

2086

2087

See also Hyd sheet 2032-2035

Diag. Ch. No. 1212-1

Form 504	
U. S. COAST AND GEODETIC SURVEY DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Type of Survey	<i>Hydrographic</i>
Field No.	Office No. <i>2086-2087</i>
LOCALITY	
State	<i>Connecticut</i>
General locality	<i>Connecticut</i>
Locality	<i>River</i>
<i>1891</i>	
194	
CHIEF OF PARTY	
<i>W. J. Virtual</i>	
LIBRARY & ARCHIVES	
DATE	

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U.S. COAST AND GEODETIC SURVEY
LIBRARY AND ARCHIVES

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SHA
2087
1891

Diag. Cht. No. 1212-1

Acc. No.

Department of Commerce and Labor
COAST AND GEODETIC SURVEY

J C Mendenhall
Superintendent.

State: *Conn.*

DESCRIPTIVE REPORT.

Hyd. Sheet No. 2087

LOCALITY:

Connecticut River

See SHA 2032, & 2086

1891
190

CHIEF OF PARTY:

W J Vinal

2087

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SHA.
2086
2087
1891

U. S. COAST AND GEODETIC SURVEY.

T. C. Mendenhall Superintendent.

State: *Conn -*

DESCRIPTIVE REPORT.

Hyde Sheet No. *2086-2087*

LOCALITY:

Connecticut-River

*See also Report for
Hyde Sheets. 2032 - - - 2035*

1891.

CHIEF OF PARTY:

W. J. Vial



2086-2087

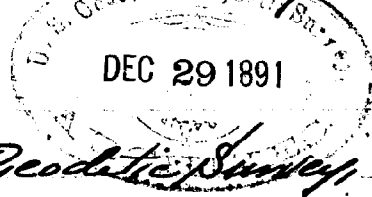
Descriptive Report
to accompany sheets
inserted in

Assistant in Charge

DEC. 23. 1891. 022305

U. S. COAST AND GEODETIC SURVEY OFFICE,

Washington, December 23rd, 1891.



Dr. T. C. Meadenhall,
Superintendent U. S. Coast and Geodetic Survey,
Washington, D. C.

Sir:

In the descriptive report, which accompanied my report of season's work, dated Nov. 30. 1890, I wrote more particularly of the commerce on the Connecticut River and of the facilities of travel along its course from its mouth to Cromwell. Having since completed a hydrographic survey of the river, extending from Saybrook to a point three miles north of Hartford, I am prepared somewhat to give an account of its physical features, the changes affecting its course, channel etc.

The Connecticut (Indian Connectiquot, long river) River was discovered and explored by Black in 1614, and named by him the "Versche", or "Fresh Water River", on account of the strong downward current which did not allow the salt water to set back so far from the mouth as in rivers generally. The current of the river is usually gentle, but the river is subject to freshets especially at the melting of the snows in the spring and as the result of heavy rain fall in

the autumn. The highest modern flood was that of May 1854, when the river reached a height of 29 feet and 10 inches above low water mark at Hartford.

"The low water height of the Connecticut River at Hartford is the same as the mean level of the Sound at the mouth of the river, some forty-nine miles south; the tide at the former place being about one foot and at the latter about four feet. The tide in the river is noticeable above Hartford at the foot of Enfield Falls in Windsor." (C. L. Burdett, C. E.).

The surface of the country through which the Connecticut River flows is generally uneven. At places along the shores are areas that are comparatively level and there are several extensive flats of natural meadow. A range of wide hills passes obliquely from southwest to northeast, crossing the river at a place called the "Strait," a little south of Middletown. Above Middletown the river flows through alluvium overlying the sandstone formation, with occasional deviations owing to the projecting trap rock. South of that place the river has made for itself a channel through the metamorphic rocks.

The rock most commonly found along the borders of the lower part of the river is crystalline and consists of gneiss, gneiss,

ally of a schistose variety. The surface layers of the schists are not usually very smooth but the rock is excellent for curbing and paving. Granitoid gneiss is extensively quarried and used in building bridge piers and other substantial structures. Veins of granite associated with mica and feldspar occur very irregularly, but in places, as at South Glastonbury, the feldspar is very abundant and is largely used in the manufacture of fine porcelain.

Above the "Strait" the rock is sedimentary and is mostly a red sandstone, varying in texture from fine shale to coarse conglomerate and variously called freestone, sandstone and brownstone. This rock is a well known building material and is extensively quarried at Portland, Cromwell and Middletown. A large vein of trap rock crosses the river ^{course} from Haddam to Chatham.

Comparatively few boulders are found in the immediate vicinity of the river. In all parts, however, are hills formed from the local drift of the later ages. These show at their base strata of rounded stones and pebbles overlaid with gravel, sand and river debris.

The trees that grow most commonly on the higher grounds of this section are oak, walnut and chestnut, and less

frequently cedar and pine. On the declivities of the hills and in the valleys are forests of maple, birch, beech, ash and many native elms.

Owing to frequent floods or freshets the direction of the channel and appearance of the banks of the river are continually changing. The erosion of the banks and deposit of sediment in the channel necessitates frequent dredging. The extent and rapidity of these changes are instanced in the fact that the river moved its whole width to the eastward in about twelve years in a section six miles south of Hartford; while at Wethersfield the river-bed since 1690 has made a remarkable change; so gradual, however, as to have attracted but little attention from year to year. The course of the river below Hartford xxx is extremely crooked; and, at the date stated the river, after flowing southeast to Wethersfield, turned sharply to the northeast and then to the southeast again, dividing at Naubuc on both sides of Wright's Island that was over a mile in length. By the shifting of the clay and sand, forming its banks, from one part of a bend to another the river now flows diagonally across its old bed leaving a cove^y on each side that lies nearly parallel to

its present course; and the island has completely disappeared, leaving the stream, however, at its average width of about 400 yards." (C. L. Bundett, C. E., 1886).

* (The "Cove" in Westfield and Kiney's Cove in Glastonbury).

"The cause of the change in the course of the river near Westfield is due to its encountering a bed of red sandstone shale underlying the soil near the present site of the prison, and now known as 'the Rocks'; and this obstruction was sufficient to hinder it from cutting across south-easterly. The other bends have simply 'worked down stream' as is the rule in soft alluvium.

Pewter Pot Brook flows into Kiney's Cove, and not into the river, as formerly; the island (Wright's) has disappeared; Sturgeon Brook flows directly into the river, and no longer into Roaring Brook. More than this: an island of about nine acres, at Penny wise, crossed by the north line of the town, and once known as Long, Cole's or Staudish's Island - is now a knoll in Hartford south meadow." (Sherman W. Adams, art. Westfield, Memorial History of Hartford County).

Stonework, to protect the banks of the river and direct the flow and scour of the current, has been placed on

the west side a little below Hartford and just above the mouth of Roaming Brook, also at Portland and Willow Island. The Portland bank formerly slanted considerably before dropping into the ^{deep} water but is now perpendicular and is rapidly being cut away. Below this point dredge work is frequently required to maintain the steamboat channel. At the point called Bodkin Rock, the water has cut the shore back so that, where formerly existed a deep pool there is now only a shallow beach. The great bend also on the Middletown side, that extends from the "Creek" to a point a little above the Naylor wharf is gradually but perceptibly deepening and the shore-line is receding.

The towns, north of Cromwell, which are included within the limits of the hydrographic survey of the present year, are Rocky Hill, Glastonbury, Westfield and Hartford. Included within the limits of the topographic survey, during the same period are the villages of Chester, Hadlyme, Tylerville, Shakerville and East Haddam.

The geological history of this region is especially interesting and has been minutely treated by Dana,

Hitchcock and Percival in their text books, ^{and} in special treatises by Prof. W. N. Rice of Wesleyan University, and S. W. Loper, A. B., Durham. See also Prof. Dana's papers on Quaternary Geology published in the "American Journal of Science" and the "Transactions of the Connecticut Academy." Important papers on the Trap Rocks have been published by W. M. Davis and B. K. Emerson in the "Bulletin of the Museum of Comparative Zoology" and in the "American Journal of Science".

A "Geological Plan" of the vicinity of the lower part of the Connecticut River, showing the place where it flows out of the sandstone formation and into the metamorphic strata, is attached to this report.

Yours respectfully,
 W. Irving Uical,
 Assistant U. S. Land & G. Survey.

*Geological Plan of Middlesex
County, Conn.*

adapted from Percival's "Geol. of Connecticut."

