, CALCITE

Veins (up to 7 inches wide) in dark grey limestone.

Exposed along the shore of Minas Basin at mid-tide level. Access to the shoreline is through the Edgar Nelson farm.

Road log from Highway 2:

- Mile 0 Junction road to Clifton, Black Rock; proceed west on this road.
 - 5.1 Junction Shore road; turn right.
 - 8.0 Fork; bear right.
 - 10.0 End of road at the Edgar Nelson farmhouse. Deposit is 150 yards west of the house.

Ref.: 29 pp. 110-111.

Maps (\overline{T}) : 11 E/6 W Truro

(G): 1058A Truro

Mile 108.8 - Truro; junction Highways 2 and 4 (Prince and Willow streets).

East Mountain Manganese Mine

PYROLUSITE, MANGANITE

As nodules up to 4 inches across in limestone conglomerate.

The deposit, on the property belonging to Mrs. Daniel McMasters, was worked at intervals between 1897 and 1941.

Road log from Highway 2 at Truro:

- Mile 0 Intersection Prince and William streets; proceed east along Prince Street (Highway 4).
 - 1.3 Junction Highway 11; turn right continuing on Highway 4.
 - 5.7 Junction Manganese Mines road; turn right.
 - 6.5 Fork; take left fork.
 - 6.7 McMasters farm on left. Specimens may be collected from the sides of the partly overgrown open-cut.

Ref.: 29 pp. 104-108.

Maps (\overline{T}) : 11 E/6 E Truro

(G): 1058A Truro

Manganese Mines Mine

PYROLUSITE, MANGANITE, CALCITE

Veins in sandstone.

The deposit, on the farm of Mrs. H. Coulter, was worked between 1880 and 1905. The dump is beside the water-filled open pit.

Road log continuing from Mile 6.5 of log to East Mountain mine:

Mile 6.5 Fork; follow right fork.

- 7.1 Junction; turn left.
- 7.6 Fork; bear left.
- 7.7 Coulter farmhouse on left.

Ref.: 29 pp. 108-110. Maps (T): 11 E/6 E Truro (G): 1058A Truro

Mile 117.0 - Brookfield crossroads (intersection Pleasant Valley, Middle Stewiacke roads)

Pleasant Valley Gypsum Deposit

Grey massive gypsum was quarried on the Gerald Brine property on the north side of the Pleasant Valley road at a point 2.5 miles west of the Brookfield crossroads.

Ref.: 29 p. 90.

Maps (\overline{T}) : 11 E/3 W Shubenacadie

(G): 1076A Shubenacadie

Brookfield Barite Mine

BARITE, SIDERITE

In fractures in sandstone and shale.

Coarsely crystalline white barite and chocolate-brown siderite are intergrown and exhibit well-developed cleavages. The deposit was

first worked before 1891 and again from 1948 to 1952 by Maritime Barytes Limited. The open pit, dumps and old concentrating plant are at the side of a hill.

Road log from Brookfield crossroads:

Mile 0 - Proceed east along Middle Stewiacke road.

- 0.9 Junction gravel road; turn left.
- 2.7 Fork; bear left.
- 2.9 Fork; bear left.
- 3.0 Junction lumber road on right; continue straight ahead.
- 3.3 Barite mine.

Ref.: 29 pp. 71-76.

Maps (\overline{T}) : 11 E/6 E Truro (G): 1058A Truro

Brookfield Iron Mine

LIMONITE

In red shale.

The ore consisting of botryoidal and massive limonite mixed with red clay was shipped to Londonderry for processing. Inactive since 1906, the deposit is about 200 yards northeast of the Brookfield barite mine. To reach it, follow the lumber road leading northwest from the road to the barite mine (Mile 3.0) for about 700 yards to the pits which are now partly overgrown.

Ref.: 29 pp. 90-91.

Maps (\overline{T}) : 11 E/6 E Truro (G): 1058A Truro

Middle Stewiacke Barite Deposit

BARITE, GRAPHITE, CALCITE

In veins cutting grey limestone.

The barite is pale green to white and contains graphite inclusions. Red calcite occurs in the limestone.

The deposit was worked for barite about a hundred years ago and, except for exploration conducted by Maritime Barytes Limited in 1948, it has since remained inactive. It is on the east side of a brook and is accessible by a wood road, about 1/2 mile long, leading north from the Brookfield-Middle Stewiacke road at a point 6.0 miles east of the Brookfield crossroads (1.9 miles east of the junction of the Birch Hill road). A few overgrown dumps can be seen on the property.

Refs.: 12 p. 192; 30 p. 61.

Maps (T): 11 E/3 E Shubenacadie (G): 1076A Shubenacadie

Smithfield Lead Mine

GALENA, PYRITE, ARSENOPYRITE, CHALCOPYRITE, SPHALERITE, CALCITE, QUARTZ, BARITE, MALACHITE, AZURITE

In limestone and limestone conglomerate.

The deposit is now inactive but was operated intermittently from 1881 to 1951. The workings consist of a few old shafts and trenches; specimens may be found on the dumps.

Road log from Brookfield:

- Mile 0 Brookfield crossroads; proceed east along Middle Stewiacke
 - 0.9 Turn-off to Brookfield barite, iron mines; continue straight ahead.
 - 8.3 Middle Stewiacke; continue along paved road.
 - 11.2 Junction gravel dry-weather road; turn left.
 - 13.4 Mine on right.

Ref.: 29 pp. 93-98.

Maps (T): 11 E/6 E Truro (G): 1058A Truro Mile 130.4 - Junction Highway 24,

Gays River Gold Mine

GOLD

In conglomerate.

The gold was found in the matrix of the conglomerate and as a thin coating on pebbles in the conglomerate. It was mined from the deposit for about 20 years after its discovery in 1862.

Road log from Highway 2:

- Mile 0 Junction Highway 24; proceed southeast along Highway 24.
 - 5.7 Gays River village; turn left onto road to Alton.
 - 9.8 Junction trail on left; follow the trail to a fork a few yards beyond the gate. Proceed along the left fork for 200 yards to the old dumps.

Ref.: 30 pp. 51-53

Maps (T): 11 E/3 W Shubenacadie (G): 1076 A Shubenacadie

Gays River Lead Mine

GALENA, SPHALERITE, MARCASITE, FLUORITE (rare), PYRITE (rare), CALCITE

In fossiliferous limestone.

Galena and sphalerite are the most common minerals. The sphalerite is usually honey-yellow but sometimes grades to medium brown. The deposit has been exposed by pits and trenches on the bank of the Gays River on the Abbott farm.

Road log from Highway 2:

- Mile 0 Junction Highway 24; proceed southeast along Highway 24.
 - 5.5 Junction Milford road; turn right.
 - 6.5 Farmhouse belonging to Mrs. C. Abbott on left.

Ref.: 30 pp. 54-57.

Maps (T): 11 E/3 W Shubenacadie

(G): 1076 A Shubenacadie

Middle Musquodoboit Clay Deposit

FIRE-CLAY

The clay is white to grey and is suitable for pottery-making.

The property belongs to Mr. Foley of Saint John, N.B.

Road log from Mile 5.5 of log to Gays River lead deposit:

Mile 5.5 Junction Milford road; continue straight ahead.

17.5 Middle Musquodoboit. Fork; bear left.

17.8 Junction Glenmore road; turn left.

18.0 Clay pit on right, about 50 yards from road.

Ref.: 30 pp. 69-70.

Maps (\overline{T}) : 11 E/3 E Shubenacadie

(G): 1076A Shubenacadie

Mile 131.1 - Shubenacadie; junction Highway 15.

Shubenacadie Clay Deposit

FIRE-CLAY, PYRITE, QUARTZ (crystals), COAL

The clay ranging from white to grey and reddish is suitable for potterymaking. In places, it contains numerous pyrite concretions which may be studded with white quartz crystals. Well-preserved plant remains are found in the lignite bed at the south end of the pit. The pit is across the railway on the east side of Highway 2 in Shubenacadie, 0.3 mile south of the junction of Highway 15.

Ref.: 30 pp. 69-70.

Maps (T): 11 E/3 W Shubenacadie

(G): 1076A Shubenacadie

Mile 133.8 - Junction Highway 14

Mile 138.5 - Milford; turn-off to gypsum quarries,

National Gypsum (Canada) Limited Quarry

GYPSUM, ANHYDRITE

Colourless selenite crystals are associated with white to grey massive gypsum. The anhydrite is white. Collectors may visit the quarry, but should make prior arrangements by writing to the mine manager who will determine if and when it is safe to collect.

Access is by a road 0.7 mile long, leading east from Highway 2 at Mile 138.5.

Ref.: 30 pp. 66-68.

Maps (T): 11 E/3 W Shubenacadie

(G): 1076A Shubenacadie

Mile 146.7 - Enfield; turn-off to Oldham,

Oldham Gold Mine

GOLD, ARSENOPYRITE, GALENA, SPHALERITE, DOLOMITE

In quartz veins cutting slate and quartzite.

Some very rich pockets of gold and gold-arsenopyrite nuggets were found in some of the veins. One pocket yielded 60 ounces of gold, and from one part of a vein an unusually high value of 103 ounces of gold per ton was obtained. The district is one of the oldest gold mining areas in the province and produced gold almost continuously from 1862 to 1928. Numerous old mines are situated in the vicinity of Oldham; the dumps and overgrown pits of one of the mines are on the south side of the gravel road leading east from Highway 2 (Mile 146.7) at a point 2.4 miles from the highway.

Ref.: 23 pp. 49, 150-156. Maps (\overline{T}) : 11 D/13 E Uniacke

(G): 1005 Elmsdale (Map sheet 66; out of print)

Mile 159.7 - Junction Highway 18.

Mile 159.9 - Turn-off to Waverley.

Waverley Gold Mine

GOLD, ARSENOPYRITE, PYRITE, DOLOMITE

In quartz veins cutting slate and quartzite.

During its most active period - 1862 to 1903 - this district was one of the principal gold producers in the province. One of the more accessible mines is in the town of Waverley. It is on a hill on the south side of the main road (and across the railway tracks) at a point 0.6 mile west of the turn-off from Highway 2. The dumps are visible from the road.

Ref.: 23 pp. 41, 200-208 Maps (T): 11 D/13 E Uniacke

(G): 1025 Waverley (Map sheet 67)

Mile 164.8 - Junction Highway 1.

Mile 173.5 - Halifax; junction Highway 3 at Armdale Rotary.

Section 3A

SHUBENACADIE-WINDSOR

Mile 0 - Shubenacadie; junction Highways 2 and 15; proceed north along

Mile 6.9 - Admiral Rock; junction New Dublin road,

Admiral Rock Limestone Quarries

SHELL LIMESTONE

The limestone consisting of coral fragments and marine shells cemented by fine-grained limestone is mostly buff-coloured with shades of red, brown, yellow and grey. Numerous tiny cavities are filled with calcite crystals.

Road log from Highway 15:

Mile 0 - Junction New Dublin road; turn left (west).

- 0.5 Junction; turn right.
- 0.9 W. Webb farmhouse and quarry on left side of road.
- 1.0 Trail on right leading 50 yards through woods to an abandoned quarry.

Ref.: 30 pp. 70-72

Maps (T): 11 E/3 W Shubenacadie (G): 1076A Shubenacadie

Mile 14.2 - South Maitland (at bridge over Five Mile River),

Stephens Deposit

GYPSUM

In shale and limestone.

White fibrous gypsum veins (up to 18 inches wide) and white fine-grained massive gypsum are exposed for 650 feet along cliffs forming the west bank of the Shubenacadie River opposite a point 3.2 miles north of the highway bridge over the Five Mile River. The fibrous variety was mined in 1869 and used in manufacturing terra alba.

Ref.: 29 p. 89.

Maps (T): 11 E/6 W Truro (G): 1058A Truro

Mile 19.7 - Maitland (at bridge),

Mile 40.0 - Tennycape (at bridge over Tennycape River),

Tennycape Manganese Deposit

PYROLUSITE, PSILOMELANE, MANGANITE, CALCITE

In matrix of conglomerate.

The manganese minerals occur as small masses, as fine crystalline aggregates, and as coating around the pebbles in the conglomerate. Crystals of calcite, some coated with hair-like manganite crystals, are found in vugs.

The manganese-bearing conglomerate is exposed in cliffs along the west side of the mouth of the Tennycape River at a point 2300 feet northwest of the Highway bridge. Only accessible at low tide.

Refs.: 16 pp. 40-41; 32 pp. 77-78. Maps (T): 11 E/5 W Bass River (G): 867A Bass River

Mile 40.6 - Turn-off to Tennycape mine

Tennycape Manganese Mine

PYROLUSITE, MANGANITE, PSILOMELANE, LIMONITE, BARITE, SELENITE, CALCITE

In limestone conglomerate and shaly limestone.

The manganese minerals occur as nodules and pockets in the conglomerate and as stringers in fractures in limestone. Pyrolusite, the most abundant mineral, may sometimes be found as well-formed crystal aggregates.

During mining operations - 1880 to 1900 - this mine was the largest producer of manganese ore in the province. The pits and open-cuts are now overgrown.

Access is by a road, 1.1 miles long, leading south from Highway 15 at Mile 40.6; the last part of the road (0.3 mile) is a wood trail not accessible to motor vehicles.

Ref.: 32 pp. 64-68.

Maps (\overline{T}) : 11 E/5 W Bass River

(G) 867A Bass River

Mile 47.1 - Turn-off to Whale Cove,

Whale Cove Manganese Deposit

RAMSDELLITE, PSILOMELANE, CALCITE

In red sandstone.

Ramsdellite (MnO $_2$) occurs as shiny black platy aggregates with dull dark brown to black fine-grained psilomelane on white and brown banded crystalline calcite. The white calcite fluoresces bright pink.

The deposit is exposed at low tide along the cliffs at Whale Cove north of Whale Creek. From the turn-off at Mile 47.1 proceed west 0.2 mile along a rough road to the shore; bear right and walk 150 yards to the occurrence.

Maps (T): 21 H/1 E Wolfville

(G): 1128A Wolfville; 38-1962 Walton-Cheverie Area (1 inch to 2000 feet)

Mile 47.9 - Walton; turn-off to gypsum quarries

Walton Gypsum Quarries

GYPSUM, ANHYDRITE

Colourless to grey transparent selenite crystals and rosettes are associated with the fine-grained white to grey massive gypsum.

Anhydrite is white or grey.

The quarries are properties of National Gypsum (Canada) Limited. Collectors may visit the inactive quarries.

Road log from Highway 15:

- Mile 0 Walton; continue straight ahead where highway turns right to cross the Walton River (Mile 47.9).
 - 0.9 Fork; take left fork. Quarry on left is in operation.
 - 1.2 Trail on left leads 200 yards to inactive quarry.

Ref.: 30 pp. 66-69.

Maps (\overline{T}) : 11 E/4 W Kennetcook

(G): 1075A Kennetcook

Mile 48.0 - Walton; bridge over Walton River (west end)

Mile 48.3 - Turn-off to Stephens mine

Stephens Manganese Mine

PYROLUSITE, MANGANITE, CALCITE (dog-tooth spar)

In pockets and joint planes in limestone.

Mining operations were conducted between 1870 and 1907. The pits are now overgrown.

Road log from Highway 15:

- Mile 0 Turn-off at Mile 48.3; turn left (south).
 - 0.2 Junction two trails on right (directly opposite a house on left side of road); follow the left (south) trail 200 yards to a fork, then take the right fork for 500 yards to the pits.

Refs: 5 p. 27; 16 pp. 46-47.

Maps (\overline{T}) : 21 $H\overline{/1}$ E Wolfville

(G): 1128A Wolfville; 38-1962 Walton-Cheverie Area (1 inch to 2000 feet)

Mile 49.1 - Turn-off to Magnet Cove Barium Corporation,

Magnet Cove Barium Corporation Mine

BARITE, GALENA, SPHALERITE, PYRITE, MARCASITE, TENNANTITE, PROUSTITE, CHALCOPYRITE, BORNITE, ARGENTITE, GERSDORFFITE, HEMATITE, SIDERITE, DOLOMITE,

CALCITE, CHLORITE, PYROLUSITE, PSILOMELANE, MANGANITE, LIMONITE, CHALCOCITE, MALACHITE, AZURITE

In brecciated fault zone in sediments (sandstone, limestone, shale).

Barite is mostly fine-grained, white, reddish, grey or black; it may occur as long prismatic crystals or as spheres composed of elongated crystals. The sulphides are usually fine to medium grained and occur as mixtures of two or more minerals. The deposit has been worked for barite since 1941 and for sulphides (lead, zinc, copper, silver) since 1961. It accounts for 90% of the barite production in Canada.

Access is by a road 1.2 miles long leading south from Highway 15 at Mile 49.1. Because the mine is in operation, visits may not be practical for safety reasons; prior arrangements should be made by writing to the mine manager.

Ref.: 5 pp. 20-27.

Maps (\overline{T}) : 21 H/1 E Wolfville

(G): 1128A Wolfville; 38-1962 Walton-Cheverie Area (1 inch to 2000 feet)

Mile 50.5 - Turn-off to shoreline

Mile 51.3 - Turn-off to Rainy Cove

Shoreline: Walton to Cheverie

CALCITE

As crystals in red sandstone and as matrix in conglomerate.

When exposed to ultra-violet rays (long or short), the crystals and some of the massive calcite fluoresce bright pink; some of the fine-grained calcite in the conglomerate fluoresces pale yellow and is phosphorescent.

Numerous localities along the shore furnish fluorescent calcite; two readily accessible ones are reached by roads branching from Highway 15 at: Mile 50.5- road (0.7 mile long) leads to gravel pits at shore; Mile 51.3- (east side of bridge over Rainy Cove Brook)- road (200 yards long) leads to wharf at Rainy Cove. Collect at low tide.

Maps (T): 21 H/1 E Wolfville

(G): 1128A Wolfville; 38-1962 Walton-Cheverie Area (1 inch to 2000 feet)

Mile 53.3 - Cambridge; turn-off to Goshen.

Goshen Iron Mine

SIDERITE, LIMONITE, BARITE, PYRITE

In sandstone and limestone.

The mine, now inactive, was worked late in the 19th century and reexamined in 1961 by Consolidated Mining and Smelting Company.

Road log from Highway 15:

Mile 0 - Turn-off at Mile 53.3; proceed south along rough dirt road.

2.8 Fork; turn right onto wood trail and proceed 100 yards. The open-cuts are on a slope on the right (north) side of the trail.

Ref.: 5 pp. 18-19.

Maps (\overline{T}) : 21 H/1 E Wolfville

(G): 1128A Wolfville; 38-1962 Walton-Cheverie Area (1 inch to 2000 feet)

Mile 59.5 - Cheverie; turn-off to wharf,

Cheverie Cliffs

GYPSUM, ANHYDRITE, CALCITE, FLUORITE, DANBURITE, CELESTITE

With limestone along cliffs.

Varieties of gypsum include: massive, fine-grained white mottled with grey or less commonly with yellow; white or orange fibrous; colourless to grey transparent platy aggregates or individual crystals of selenite. Purple fluorite is found with colourless calcite crystals. White nodular aggregates of danburite have been found in association with anhydrite. Blue-grey, transparent fibrous bundles of celestite protrude through the weathered surface of the fibrous gypsum. The cliffs are northeast of the wharf which is 0.2 mile from the highway. Collect at low tide.

Ref.: 13 pp. 44-45.

Maps (\overline{T}) : 21 H/1 E Wolfville

(G): 1128A Wolfville; 38-1962 Walton-Cheverie Area (1 inch to 2000 feet)

Macumber Mine

PYROLUSITE, MANGANITE, PSILOMELANE, CALCITE

In limestone conglomerate.

The manganese minerals occur as nodular masses and crystal aggregates with white to brown calcite (dog-tooth spar). The deposit, on the shoreline southwest of the Cheverie wharf, was worked briefly in the 1880's and again in the 1930's. The remains of the workings consist of an open-cut into the cliff on the T. Macumber property.

Access is by walking (at low tide) along the shore southwest from the wharf for 400 yards to the cliffs in front of the Macumber farmhouse, or by taking the road (0.3 mile long) leading west from Highway 15 at Mile 59.9 to the farmhouse.

Refs.: 5 pp. 15-16; 8 p. 64; 16 pp. 50-51.

Maps (T): 21 H/1 E Wolfville

(G): 1128A Wolfville; 38-1962 Walton-Cheverie Area (1 inch to 2000 feet)

Mile 60.5 - Turn-off to gypsum quarry.

Cheverie Gypsum Quarry

White and grey mottled fine-grained gypsum contains transparent grey selenite crystals. The quarry, inactive for many years, is now overgrown and only the sides remain.

Access is by a farm road, about a mile long, leading east from Highway 15 at Mile 60.5.

Maps (T): 21 H/1 E Wolfville

(G): 1128A Wolfville; 38-1962 Walton-Cheverie Area (1 inch to 2000 feet)

Mile 60.8 - Gypsum quarry on left,

National Gypsum (Canada) Limited Quarry

GYPSUM, ANHYDRITE

White to grey compact gypsum containing colourless, transparent selenite crystals is associated with greyish anhydrite. The deposit has been worked since 1957. Collectors may visit the quarry but prior written arrangements should be made with the mine manager to determine when and if it is safe to collect.

The quarry is on the south side of Highway 15 at Mile 60.8.

Refs.: 5 pp. 17-18; 8 pp. 57-58.

Maps (T): 21 H/1 E Wolfville

(G): 1128A Wolfville; 38-1962 Walton-Cheverie Area (1 inch to 2000 feet)

Mile 75.7 - Brooklyn; junction Highway 14.

Mile 78.9 - Sweet's Corners; junction Wentworth Creek road leading to gypsum quarries operated by Fundy Gypsum Company Limited. Because of safety regulations, collecting is not permitted in these quarries, but visitors may do so in the Company's inactive properties in the Windsor area.

Mile 80.2 - Junction Irishman's road.

Mosher Quarry

GYPSUM, ANHYDRITE

White and grey mottled gypsum and anhydrite is exposed along the walls of the quarry (inactive); the floor of the quarry is now overgrown.

Road log from Highway 15:

Mile 0 - Junction Irishman's road; turn left (south).

- 0.5 Junction quarry road; turn left.
- 0.8 Quarry.

Maps (T): 21 A/16 E Windsor

(G): 1037 Windsor (Map sheet 73)

Mile 81.3 - Junction Meadow road,

Meadow Quarry

GYPSUM, ANHYDRITE

The gypsum is white streaked and mottled with grey.

Road log from Highway 15:

- Mile 0 Junction Meadow road; turn left (south).
 - 0.3 Trail on left (north side of lake) leads 300 yards to the quarry (inactive).
- Maps (T): 21 A/16 E Windsor
 - (G): 1037 Windsor (Map sheet 73)

Mile 82.3 - Windsor; junction Highway 1,

Mile 84.7 - Windsor; intersection Gray Street (at traffic lights),

Parsons Limestone Quarry

SHELL LIMESTONE

The rock is grey to buff-coloured and consists of marine shells and coral fragments cemented by fine-grained high-calcium limestone. Tiny cavities are lined with calcite crystals. The quarry, now inactive, belongs to Ralph and Arthur Parsons Limited of Windsor.

Road log from Highway 1:

- Mile 0 Intersection Gray Street; turn left (west) onto Gray Street.
 - 0.2 Fork; bear left.
 - 0.4 Fork; bear left.
 - 0.5 Fork; bear right.
 - 1.0 Junction farm lane on right (in front of farmhouse at top of hill); turn right, then swing left after passing house.
 - 1.1 Gate; walk downhill to quarry.

Ref.: 14 pp. 67-68.

Maps (\overline{T}) : 21 A/16 E Windsor

(G): 1037 Windsor (Map sheet 73)

Mile 85.2 - Bridge over Avon River (east end) at Windsor,

Section 3B

SHUBENACADIE - WINDSOR

Mile 0 - Milford; junction Highways 2 and 14. Proceed west along No. 14.

Mile 19.6 - Turn-off to East Rawdon mine.

East Rawdon Gold Mine

GOLD, PYRITE

In quartz veins cutting quartzite.

The mine, opened in 1884, was last worked in 1929. The workings consisted of numerous shafts, now inaccessible. A few dumps remain.

Access is by a road (0.6 mile long) leading south from Highway 14 at Mile 19.6 (0.7 mile east of its junction with the West Gore road).

Ref.: 30 p. 48.

Maps (T): 11 E/4W Kennetcook (G): 1075A Kennetcook

Mile 20.3 - Rawdon Gold Mines; junction West Gore road.

West Gore Antimony Mine

STIBNITE, ANTIMONY (native), GOLD, ARSENOPYRITE, PYRITE, VALENTINITE, KERMESITE

In quartz-calcite veins cutting slate.

The antimony occurs as stringers and bunches, kermesite and valentinite as coatings. The deposit was worked for antimony beginning in 1883 and for gold about 20 years later. It has been inactive since the 1930's. There are a few caved shafts on the property and several dumps.

Road log from Highway 14:

Mile 0 - Rawdon Gold Mines; proceed north along West Gore road.

2.8 West Gore crossroads; turn left onto Clarksville road.

Mile 3.0 Fork; bear left.

- 3.6 Junction; turn left onto mine road.
- 3.8 Mine dumps on right.

Ref.: 30 pp. 57-60.

Maps (\overline{T}) : 11 E/4 W Kennetcook

(G): 1075A Kennetcook

Mile 24.6 - Centre Rawdon; turn-off to Northup mine.

Northup Gold Mine

GOLD, PYRITE, QUARTZ (crystals)

In quartz veins cutting dark grey slate.

This is one of several gold mines worked in the district for about 10 years just before the turn of the century.

Turn left (south) from Highway 14 opposite the church (Mile 24.6) and proceed 0.2 mile along a gravel road to the dumps on the right about 40 yards in from the road. The underground workings are inaccessible.

Ref.: 30 pp. 46-47.

Maps (T): 11 E/4 W Kennetcook (G): 1075A Kennetcook

Mile 25.3 - Centre Rawdon; junction Clarksville road.

Centre Rawdon Gold Mine

The deposit is similar to the Northup mine.

Road log from Highway 14:

Mile 0 - Junction Clarksville road; turn right (north).

0.3 Junction wood trail (immediately in front of junction of gravel road); turn right.

Mile 0.4 Old building on left. From this point the road is not accessible to motor vehicles; walk along trail for about 300 yards to the mine which consists of caved shafts, a tunnel and several dumps.

Ref.: 30 pp. 46-47.

Maps (T): 11 E/4 W Kennetcook

(G): 1075A Kennetcook

Mile 32.9 - Turn-off to Smiley's Park Camp-Site

Porter Quarry

GYPSUM, ANHYDRITE

Gypsum is fine-grained and massive. It is usually snow-white streaked with grey. The quarry, inactive in 1963, is on the Porter farm.

Road log from Highway 14:

- Mile 0 Turn left (south) at Mile 32.9 and follow signs to the Camp-Site.
 - 0.5 Smiley's Park Camp-Site at bridge over Meander River.
 - 0.8 Fork; bear left.
 - 1.1 Porter farmhouse on left.

Ref.: 30 p. 69.

Maps (T): 11 E/4 W Kennetcook

(G): 1075A Kennetcook

Maynard Quarry

Gypsum deposit is similar to that at the Porter property.

Follow the road log for Porter quarry to Mile 0.8; then take right (west) fork for 0.15 mile to the Maynard farmhouse on the south side of road.

Ref.: 30 p. 69.

Maps (T): 11 E/4 W Kennetcook

(G): 1075A Kennetcook

Meander River Placer Gold

Gold was panned from the alluvium 1 1/4 miles east of the bridge at Smiley's Park Camp-Site.

Ref.: 30 p. 54.

Maps (\overline{T}) : 11 E/4 W Kennetcook

(G): 1075A Kennetcook

Mile 35.6 - Brooklyn; junction Highway 15

Mile 42.1 - Windsor; junction Highway 1

Section 4

WINDSOR — FREEPORT

Mile 0 - Windsor (east end of bridge over Avon River); proceed north along Highway 1.

Mile 19.1 - Wolfville (west end); junction Scots Bay Road

The North Mountain Coastline

The shoreline from Cape Blomidon to Briar Island is composed of Triassic basalt characterized by columnar jointing and, in places, by numerous cavities and seams filled with zeolites, jasper and chalcedony. Zeolites are most plentiful between Halls Harbour and Margaretville while jasper and chalcedony are mostly between Scots Bay and Long Beach and less abundantly westward from Port George. Of the zeolites, stilbite and heulandite are the most abundant and were noted in nearly every locality visited. Stilbite occurs as colourless to white transparent radiating plates and sheaf-like aggregates, heulandite as colourless to white, pink or pinkish-orange flattened and sometimes radiating prisms. Other zeolites found are: analcite as colourless to white or, less commonly, pink vitreous spherical nodules; mordenite as white or pink opaque nodules with fibrous structure; thomsonite as white transparent radiating fibres; laumontite as white, pink or reddish crystal aggregates becoming opaque and friable when exposed; apophyllite as greenish-tinged, colourless to white radiating plates; scolecite as white partly transparent radiating fibres. Green celadonite coats the zeolites.

The minerals are found in cavities in the basalt cliffs along the shoreline and in the rock fragments along the beaches. Collecting along all shorelines is at low tide. Minerals are listed for localities readily accessible from the main highways.

Scots Bay, Small Cove, Big Cove

CHALCEDONY (agate), JASPER, RUTILATED QUARTZ, AMETHYST, STILBITE, MESOLITE, NATROLITE, HEULANDITE

The zeolites occur sparingly in seams usually less than an inch wide; jasper (deep red) and chalcedony (grey to deep blue, reddish-orange) in seams or nodules are more common, especially in the Small Cove-Big Cove areas near the tip of Cape Split, 4 to 5 miles from Scots Bay. Arrangements for boat trips to the Cape Split area can be made at Scots Bay village.

Road log from Highway 1:

- Mile 0 Junction road to Scots Bay, Port Williams, Canning, etc.; proceed north.
 - 7.0 Canning; turn left (north) onto Scots Bay road.
 - 10. I Junction Glenmont road; turn right.
 - 18.4 Scots Bay; turn-off to beach.
 - 20.6 End of road at wharf, near Mr. J. Macdonald's farmhouse. Walk west along the shore for agates, zeolites, etc. The trail to Cape Blomidon leads north from the farmhouse.

Ref.: 35 p. 132.

Maps (T): 21 H/8 W Parrsboro

(G): 841 Parrsboro (Map sheet 83)

Woodworth (Bennett) Bay

CHALCEDONY (agate), JASPER, THOMSONITE, HEULANDITE, ANALCITE, MORDENITE (rare), STILBITE

Deep red to chocolate brown jasper and orange to red or bluish grey chalcedony are in seams up to about 3 inches wide. Zeolites occupy small cavities, usually less than 2 inches across and heulandite is the most abundant.

Road log from Mile 10.1 of log to Scots Bay:

- Mile 10.1 Junction Glenmont road; turn left.
 - 10.2 Junction Ross Creek road; turn right.
 - 14.2 Woodworth Bay (end of road).

Maps (T): 21 H/l W Wolfville

(G): 1128A Wolfville

Baxter Harbour, Long Beach

CHALCEDONY (agate), JASPER, HEULANDITE, ANALCITE, LAUMONTITE, STILBITE

Heulandite as tiny crystals lining walls of cavities, sometimes several inches across is the most common zeolite. Chalcedony (bluish or pinkish grey) and jasper veinlets are usually less than 2 inches across.

Road log from Mile 10.1 of log to Scots Bay:

- Mile 10.1 Junction Glenmont road; turn left (west).
 - 10.2 Junction Ross Creek road; continue straight ahead.
 - 14.2 Glenmont, at intersection Kentville-Black Hole road; continue straight ahead.
 - 14.7 Junction Baxter Harbour, Long Beach road; turn right.
 - 17.9 Baxter Harbour; continue straight ahead 0.1 mile to wharf. For Long Beach shoreline, turn left and proceed west 1.8 miles.
- Maps (T): 21 H/2 E Berwick
 - (G): 13A Kingsport (Map sheet 84) 14A Hall Harbour (Map sheet 99)

Mile 24.6 - Kentville, at Cornwallis Street intersection.

Halls Harbour

STILBITE, HEULANDITE, LAUMONTITE, APOPHYLLITE, THOMSONITE. AMETHYST

The zeolites, especially stilbite and heulandite, are more plentiful and occur in larger cavities (up to 2 or 3 feet across) along the shoreline from here to Black Rock than on any other part of the coast, while chalcedony and jasper occur sparingly in narrow veinlets.

Road log from Highway 1:

- Mile 0 Kentville; proceed north along Cornwallis Street.
 - 0.8 Fork; take left fork.
 - 11.5 Halls Harbour; turn right onto Cove road.
 - 11.8 Fork; follow left fork.
 - 11.9 End of road at shoreline.

Maps (T): 21 H/2 E Berwick

(G): 14A Hall Harbour (Map sheet 99)

Chipman Brook

HEULANDITE, STILBITE, LAUMONTITE, MORDENITE, CHALCE-DONY (rare)

Mordenite nodules, usually less than an inch across, are generally coated with a soft green opaque mineral belonging to the mica group. Heulandite and stilbite are the most common zeolites. Numerous spike amygdules, 2 or 3 inches in diameter and several feet long, were observed on the walls of the shoreline cliffs.

Road log from Mile 11.5 of log to Halls Harbour:

- Mile 11.5 Junction Cove road; turn left (west) toward wharf.
 - 12.0 Junction Huntington Point road; continue straight ahead.
 - 12.6 Junction; turn right.
 - 15. I Junction Chipman Brook-Lakeville road; turn right.
 - 16.1 Bridge over Chipman Brook; wharf is on right. Walk to shoreline.

Maps (T): 21 H/2 E Berwick

(G): GSC 14A Hall Harbour (Map sheet 99)

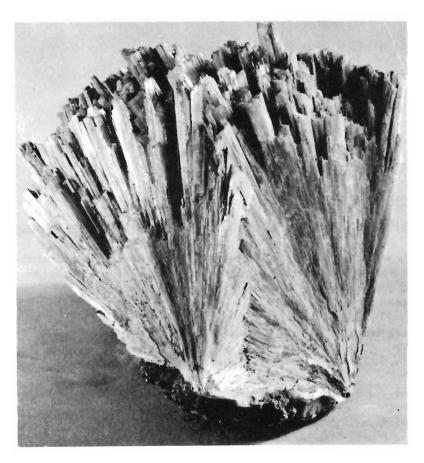
Canada Creek, Black Rock

STILBITE, MORDENITE, HEULANDITE, MESOLITE, APOPHYLLITE, LAUMONTITE, PREHNITE, GYROLITE

Spike amygdules similar to those at Chipman Brook were seen at Canada Creek. Stilbite and heulandite are in good supply; green-coated mordenite nodules up to 1 1/2 inches across are quite common in places.

Road log from Mile 16.1 of log to Chipman Brook:

Mile 16.1 Bridge over Chipman Brook; continue west.



Mesolite, Bay of Fundy region, Nova Scotia.

- Mile 17.3 Junction; turn right.
 - 19.2 Junction Waterville-Black Rock road; turn right.
 - 21.0 Bridge over Canada Creek; wharf is a few yards north of the bridge.
 - 21.9 Black Rock lighthouse on right.

Refs.: 31 p. 28; 35 p. 131.

Maps (T): 21 H/2 E, W Berwick

(G): 14A Hall Harbour (Map sheet 99)

Mile 37.2 - Turn-off to Berwick

Harbourville, Ogilvie

STILBITE, HEULANDITE, LAUMONTITE, MESOLITE, CHALCEDONY

Stilbite and heulandite are the predominant zeolites; some of the heulandite occurs as chalk-white, dense nodules up to 2 inches across. Specimens of red and white or grey mottled chalcedony were found at Ogilvie.

Road log from log to Black Rock

- Mile 21.9 Black Rock lighthouse; continue straight ahead (west).
 - 23.2 Junction Russia road; turn right.
 - 25.4 Junction Berwick-Harbourville road; turn right. This point may also be reached by a direct 9 1/2 mile road leading north from Highway 1 at the Berwick turn-off.
 - 25.7 Harbourville wharf on right; continue straight ahead (west) to Ogilvie.
 - 27.6 Junction Ogilvie road; turn right.
 - 28.6 Ogilvie wharf.

Ref.: 31 p. 28.

Maps (\overline{T}) : 21 H/2 W Berwick

(G): 14A Hall Harbour (Map sheet 99)

Mile 44.4 - Auburn; turn-off to Morden

Morden

STILBITE, LAUMONTITE, MORDENITE, APOPHYLLITE, ANALCITE, HEULANDITE, MESOLITE

This locality furnished one of the first recorded occurrences of mordenite; the larger nodules of this mineral are usually flattened and up to 2 inches across. Analcite, next in abundance to stilbite and heulandite, is in cavities about 1/2 inch wide.

Road log from log to Ogilvie:

Mile 27.6 - Junction Ogilvie road; continue straight ahead (west).

- 28.8 Crossroads; turn right.
- 35.0 Junction Auburn-Morden road; turn right.
- 35.7 Morden wharf. This is 7 1/2 miles by direct road from Highway 1 at Auburn.

Ref.: 31 p. 28.

Map (T): 21 H/2 W Berwick

Mile 55.9 - Middleton; junction Highway 10,

Nictaux Granite Quarry

Light grey granite is quarried at numerous places in the area for use as monumental stone.

Road log from Highway 1:

Mile 0 - Middleton; proceed south along Highway 10.

- 1.7 Junction Nictaux West road; turn right.
- 4.7 Junction road on left leading 200 yards to quarry.

Ref.: 28 p. 32.

Maps (T): 21 A/14 E Bridgetown

(G): 14-1960 Nictaux-Torbrook

Wheelock Iron Mine

MAGNETITE, HEMATITE

In slate.

The ore is fossiliferous and contains hematite in part altered to magnetite. The fossils—Devonian marine shells— are enclosed in the ore and in the slate. The deposit was worked from 1906 to 1913. Some of the old pits and dumps are on the Veinot property near Torbrook.

Road log from Highway 1:

- Mile 0 Middleton; proceed south along Highway 10.
 - 1.7 Junction Nictaux West road; continue along Highway 10.
 - 2.9 Nictaux Falls; turn left.
 - 3.2 Fork; take left fork.
 - 4.5 Junction Bloomington road; continue straight ahead.
 - 5.3 C. Veinot property on right.

Ref.: 20 pp. 185-194.

Maps (T): 21 A/15 W Gaspereau Lake (G): 14-1960 Nictaux-Torbrook

Leckie Iron Mine

HEMATITE

In slate.

The hematite is either the fine grained red massive variety or specularite. The abandoned workings are on the G. Hebb property at Torbrook Mines.

Road log from log to Wheelock mine:

- Mile 5.3 Turn-off to Veinot property; continue straight ahead (east).
 - 6.9 Fork; follow left fork.

Mile 8.3 Torbrook Mines; turn left onto dirt road.

8.5 Mine. The pits extend southwestward along the trail.

Ref.: 20 pp. 185-194.

Maps (T): 21 A/15 W Gaspereau Lake

(G): 14-1960 Nictaux-Torbrook

Margaretville

HEULANDITE, LAUMONTITE, ANALCITE, APOPHYLLITE, GYROLITE, MESOLITE, STILBITE, SCOLECITE, NATROLITE

Laumontite, the most prominent zeolite, occurs in large openings (up to a foot across) but specimens are usually crumbly to pulverulent due to exposure to sunlight and a dry atmosphere. The other zeolites occupy small cavities averaging about 1/2 inch across. A few spike amygdules can be seen along the cliffs.

A 9-mile road leads north from Highway 1 at Middleton to the wharf at Margaretville.

Refs.: 31 p. 28; 35 p. 127.

Map (T): 21 H/3 E Margaretsville

Port George

CHALCEDONY, STILBITE, HEULANDITE, ANALCITE, MESOLITE, APOPHYLLITE, LAUMONTITE, GYROLITE, THOMSONITE

The zeolites at this locality, at Port Lorne and at Hampton occur sparingly and in very small cavities; grey chalcedony and sometimes jasper are found in veins usually less than 2 inches wide.

The shoreline is easily accessible from the road at various points in the village which is $7 \frac{1}{2}$ miles north of Highway 1 at Middleton.

Refs.: 31 p. 28; 35 p. 127.

Map (T): 21 H/3 E Margaretsville

Port Lorne

JASPER, CHALCEDONY, STILBITE, MESOLITE, THOMSONITE APOPHYLLITE, LAUMONTITE

Specimens of deep red and grey banded jasper were found along the shore.

Access to the shoreline (at the wharf) is by gravel roads from Port George (12 miles) or from Hampton (6 miles).

Ref.: 31 p. 28.

Maps (T): 21 A/14 W Bridgetown

(G): 40-1961 Annapolis (1 inch to 4 miles)

Mile 69.6 - Bridgetown; junction Highway 1A. Proceed west along 1A.

Mile 69.8 - Bridgetown; turn-off from Highway 1A to Hampton.

Hampton (Chute Cove)

CHALCEDONY, APOPHYLLITE, NATROLITE, EPIDOTE

Numerous pebbles of epidote and quartz occur along the beach. They average 2 or 3 inches across and are suitable for polishing.

The shoreline is 6.4 miles from Highway 1A at Bridgetown.

Ref.: 35 p. 127.

Maps (T): 21 A/14 W Bridgetown

(G): 40-1961 Annapolis (1 inch to 4 miles)

Mile 82.5 - Junction road to Parker Cove.

Parker Cove

CHALCEDONY, JASPER

Bluish grey chalcedony and deep reddish brown jasper occur in thin seams averaging about an inch wide.

The shoreline is 4.1 miles north of Highway 1A.

Maps (T): 21 A/13 E Granville Ferry

(G): 40-1961 Annapolis (1 inch to 4 miles)

Mile 84.8 - Annapolis Royal; junction Highway 1

Mile 103.2 - Turn-off to Digby

Mile 105.7 - Digby at Post Office (Church Street); follow Highway 17 to Freeport.

Mile 106.2 - Digby; turn-off to Deep Cove

Deep Cove

JASPER, CHALCEDONY, STILBITE, HEULANDITE, EPISTILBITE

Stilbite, epistilbite and heulandite occur in thin veins cutting basalt and reddish quartz seams; a few seams of red jasper with blue-grey chalcedony up to 3 inches across were seen.

Road log from Digby:

Mile 0 - Post Office; proceed north along Highway 17.

0.5 Fork; take right fork.

6.0 Junction road to Deep Cove; turn right.

6.4 Wharf; walk to shore.

Maps (T): 21 A/12 W Digby

(G): 40-1961 Annapolis (1 inch to 4 miles)

Mile 115.3 - Rossway; turn-off to Gulliver Cove

Gulliver Cove

STILBITE, HEULANDITE, CHALCEDONY, JASPER, QUARTZ (crystals)

Stilbite is opaque, pink to red or white, and often has all colours mixed forming streaked or mottled pattern, in seams about 3 inches wide; some of it is compact and mixed with colourless quartz and/or bluish-white chalcedony and could be polished. Heulandite occurs as colourless platy crystals in irregular veinlets cutting stilbite or in seams about an inch wide in basalt. Jasper in veins about 2 inches wide is pinkish- to chocolate-brown. The quartz crystals are colourless and about 1/2 inch across.

The wharf at Gulliver Cove is 2.3 miles north of Highway 17 at the Rossway turn-off.

Maps (T): 21 A/12 W Digby

(G): 40-1961 Annapolis (1 inch to 4 miles)

Mile 121.0 - Centreville; turn-off to Trout Cove,

Trout Cove

STILBITE, HEULANDITE, JASPER, CHALCEDONY

Jasper veins up to 5 inches wide range in colour from yellow to deep red and rusty brown; colourless to grey chalcedony is sometimes mixed with jasper. The jasper at this locality is the most attractive seen along the North Mountain coast. The zeolites are similar to those at Gulliver Cove, but occur sparingly.

The wharf at Trout Cove is 1.1 miles west of the turn-off from Highway 17 at Centreville.

Maps (T): 21 B/9 E Centreville

(G): 48-1960 St. Mary Bay (1 inch to 4 miles)

Mile 126.5 - Sandy Cove; turn-off to East Sandy Cove and Sandy Cove

Sandy Cove (Bay of Fundy shore)

JASPER, CHALCEDONY, QUARTZ (crystals)

In veins, up to 4 inches wide, cutting basalt.

Proceed west from Sandy Cove village following the signs to the Champlain Camp; at the turn-off to the camp (0.7 mile from the Highway) take the right turn and continue 0.2 mile to the wharf.

Maps (T): 21 B/8 E Church Point

(G): 48-1960 St. Mary Bay (1 inch to 4 miles)

East Sandy Cove (St. Mary's Bay)

ANALCITE, SCOLECITE, STILBITE, CHALCEDONY, JASPER

Colourless, vitreous analcite is in cavities generally less than an inch across; white radiating scolecite is common in small cavities. Stilbite occurs as colourless to white sheaf-like aggregates; a few specimens measuring several inches across were found. Jasper and chalcedony veins are mostly less than 1/2 inch wide.

Access to St. Mary's Bay wharf is by a road 0.6 mile long leading east from Highway 17 opposite the turn-off to the Champlain Camp.

Maps (T): 21 B/8 E Church Point

(G): 48-1960 St. Mary Bay (1 inch to 4 miles)

Mile 131.2 - Little River; turn-off to wharf,

Little River Cove

STILBITE, CHALCEDONY, JASPER

In narrow seams (about 1/2 inch wide) in basalt.

The wharf at Little River Cove is 0.7 mile east of the Highway.

Maps (T): 21 B/8 E Church Point

(G): 48-1960 St. Mary Bay (1 inch to 4 miles)

Mile 132.7 - Turn-off to Whale Cove.

Whale Cove

JASPER, CHALCEDONY

Red jasper occurs with white to grey chalcedony or quartz in veins up to 2 inches across.

A road, 0.8 mile long, leads west from Highway 17 to the wharf.

Maps (T): 21 B/8 E Church Point

(G): 48-1960 St. Mary Bay (1 inch to 4 miles)

Mile 136.9 - East Ferry (at wharf),

Petite Passage (at East Ferry)

JASPER, CHALCEDONY, STILBITE

Minerals occur sparingly in narrow seams (about 1/2 inch wide).

Maps (T): 21 B/8 E Church Point

(G): GSC 48-1960 St. Mary Bay (1 inch to 4 miles)

Mile 148.2 - Freeport (at wharf),

Grand Passage (at Freeport)

JASPER, CHALCEDONY, QUARTZ

Deep red and yellow jasper occurs with greyish chalcedony and colourless to white quartz in veins about 1 inch wide.

Maps (T): 21 B/8 W Church Point

(G): 48-1960 St. Mary Bay (1 inch to 4 miles)

Section 5

DIGBY - HALIFAX via YARMOUTH

Mile 0 - Junction Highways 1 and 17 (Digby outskirts); proceed south along Highway 1.

Mile 61.0 - Hebron; junction Highway 40

Carleton Gold Mine

GOLD, ARSENOPYRITE, PYRITE, GALENA, CHALCOPYRITE, CALCITE

In quartz veins cutting slate and quartzite.

Native gold occurred finely disseminated in the quartz. The mine was worked between 1886 and 1915 by open-cuts and underground methods. Several dumps and some of the equipment remain on the property.

Road log from Highway 1:

Mile 0 - Hebron; proceed east along Highway 40.

- 12.5 Carleton; continue straight ahead at junction of Kemptville road.
- 13.8 Junction wood road on right; walk along this road for about 400 yards to a shack on left side of road. Mine is near the shack in a wooded area.

Ref.: 23 pp. 68-69.

Maps (\overline{T}) : 21 A/4 W Wentworth Lake

(G): 40-1961 Annapolis (1 inch to 4 miles)

Mile 64.0 - Yarmouth (at Horse Fountain),

Creampot Gold Mine

GOLD, ARSENOPYRITE, GALENA

In quartz vein cutting green slate.

Native gold with galena in quartz; crystals of arsenopyrite in slate. The mine was last worked about 60 years ago and the openings are now filled; however, the vein can be seen outcropping along the shoreline

cliff (at low tide) just west of where the mine used to be. The mine derives its name from the white foam produced by the churning of salt water waves against the indentations along the cliff where the vein is exposed.

Road log from Yarmouth:

- Mile 0 Main Street (Highway 1) at Horse Fountain; turn right (west).
 - 1.6 Junction gravel road; turn left.
 - 2.2 Fork; bear right.
 - 3.2 Crossroad; turn right.
 - 5.0 Fork; follow left fork.
 - 5.6 Farmhouse (enquire re: entry to property); road from here leads northwest to the shoreline.
 - 6.5 Old mine.

Ref.: 11 pp. 18-20.

Maps (T): 20 9/16 E Yarmouth

(G): 1815 Cranberry Head-Chegoggin Point (1 inch to 1/2 mile)

Foote Cove Beach

GOLD, GARNET, ACTINOLITE, CHLORITOID, STAUROLITE, SILLIMANITE, PYRITE

Fine gold believed to have come from the Creampot mine about 2 miles to the north, was found in the sand along the shore. The other minerals occur as small crystals in light grey schist which outcrops along the shore from Foote Cove south to Chegoggin Point.

Road log from Mile 3.2 of log to Creampot mine:

- Mile 3.2 Crossroad; continue straight ahead (west).
 - 3.5 Trail leads straight ahead 350 yards to Foote Cove. (The road turns left to Chegoggin Point.) Collect at low tide.

Ref.: 11 pp. 16-17.

Maps (T): 20 0/16 E Yarmouth

(G): 1815 Cranberry Head-Chegoggin Point (1 inch to 1/2 mile)

Chegoggin Point Deposits

GARNET, QUARTZITE

Garnet occurs in hornblende-biotite schist.

Pink to deep red garnet crystals are usually about 1/4 inch across. At one time the garnet was believed to have possibilities for abrasive purposes and two pits were sunk. They are just west of the quartzite quarry and are now almost completely overgrown. A few specimens may be found near the pits and along the shoreline nearby. The quartzite grades from colourless glassy to buff and turbid grey.

From Mile 3.5 (turn-off to Foote Cove) proceed south along the gravel road for 0.4 mile to the silica quarry on the right side of the road.

Ref.: 11 pp. 15-17.

Maps (\overline{T}) : 20 0/16 E Yarmouth

(G): 1815 Cranberry Head-Chegoggin Point (1 inch to 1/2 mile)

Mile 65.0 - Yarmouth; junction Highway 3 (Main and Parade streets).

Follow Highway 3 to Halifax.

Mile 128.5 - Clyde River; turn-off to Port LaTour, Blanche.

Port La Tour Shoreline

STAUROLITE, GARNET, CHLORITE

In grey schist.

Dark brown staurolite crystals, some twinned, measure up to $1\ 1/4$ inches long. Deep green to black prisms about an inch across are composed of chlorite and quartz replacing staurolite. The garnets are pink and usually less than 1/4 inch across.

Road log from Highway 3:

- Mile 0 Clyde River; proceed south along road to North East Harbour, Boccaro.
 - 2.1 Port Clyde; follow right (south) fork.
 - 6.0 Cape Negro; take right fork.
 - 13.6 Junction road to wharf; turn left in front of church.

Mile 14.0 Wharf at Crow Neck Point. The schists are exposed along the shore in the vicinity of the wharf.

Maps (T): 20 P/6 W Boccaro

(G): 44-1960 Shelburne (1 inch to 4 miles)

Negro Harbour Shoreline

STAUROLITE, GARNET, CHLORITE

In schist.

The deposit is similar to the Port La Tour occurrence. The chlorite prisms are well-formed and exhibit sharp outlines in the schist.

Road log from Mile 6.0 of log to Port La Tour:

Mile 6.0 Fork at Cape Negro; take left (east) fork.

11.0 End of road at Blanche on the shore of Negro Harbour. The schist is exposed along this shoreline.

Maps (T): 20 P/11 W Lockeport.

(G): 44-1960 Shelburne (1 inch to 4 miles)

Mile 137.4 - Turn-off to granite quarry.

Birchtown Black Granite Quarry

HORNBLENDE DIORITE

The quarry is operated by Dauphinee Memorial Art Limited of Shelburne. The rock is used locally for monumental stone.

Access is by a road, 0.4 mile long, leading north from the turn-off at Highway 3 (Mile 137.4).

Maps (T): 20 P/11 W Lockeport

(G): 44-1960 Shelburne (1 inch to 4 miles)

Mile 137.8 - Junction road to Roseway

Round Bay, Atlantic Shoreline

STAUROLITE, ANDALUSITE, GARNET, CHLORITE

In light grey biotite schist.

Brown crystals of staurolite are about an inch long and sometimes twinned. Pink to mauve and alusite crystals up to 4 inches long contain inclusions of quartz, garnet and mica. Black chlorite prisms and tiny pink garnets are scattered throughout the schist. Exposures of the rock are along the west shore of Shelburne Harbour from Roseway south to East Point.

Road log to Roseway Beach, Round Bay and Atlantic:

- Mile 0 Junction Roseway, East Point road at Mile 137.8; proceed south.
 - 9.6 Turn-off (left) to Roseway Beach, 1.5 miles away.
 - 12.2 Turn-off (left) to Round Bay; at fork 0.7 mile from turn-off turn left and continue 0.3 mile to the shore.
 - 13.2 Turn-off (left) to Atlantic. Proceed 0.4 mile to fork; turn right and continue 0.4 mile to another fork; turn right continuing 0.3 mile to fork, then turn left and proceed 0.3 mile to the shore.

Maps (T): 20 P/11 W Lockeport

(G): 44-1960 Shelburne (I inch to 4 miles)

Mile 141.3 - Turn-off to Islands Park Camp-site

Shelburne Granite Quarry

GARNET, MUSCOVITE

In grey biotite granite.

Crystals of muscovite, about an inch across, and of red garnet, 1/4 inch in diameter, occur with coarse feldspar in granite. The deposit is worked for monumental stone by the Dauphinee Memorial Art Limited of Shelburne.

Quarry is on the east side of the Camp office at the Islands Park Provincial Camp-site, 0.6 mile south of Highway 3.

Maps (T): 20 P/14 W Shelburne

(G): 44-1960 Shelburne (1 inch to 4 miles)

Mile 141.5 - Shelburne; bridge over Roseway River,

Mile 142.8 - Shelburne; King and Water streets

Shelburne Harbour (South of Sandy Point)

STAUROLITE, ANDALUSITE, GARNET, CHLORITE

Similar to the deposits south of Roseway.

Road log from Shelburne:

Mile 0 - Highway 3, 2 blocks east of Main Street; turn right (south).

7.2 Junction road to wharf; turn right.

7.3 Wharf; shoreline exposures are to the left (east).

Maps (T): 20 P/11 W Lockeport

(G): 44-1960 Shelburne (1 inch to 4 miles)

Mile 149.4 - Jordan Falls; bridge over Jordan River.

Road-Cuts: Shelburne to Jordan Falls

STAUROLITE, ANDALUSITE, GARNET

In schist similar to Shelburne Harbour occurrences.

The rock is exposed along several road-cuts between Shelburne and Jordan Falls, and along the Jordan River where it is bridged by the Highway.

Maps (T): 20 P/14 E, W Shelburne

(G): 44-1960 Shelburne (1 inch to 4 miles)

Mile 149.5 - Junction Lake John road (east side of bridge).

Jordan Falls Beryl Occurrence

BERYL, TOURMALINE, MOLYBDENITE, QUARTZ, MUSCOVITE, APATITE

In quartz vein cutting biotite quartzite.

Pale green beryl occurs as small crystals and crystalline masses. Quartz is colourless, pale pink or smoky; tourmaline crystals are black; small apatite crystals are pale green.

Road log from Highway 3:

Mile 0 - Jordan Falls; proceed north along Lake John road.

- 3.1 Junction tractor trail on right (a few yards in front of a bridge over stream); proceed on foot.
- 3.6 Clearing on top of hill; trenches expose the vein at several places in the cleared area.

Ref.: 26 p. 36.

Maps (T): 20 P/14 E Shelburne

(G): 44-1960 Shelburne (1 inch to 4 miles)

Mile 187.2 - Port Mouton; bridge over Broad River,

Mile 189.0 - Summerville Beach Picnic Site (on right).

Summerville Beach Beryl Occurrence

BERYL, GARNET, MUSCOVITE, APATITE, QUARTZ

In granite pegmatite boulders.

White to pale green beryl, red garnets up to 1/2 inch across and pale green transparent apatite grains occur with muscovite, quartz and feldspar in boulders along the seashore in the vicinity of the picnic site.

Ref.: 26 p. 38.

Maps (T): 20 P/15 W Port Mouton

(G): 44-1960 Shelburne (1 inch to 4 miles)

Mile 190.7 - Hunts Point Beach and Wharf,

Hunts Point Beryl Occurrence

BERYL, GARNET

In quartz stringers cutting grey granite.

The granite is exposed along the shoreline on the east side of the wharf.

Ref.: 26 p. 38.

Maps (T): 20 P/15 W Port Mouton

(G): 44-1960 Shelburne (1 inch to 4 miles)

Mile 198.4 - Liverpool; corner Main and Market streets.

Western Head Shoreline

- (a) ANDALUSITE; (b) BERYL
- (a) In biotite schist; (b) in quartz stringers cutting grey granite.

Andalusite occurs as transparent pinkish-brown, slender prisms about 1/2 inch long.

Road log from Liverpool:

- Mile 0 Corner Market and Main streets; proceed east along Main Street.
 - 0.1 Intersection; turn right onto road to hospital.
 - 0.9 Fork; follow left fork (Mersey road).
 - 4.5 Walk to biotite schist and granite exposures along the shoreline on left.

Ref.: 26 p. 38.

Maps (T): 20 P/15 E Port Mouton

(G): 44-1960 Shelburne (1 inch to 4 miles)

Mile 221.2 - Hebbs Cross; junction Camperdown road,

Mile 222.2 - Junction Mine Road No. 1.

Leipsigate (Millipsigate) Gold Mines

GOLD, PYRITE, ARSENOPYRITE

In quartz veins cutting slate.

Gold mining in the district commenced in the 1880's and reached its peak between 1898 and 1909. Some of the mines were re-opened for a short time in 1947. Much of the dump material has been removed and used for road building, but some specimens are still available in what remains.

Road log from Highway 3:

Mile 0 - Junction Mine Road No. 1; proceed west along this road.

- 1.7 Turn-off (right) to old dumps (0.1 and 0.2 mile from the turn-off).
- 3.7 Old mine dumps at southwest end of Leipsigate Lake.

Refs.: 23 pp. 112-118; 35 p. 110. Maps (T): 21 A/7 E Bridgewater (G): 435A Malaga Lake

Mile 227.4 - Bridgewater; junction (west) Highway 3A. Continue along Highway 3.

Mile 237.6 - Junction (east) Highway 32,

Indian Path Mine

SCHEELITE, GOLD, SPHALERITE, GALENA, ARSENOPYRITE, PYRITE

In quartz veins cutting slate.

Pale buff-coloured scheelite occurs as small masses in white quartz. The mine was worked for gold late in the 19th century and for tungsten between 1926 and 1942. Several dumps, a few open-cuts and some of the equipment can be seen on the property.

Road log from Highway 3:

Mile 0 - At junction (Mile 237.6) proceed south along Highway 32.

- 3.6 Junction Indian Path road; turn right.
- 4.0 Junction dirt road; turn right.
- 4.3 Mine at top of hill.

Refs.: 21 pp. 195-196; 23 p. 94. Maps (T): 21 A/8 W Lunenburg

(G): 2154 Bridgewater (Map sheet 89)

Ovens Gold Deposits

GOLD, ARSENOPYRITE, PYRITE, SIDERITE, SPHALERITE, MAGNETITE, PYROXENE, GOETHITE, TOURMALINE, CALCITE, QUARTZ (crystals)

In quartz veins cutting slate and in beach sands.

Arsenopyrite occurs as slender crystals up to an inch long, siderite as pale yellow opaque masses. Quartz crystals, some transparent and about 3/4 inch long line cavities in quartz. Transparent yellow tourmaline, yellow sphalerite, green pyroxene, magnetite, goethite, biotite and calcite are found as grains or small crystals in the beach sands.

Gold was first discovered in 1861 by James Dowling in a vein on the headland known as 'The Bluff' immediately north of Cunard Cove. A month later John Campbell discovered gold in the beach sand, and from then until 1862 most of the gold mined in the district was recovered from the alluvium. From 1863 to 1897, the veins (Bent, Campbell, Trauenwizer and Dowling) were worked by open-cuts and shafts, the most productive being the Bent vein. The placer gold originated from the gold-quartz veins being worn down by wave action and the particles deposited in the sand and in crevices in the steeply-dipping slate beds. The richest placers were to the north of Cunard Cove and along the north shore of Rose Bay, 1/2 to 1 mile west of Ovens Point. The name 'Ovens' refers to the deep indentations in the nearly vertical slate beds brought about by wave action against the cliffs. The area is now the site of Ovens Natural Park (entrance fee in 1963 was \$1.00). The old workings are no longer present but numerous quartz veins are exposed along the shore. A deposit similar to the shoreline deposit has been exposed by pits in a clearing on the north side of the road leading



Steeply dipping slate beds at Cunard Cove, The Ovens, Nova Scotia.

to the park, about 0.2 mile west of the entrance gate.

The park is 8.8 miles along Highway 32 south of its junction with Highway 3 (5.2 miles south of the junction of the Indian Path road).

Ref.: 23 pp. 156-157.

Maps (T): 21 A/8 W Lunenburg

(G): 2154 Bridgewater (Map sheet 89)

Mile 239.0 - Turn-off to Lunenburg,

Mile 245.8 - Mahone Bay; junction (east) Highway 3A.

Blockhouse Gold Mine

GOLD, ARSENOPYRITE, PYRITE, QUARTZ (crystals)

In quartz veins cutting slate.

The mine was active from 1896 to 1902, and from 1935 to 1936. The dumps, a couple of old shafts and the remains of a mill are still there.

Road log from Highway 3:

Mile 0 - Mahone Bay; proceed west along Highway 3A.

- 2.7 Junction gravel road; turn left (south).
- 3.1 Junction mine road; turn left.
- 3.2 Mine.

Refs.: 23 p. 58; 35 p. 105. Maps (T): 21 A/8 W Lunenburg

(G): 2153 Mahone Bay (Map sheet 88)

Mile 267.0 - East River; junction Blandford road.

East River Limestone Quarry

CALCITE, DOLOMITE, PYRITE

Dark grey limestone contains crystals of calcite, dolomite and pyrite and, in places, fossil shells. The quarry is operated by the Mersey Paper Company Limited of Liverpool.

Road log from Highway 3:

Mile 0 - East River; proceed south along Blandford road.

- 0.9 Junction gravel road; turn left.
- 1.1 Fork; follow right fork.
- 1.3 Gate to quarry (across railway tracks).

Ref.: 14 pp. 91-92.

Maps (\overline{T}) : 21 A/9 E Chester

(G): 1036 St. Margaret Bay (Map sheet 71)

Mile 303.0 - Halifax; junction Highway 1 and 2 at Armdale Rotary.

FURTHER INFORMATION FOR THE COLLECTOR

Mineral, Rock Displays:

Grand Manan Museum, Grand Harbour, Grand Manan Island, New Brunswick.

New Brunswick Museum, Douglas Avenue, Saint John, New Brunswick.

Albert County Historical Museum, Hopewell Cape, New Brunswick.

Parrsboro Museum, Parrsboro, Nova Scotia.

Ovens Natural Park Museum, The Ovens, Nova Scotia.

Nova Scotia Museum of Science, Spring Garden Road, Halifax, Nova Scotia.

Addresses:

For geological maps and reports:

*The Director,
Geological Survey of Canada,
Department of Mines and Technical Surveys,
601 Booth Street,
Ottawa 4, Ontario.

New Brunswick Department of Lands and Mines, Mining Section, Fredericton, New Brunswick.

Nova Scotia Department of Mines, Halifax, Nova Scotia.

For topographic maps (50 cents per sheet):

*The Director,
Surveys and Mapping Branch,
Department of Mines and Technical Surveys,
615 Booth Street,
Ottawa 4, Ontario.

^{*} Prepayment is required for all orders; cheques should be made payable to the Receiver General of Canada.

For tide and current tables for Bay of Fundy and Atlantic Coast of Nova Scotia (30 cents per copy):

*The Director,
Canadian Hydrographic Service,
Marine Sciences Branch,
Department of Mines and Technical Surveys,
615 Booth Street,
Ottawa 4, Ontario.

For road maps and travel information:

The Canadian Government Travel Bureau, Department of Trade and Commerce, 150 Kent Street, Ottawa, Ontario.

New Brunswick Travel Bureau, P.O. Box 1030, Fredericton, New Brunswick.

Nova Scotia Travel Bureau, Department of Trade and Industry, Halifax, Nova Scotia.

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