Open Report

STATE OF CONNECTICUT
GEOLOGICAL AND NATURAL HISTORY SURVEY
JOE WEBB PEOPLES, DIRECTOR

QUADRANGLE REPORT NO. 16
PLATE 1

# GEOLOGIC MAP OF THE COLLINSVILLE QUADRANGLE, CONNECTICUT

**Bedrock Geology by Rolfe S. Stanley in 1955, 1959-1961**

## EXPLANATION

### SURFICIAL DEPOSITS

PLEISTOCENE

Glacial cover
*(only shown where cover prevents mapping of stratigraphy)*

### SEDIMENTARY ROCKS

TRIASSIC

TrN — New Haven Arkose
*Light to dark red arkosic conglomerate, arkose, and arkosic siltstone.*

Td — Dolerite

*PROFOUND UNCONFORMITY*

### METAMORPHIC ROCKS

Hartland Group

SLrs / SLks — Slashers Ledges Formation

rusty schist member
*Rusty-weathering, medium-grained, staurolite-kyanite-garnet-mica-plagioclase-quartz schist.*

kyanite schist member
*Nonrusty-weathering, medium-grained, magnetite-garnet-kyanite-biotite-plagioclase-quartz-muscovite schist with large porphyroblasts of kyanite and plagioclase. Beds of biotite-quartz-plagioclase gneiss and staurolite-garnet-quartz-mica-plagioclase schist occur on either side of the bed of amphibolite.*

Granitic rocks

SKbh / SKrm — Satans Kingdom Formation

Breezy Hill Member
*Nonrusty-weathering, medium-grained, staurolite-garnet-plagioclase-mica-quartz schist containing small porphyroblasts of plagioclase.*

*Rusty-weathering, medium-grained, kyanite-garnet-plagioclase-mica-quartz schist.*

Ratlum Mountain Member
*A mixed assemblage of commonly nonrusty-weathering, medium-grained rocks containing garnet-biotite-muscovite-plagioclase-quartz schist, garnet-biotite-plagioclase-quartz gneiss, amphibole-biotite-plagioclase gneiss, calc-silicate gneiss, and a zone of garnet amphibolite which is commonly associated with light-gray schist with large porphyroblasts of plagioclase. Anthophyllite-plagioclase gneiss is locally present near the amphibolite. Garnet-staurolite-kyanite and garnet-kyanite are common in the schist.*

RHu / RHl — Rattlesnake Hill Formation

upper member
*Rusty-weathering, fine-to medium-grained, mica-quartz schist interbedded with thinly to thickly bedded mica quartzite and mica-plagioclase-quartz gneiss. Graphite present in some schist. Garnet and kyanite sparce. Quartz-garnet granulite present in some localities. Rocks on Jones and Yellow Mountains are considered facies equivalents with those rocks of the upper member in the center of the quadrangle.*

RHu? — Rocks on Jones and Yellow Mountains

lower member
*An assemblage of nonrusty-weathering, medium-grained rocks consisting of kyanite-garnet-biotite-plagioclase-muscovite-quartz schist, amphibolite, and calc-silicate gneiss and granulite.*

S — The Straits Schist
*Rusty-weathering, medium- to coarse-grained, graphite-kyanite-garnet-plagioclase-biotite-muscovite-quartz schist. Lenses of amphibolite and thin beds of graphite-mica-quartz gneiss are common.*

lower group

Ca / Cb — Collinsville Formation

Sweetheart Mountain Member
*Nonrusty-weathering, medium- to coarse-grained, kyanite-garnet-muscovite-biotite-plagioclase-quartz schist. Lenses of amphibolite occur throughout the member.*

Bristol Member
*A heterogeneous unit composed of medium-grained, garnet-biotite-quartz-plagioclase gneiss, garnet-biotite-muscovite-plagioclase-quartz gneiss and schist, and amphibolite, with subordinate amphibole-biotite-quartz-plagioclase gneiss and a distinctive zone of quartz-garnet granulite and gneiss. All rocks are nonrusty weathering and range in color from white through shades of gray and greenish gray.*

Twv / Tsm / Twc — Taine Mountain Formation

Whigville Member
*Nonrusty-weathering, medium-grained, garnet-plagioclase-mica-quartz schist that locally contains kyanite. The schist is commonly layered.*

Scranton Mountain Member
*Rusty-weathering, medium-grained, kyanite-garnet-plagioclase-quartz-mica schist with subordinate mica-plagioclase-quartz gneiss and a few beds of calc-silicate gneiss.*

Wildcat Member
*Nonrusty-weathering, fine- to medium-grained, biotite-plagioclase-quartz gneiss with subordinate biotite-plagioclase-muscovite-quartz schist, kyanite-plagioclase-biotite-quartz schist and a few lenses of amphibolite.*

### ROCK TYPE

- Amphibolite
- Schistose amphibolite
- Talc-chlorite schist, steatite, pyroxene-hornblende gneiss (Prospect pits common at each locality)
- Rock containing anthophyllite and garnet
- Plagioclase porphyroblasts 2 cm to 4 cm in size
- Calc-silicate gneiss or granulite
- Quartzite
- Quartz-garnet granulite
- Granite rocks containing muscovite, quartz and white feldspar. Biotite less common.
- Granite rocks with pink feldspar
- Granite rocks with large crystals of feldspar
- Granite rocks with porphyroblasts of microcline
- Contact, solid where definite, dashed where approximate, dotted where inferred, and queried where questionable.

### STRUCTURAL

PLANAR
(Strike and dip shown by each symbol; number indicates the value of dip in degrees)

- Foliation: inclined, vertical, horizontal, crumpled by crenulate folds
- Bedding foliation: inclined, vertical, horizontal (includes bedding in sedimentary rock)
- Axial-surface foliation: inclined
- Foliation measured in temporary excavations
- Axial surface of minor fold: inclined, vertical
- Joint: inclined, vertical (shown only in dolerite)

LINEAR
(Strike and plunge shown by each symbol; number indicates value of plunge in degrees)

- Axis of first-order fold / Axis of second-order fold — calculated from poles to foliation
- Axis of third-order fold (calculated from three or more foliation measurements around the hinge of the fold. These measurements are not included in calculations of first- and second-order folds.)
- Clockwise rotation / Counterclockwise rotation — sense of rotation
- Axis of crenulate fold
- Rod (quartz or quartz and plagioclase)
- Mullion
- Mineral lineation (commonly elongate mica)
- Axis of rotation of plagioclase porphyroblast showing sense of rotation
- Boudin line
- Offset boudinage: Clockwise rotation about boudin line / Counterclockwise rotation about boudin line
- Joint columns determined from the intersection of more than two joints at a locality
- Generalized trace of axial surface of *antiform*: vertical, overturned. Queried where questionable
- Generalized trace of axial surface of *synform*: vertical, overturned. Queried where questionable

### FAULTS

- Reverse fault: dashed where inferred, queried where questionable. Barbs on side of upper plate.
- Normal fault: dashed where inferred, queried where questionable. U, up; D, down.

### MISCELLANEOUS

- Abandoned mine
- Possible fault contact (text reference)
- G — Graded bedding (text reference)
- A–A′–A″–A‴ — Line of geologic section

**Type Localities**

10 Slashers Ledges Formation
9 Satans Kingdom Formation
8 Breezy Hill Member
7 Ratlum Mountain Member
6 Rattlesnake Hill Formation
5 Collinsville Formation
4 Taine Mountain Formation
3 Scranton Mountain Member

**Reference Localities**

2 The Straits Schist
1 Collinsville Formation

Base map by U.S. Geological Survey

Control by USGS, USC&GS, and Connecticut Geodetic Survey

Topography from aerial photographs by multiplex methods
Aerial photographs taken 1944. Field check 1948
Revised 1956

Polyconic projection. 1927 North American datum
10,000-foot grid based on Connecticut coordinate system

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APPROXIMATE MEAN DECLINATION, 1956

SCALE 1:24000

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

QUADRANGLE LOCATION

Geology engraved and printed by Williams and Heintz Map Corp

COLLINSVILLE, CONN.
N4145—W7252.5/7.5
1956