Hampton Rodgers Bedrock Compilation Sheet (paper)

Map

NOTICE !

Bedrock quadrangle 1:24,000 scale compilation sheets for the Bedrock Geological Map of Connecticut, John Rodgers, 1985, Connecticut Geological and Natural History Survey, Department of Environmental Protection, Hartford, Connecticut, in Cooperation with the U.S. Geological Survey, 1:125,000 scale, 2 sheets. [minimum 116 paper quad compilations with mylar overlays constituting the master file set for geologic lines and units compiled to the State map, some quads have multiple sheets depicting iterations of mapping]. Compilations drafted by Nancy Davis, Craig Dietsch, and Nat Gibbons under the direction of John Rodgers.

Geologic unit designation table translates earlier map unit nomenclature to the units ultimately used in the State publication.

This map set contains unpublished maps, cross- sections, and related information archived by the State Geological and Natural History Survey of Connecticut as part of the Survey Library Collection.

These materials have not been reviewed for accuracy, consistency, or completeness. For many geographic areas, more current information exists, either in published or unpublished form.

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DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH
THE STATE OF CONNECTICUT
GEOLOGICAL AND NATURAL HISTORY SURVEY

Base map by U.S. Geological Survey, 1959

SCALE 1:24 000

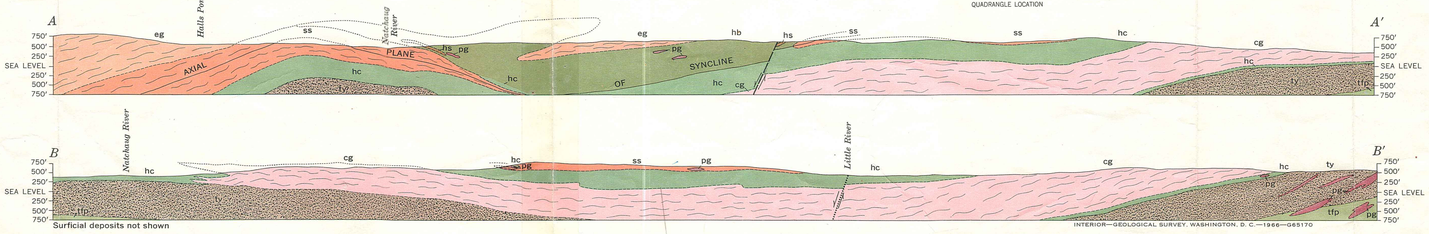
1 ½ 0 1 MILE
1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

APPROXIMATE MEAN DECLINATION, 1966

CONNECTICUT
QUADRANGLE LOCATION

Bedrock geology mapped in 1959 and 1960 by H. Roberta Dixon, assisted by A. Hetzel, 1959 and B. Voorhies, 1960.
Surficial geology mapped in 1963 by Fred Pessl, Jr.



Surficial deposits not shown

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—1966—GE5170

GEOLOGIC MAP OF THE HAMPTON QUADRANGLE, WINDHAM COUNTY, CONNECTICUT

By

H. Roberta Dixon and Fred Pessl, Jr.

1966

EXPLANATION

Darker tones of respective colors indicate bedrock outcrops of the unit. Small outcrops on which attitude of bedding, foliation, etc. is recorded are indicated only by structure symbol.
In rock names given below, minerals are listed in a general order of abundance, with the least abundant mineral first. Minerals shown in parentheses are not always present in a given rock type

QUATERNARY

Recent

Qal — Alluvium
Silt, sand, and gravel on flood plains of modern streams

Qst — Stream terrace deposits
Sand, silt, and gravel composing terraces younger than the main Little River terraces (Qgl2)

Pleistocene (Wisconsin)

Buttonball-Merrick Brook Area	Natchaug River Area	Little River Area	Lyon Brook Area	Sandy Brook-Stetson Corner Area	
Qgb3, Qgb2, Qgb1	Qgn2, Qgn1	Qgl2, Qgl1	Qgv	Qgs	Undifferentiated: Qgu

Glacial stream deposits
Sand, gravel, and silt deposits including kames, kame terraces, kame plains, kame deltas, and ice-channel fillings; subscript numbers indicate order of deposition, 1 oldest; correlation of deposits from area to area is tentative
Till not shown on map, but covers most of bedrock areas; consists of unstratified, poorly sorted, sand, silt, and stones, with minor amounts of clay; locally contains lenses of gravel; includes loose, sandy, stony, light-gray till and compact, sandy-silty, olive-brown (oxidized) till

q — Vein quartz

IGNEOUS AND METAMORPHOSED IGNEOUS ROCKS

pg — Pegmatitic and granitic sills and dikes
Sills and dikes of coarse- to fine-grained rock varying in composition from granite to quartz diorite. A few hornblende-bearing pegmatites cut the Hebron Formation. Range in thickness is from a few inches to tens of feet; in general only those greater than 10 feet in thickness are shown on the map. Most but not all are foliated. Locally they convert schist of the Yantic Member of the Tatnic Hill Formation to migmatite

cg — Canterbury Gneiss
Light-gray, medium-grained, porphyroblastic biotite-microcline-oligoclase-quartz gneiss. Accessory minerals are epidote and allanite, muscovite, apatite, sphene, and zircon. Commonly contains half-inch megacrysts of microcline and oligoclase. Inclusions of Hebron Formation can be found near margins. Thin aplite sills common near base

eg — Eastford Gneiss[1]
eg, light- to medium-gray, medium-grained, strongly lineated muscovite-biotite-microcline-oligoclase-quartz gneiss. Accessory minerals are apatite, zircon, sphene, and locally garnet. Two foliations are prominent locally and the strong lineation apparently represents their intersection. Aplite dikes averaging 10 inches in thickness cut the gneiss at an acute angle to the foliation. Differentiated from Canterbury Gneiss texturally by the two foliations, and thicker cross cutting aplites, and compositionally by greater variability, presence of megascopic muscovite, and absence of epidote and allanite
eag, white, medium-grained, alaskite gneiss composed of quartz (30 percent), albite (40 percent), microcline (18 percent), and muscovite (12 percent), and accessory garnet and apatite

METAMORPHIC ROCKS

ss — Scotland Schist
Medium- to dark-gray, fine- to medium-grained, interlayered oligoclase-biotite-muscovite-quartz schist and (muscovite)-biotite-oligoclase-quartz schist; minor minerals are garnet, staurolite, and kyanite; accessory minerals are tourmaline, zircon, apatite, and opaque minerals. Muscovite-poor schist is most common in the basal 10 to 20 feet. Quartz pods averaging 6 inches long and 1 inch thick are common. Weathered rock is commonly dull gray, but locally is rusty. The rusty weathering tends to become more prominent to the north

hs, hc, hb — Hebron Formation
hc, dark-gray, greenish-gray, and purplish-gray, fine- to medium-grained, thinly layered biotite-(epidote)-andesine-quartz schist, (biotite)-(epidote)-hornblende-andesine-quartz granulite, calcite-(epidote)-(hornblende)-biotite-andesine-quartz schist; rarely contains as much as 25 percent scapolite and diopside; accessory minerals are sphene, apatite, zircon, opaque minerals, and rare tourmaline, rutile, and garnet. A nonresistant, poorly exposed unit. Layers commonly 1 to 2 inches in thickness
hb, dark-gray, fine-grained, biotite-andesine-quartz schist, with minor interlayered epidote-biotite-hornblende-andesine-quartz granulite; muscovite, garnet, and calcite are rare minor constituents; accessory minerals are sphene, zircon, apatite, and opaque minerals, and rare tourmaline and rutile. Not as well layered as hc. In this area hb is primarily in the overturned limb of the recumbent syncline, and hc is primarily in the normal limb of the fold
hs, strongly rusty weathering, pyrite-graphite-quartz-muscovite schist. Contains quartz-kyanite knots as much as 1½ feet in diameter, in which kyanite blades are as much as 10 inches long

bs — Brimfield Schist
Dark-gray, commonly rusty weathering, medium-grained garnet-muscovite-biotite-oligoclase-quartz schist. Not exposed in the Hampton quadrangle, but is exposed in the adjacent Eastford quadrangle to the north and in the Spring Hill quadrangle to the west. Contacts are projected into this quadrangle from those areas of outcrop

ty, tfp — Tatnic Hill Formation
ty, Yantic Member, medium- to dark-gray, fine- to medium-grained, muscovite-biotite-oligoclase-quartz schist, with minor garnet, epidote, and potassic feldspar; accessory minerals are zircon, apatite, and opaque minerals. Minor interlayered lenses of staurolite/kyanite or sillimanite-garnet-muscovite-biotite-oligoclase-quartz schist. Megacrysts of plagioclase averaging ½ inch diameter are common. Amphibolite pods as much as 10 feet in thickness are common near base
tfp, Fly Pond Member, light- to medium-gray, medium-grained, thinly layered to massive epidote-(diopside)-biotite-hornblende-quartz-andesine gneiss; accessory minerals are sphene, potassic feldspar, apatite, and opaque minerals

GEOLOGIC QUADRANGLE MAP
HAMPTON QUADRANGLE, CONNECTICUT
QQ-468

Contact
Long dashed where approximately located; short dashed where inferred; dotted where concealed

Fault
Dashed where approximately located; dotted where concealed. Arrows show relative horizontal movement; U, upthrown side; D, downthrown side

Probable trace of axial plane of recumbent syncline
Showing dip of limbs; queried where doubtful, dotted where concealed

STAUROLITE-KYANITE
SILLIMANITE
Mineral isograd
Queried where location is questionable; dotted where concealed

Inclined 10 — Horizontal
Strike and dip of foliation
In metasedimentary rocks relationship to bedding not determined, but presumed to be parallel

15 Parallel — 15 20 Strike parallel — 28 20 Overturned — 15 15 Non-parallel
Intersection of symbols at point of observation
Strike and dip of foliation and bedding

Inclined 10 — Horizontal
Strike and dip of foliation in igneous rocks

Inclined 37 — Vertical
Strike and dip of joints

10
Strike and dip of cataclastic foliation

15 Bearing and plunge of mineral lineation — Horizontal mineral lineation — 5 Bearing and plunge of crinkle lineation or fold axes
Lineation
Used in combination with bedding, foliation, and joint symbols, or fold symbols

5 2 — 10 5
Minor folds
Strike and dip of axial plane and bearing and plunge of axis. Map sense of folds shown where determined

×
Boulder concentration of a given rock type used in delineation of contact

Bouldery areas
Relative abundance of boulders indicated by density of pattern

+B
Glacial boulder
Diameter greater than 10 feet; letters indicate rock type where identified; B, Brimfield Schist; C, Canterbury Gneiss; E, Eastford Gneiss; P, pegmatite; S, Scotland Schist

Melt-water channel
Arrow indicates direction of flow

Direction of melt-water stream flow

Glacial striae
Point of observation at tip of arrow

Scarp between glacial terrace surfaces of closely related age mapped as same unit; ticks on downslope side

Active pit — Inactive pit
Pit in glacial deposits
Approximate boundaries of large pits shown by hachures

sd-p / sd
Materials classification
Letter symbols indicate approximate size distribution in decreasing order of abundance; sd, sand; s, silt; p, pebble gravel; c, cobble gravel; b, boulder gravel; ps, pebbly sand; t, till; ft, flowtill (lenses of till of variable thickness interbedded with glaciofluvial deposits). Superposed symbols indicate superposition of materials in exposure. Read hyphen as "to"

PRE-PENNSYLVANIAN

The name Eastford Granite Gneiss of Connecticut (Rice and Gregory, 1906) is changed to Eastford Gneiss as the rock is primarily quartz monzonite. Eastford Gneiss is adopted for use by the U.S. Geological Survey in this report.

REFERENCE CITED

Rice, W. N., and Gregory, H. E., 1906, Manual of the geology of Connecticut: Connecticut Geol. Nat. Hist. Survey Bull. 6.

For sale by U.S. Geological Survey, price $1.00