1859

1859

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. ..... Office No. 1859

LOCALITY

State Maine

General locality Penobscot Bay

Locality Bay and River

~~1884~~

~~194~~

CHIEF OF PARTY

Eugene Ellicot

LIBRARY & ARCHIVES

DATE .....

8-1870-1 (1)++

1888

Descriptive Report

to accompany Sheet No. 1859

Locality

Pembroke, Maine

1859

U. S. COAST AND GEODETIC SURVEY.

F. M. Thorn, Superintendent.

State: Maine.

DESCRIPTIVE REPORT.

Topographic Sheet No. 1859.

LOCALITY:

Pennamaquan

Bay and River.

1888.

CHIEF OF PARTY:

Eugene Elliott.

Give here full address to which reply should be sent:

U. S. Coast and Geodetic Survey,

Machias, Me.

Dec 19th, 1888

F. M. Thorn, Esq.

Supt. Coast & Geo. Survey

Washington, D. C.

Sir:

I have the honor to submit the following report of season's work which closed on the 17th of October.

The location of sheet is best described or defined, by saying that it embraces the shore line, and coastly contiguous to the North-Eastern quarter of Cutscook Bay, Me. The extreme S. Eastern limit of detailed topography is the East Port (Moose Island) - Main land bridge. The Western limit - in general terms - is drawn upon topography executed during season of 1888 by said J. H. Gray.

Field operations were begun on the 14th of May, and closed Oct. 17th

The geological formations of this county
is quite interesting. I am inclined
to believe that the Laurentian deposits
outlined and elaborately discussed by
Agassiz reached as far South as Southe=
astern Maine. It is quite evident that even
a higher geological scale is reached, for
there is to be seen evidence of the Devonian
deposits, or rock. The physical features of
the country are in accordance with the above
suggested idea: the hills are generally low
and especially irregular: the greatest
altitude on the tract under discussion is
but little in excess of three hundred feet,
and this is the highest point I know of in
following the coast from Machias Bay
East to Lubec Head, and thence along
the irregular shore of West Lubec Bay,
Johnson's Bay etc, into and around Cobscook
Bay. There are a few peaks up the St.
St. Croix River, extremes of Chamcook
Mountain (New Brunswick) which are of
greater height.

As intimated the country is for the most part exceedingly rough. There are but few hills attaining the height of two hundred feet. Over certain stretches of the route where perhaps an hundred foot contour would not be involved I have experienced as much inconvenience and discomfort in carrying the plane table work as I have in California with hills of twelve or fifteen hundred feet to delineate. A very marked feature in the rock is the abrupt and inaccessible South-West facial exposure. The weather and time have destroyed a portion perpendicularly, which at one time no doubt existed - facing as above but still it is marked. On the N. E. side of the hills the slope is conspicuous, in contrast. It is quite impossible to delineate this feature excepting in a general way, on a scale of 10.000. By inspecting the sheet this feature will show itself very plainly.

A few square miles were covered by drowsy Sandstones in which no fossils were found. The largest part of area covered by the sheet

is composed of Silurian rock, or formation peculiar to that era. In the Silurian shales were found sparingly pronounced conglomerates. A few fossils occur, but the exposures are not at all frequent. I obtained specimens of Marchisonia, Nucula, orthis orbicularis, &c. The evidences of glacial action are very marked, the furrows in places being a foot or more across, and many yards in length. From the very interesting investigations made by Agassiz in vicinity of Bangor, Maine I am inclined to believe that this entire belt is similar, and will fall under the same scientific classification. Granite, which to the popular mind is another name for Coast of Maine, does not occur

The only mineral deposit encountered during survey work is in Medina corner of sheet, but not embraced in topographical detail - it is a vein of galenite, about two (2) inches in thickness included in a matrix of quartz. It has been worked slightly, but the paucity of metal discouraged the miners, and operation

were abandoned.
Concerning requirements in paragraph
2: Low water line is defined plainly because of there being no uncertain quantity caused by bunkers.
6: Springs of water are not frequent and those that were seen are small and insignificant.
7: Salt marshes are scarcely worthy of consideration as they only exist in small, fringe like, patches.
8: The vegetation is a matter of small range. The trees are of forest growth, and generally indeed entirely of "second-growth". The primeval forest was of noble proportions and of great commercial value. Before the opening up of the Michigan and other white pine districts the Atlantic States depended on Maine for this valuable timber, and the activity in cutting and marketing continued from soon after the Revolution until a few years after the Rebellion. During these many years prodigious quantities were shipped, and the country practically stripped of its best timber.

At present the shipments of lumber are comparatively small, and the quantity such as only sells in the market of trade as second class. Michigan lumber being accorded the first place. (The remarks on this subject, which I may much appreciated will be regarded as redundant, should apply to the Eastern part of Maine. To confine myself the possible space covered by an antiquarian sketch, or scale of 10,000 would be to reduce the discussion to ridiculously-little limits.)

The average height of the Spruce - the dominant tree - is about forty feet. The white pine forest, destroyed by axe or fire are generally coming up in Spruce. The hardwoods are a small factor, though there is much of the birch used as material for cotton spools. Probably all the spools used by manufacturers of sewing cotton, silk, etc., are made of Maine birch. Notwithstanding the binder and inferior age of the forest much of it is being cut, for low grade of lumber.

The manufacture of cases for packing

Sardines consumes quite a lot of small stuff - but larger in most cases than the cord wood used for fuel in Baltimore and Washington. The most valuable hard wood for fuel is the Rock maple.

I saw it stated in a paper recently - as to reliability of report I know nothing - That an Agent of Agricultural Dept. had made an exhaustive examination of the woodlands of Maine, and reported that the cutting of timber was not equal to the growth. In other words the timber is growing more rapidly than the mill men can cut it. I am inclined to pin my faith to the report, for the growth is remarkable

Of fruit trees there are few. No fruits flourish. The apple is tried by all the farmers but the result does not strike me as commensurate with outlay. There is a gorgeous crop of blossoms towards the latter part of June, but before the real and useful work of an apple tree's life begins the cold nights of September

town then thoroughly, and say forward then to rest for eight months, and prepare for production of more blossoms.

Q: The proportion of arable land to the wooded, is not more than as one to fifteen, and directly North of that an almost unbroken woodland is encountered.

The only town embraced, or included in the survey under discussion is Penobscot. One, then is N. Sunbrook which exists by grace of the Post office Department. There is no line of demarcation between the two settlements (two as officially considered) the P. Officer an about three quarters of a mile apart.

I was unable to learn the derivation of the name Sunbrook, though I made frequent inquiry. The first settlement was made in 1774 by a party of colonist from Hingham, Massachusetts, headed by a bold spirit named Hersey. The only clue I could get to the origin of name was that Hersey had not been long in Massachusetts, and that

It came from England. The chances are that it named the place after the English Cambridge, because of early association. It was the custom of the Colonial Governors to make grants of one hundred acres to settlers. In some instances an entire township was granted an individual upon condition that he would induce a certain number of families to locate thereon — the number varied, as well as I can learn from thirty to sixty. This was an inducement to much fraud on the commonwealth, and imposition on the settlers. I have seen some of the so-called deeds or titles to their land. They are in themselves well nigh useless. Title was finally acquired by prescription, in many cases at least. In other words the squatter of the West to day, has the privileges in the Far East. The digression may be irrelevant to the subject in hand, but in a more extended report would not be without interest.

To comply with requirement: The original settlement was induced, no doubt by the

fairly good quality of the hay land, safety of harbor, and boat landings, and valuable timber. [illegible], I am informed by Mrs. Grundy, that the first saw mill was erected in 1795, and that the facilities for sawing were steadily increased and increased upon until the beginning of present century, and subsequently.

The town as a corporate body was set off from Dennysville in 1832.

In 1838 the Caffin Iron Mills were started. These mills flourished till close of Rebellion and then languished till 1884, when work was stopped, and the plant practically closed. The remarkable features of this enterprise, which was for a period very successful and remunerative lie in the fact that there was not an element for iron making within many miles. The ores came from abroad, as Pennsylvania: the coal from Pennsylvania, and the flux from head of Bay of Fundy — in Nova Scotia. Every variety of iron, from the 1/2 by 1/8 inch nail plate was made.

To reply to the question, what maintains (the settlements) there. There is not an industry left. In former years, inside the bay work many vessels of large tonnage were built. I am informed that at one time there were seven hulls under course of construction. Some of the people own "fishes" of vessels, from which scanty returns are derived, but the bulk of the people have nothing but their little farms, or lots, but by dint of going to work in factories in Massachusetts for part of a year they manage to subsist. Money is scarce. The men take for one another. The carpenter works out his bill at the store and the storekeeper. The farmer takes goods for his meagre products. The shop keeper pays the wholesale people in eggs and other small stuff. The people who bound are apt to work out in chores a part of their bond - or if they are independent, the bond is paid in goods. So the life in the village of Pembroke goes. One of the most intelligent and best off men in the place told me that the destruction of all their interests had not created any

poverty or hardship. Of course many persons have moved away during part of the years, but those who remain have comfortable homes, and by the exercise of an economy which does not savour a little of penury, they pull through decently, and comfortably.

There are no Rail-roads. The communication with the metropolis, Eastport, is by a very poor road, or for heavy goods, freight, etc. by water. In a previous report I had occasion to say that the roads were generally good, and in winter, unexceptionably so. In the case of Pembroke this is different. West of the town toward Dennysville they are poor. To the N.- inland equally so. From Pembroke to the Eastport ferry, a distance of 7 miles the road is vile beyond description. There exist in the town of Dennysville deposits of Gravel sufficient - along the road sides. The result is, to have very tolerable, good roads. In Pembroke there is no gravel within easy reach of the roads, excepting those leading to Garnet Head and Leighton's Pt, where beach

gravel is used. The aforesaid bad piece of road between Pembroke and Eastport Bridge would be better, perhaps, but that it runs through the town of Perry, and the settlements are good and far between. Perry village and the producing section are all on the Eastport-Calais road. The Perry people say that they do not use the Pembroke road, and the Pembroke people are too selfish and narrow minded to spend a penny outside of their town limits. Hence, one of the most important and freely used roads in the County is the worst.

I cannot omit the opportunity to call your attention to the town system of this section. A good system in the abstract, theoretically economical and productive of excellent results in rich sections, but illy suited to a poor sterile County like this. There are about seven towns in this county to whose each should be one. The grades are not generally bad - town and there a steep pitch is met with. The County is on a low grade - but few hills of any magnitude - hence not many bad grades.

The Pemmamagoon (sometimes spelt with but one N in the first syllable) River is the only stream with which I have to do. This stream in its normal volume is not of much importance, but by the control in which it is held it is particularly valuable. Contiguous to the millsights, or falls, and extending back two miles there is a valuable right (belonging to the present owners of the old iron works) of flowage. Beside the right the natural facility is good. The flowage covers, or can be made to cover about 60 acres of area. So perfect is the control over the water it can be used from a high water flowage downward, for six feet. 60 acres area with a depth of 6 feet makes in itself a handsome number of waterpower. Perfect water is enough, or as much of it as "needed, and held for use. But this is a small part, an insignificant part, of the water storage facility this stream, and its sources afford. A mile above the head of the above mentioned reservoir is the S. end of Pemmamagoon

Lake, as to which empties Round Pond.
I estimate the area of these two bodies at 22
miles. They lie, probably forty feet above
the sea ocean mean, and can be kept in
perfect control. Indeed I do not doubt but
that (saving private rights) their waters could
be inexpensively made to rise their surface
6 to 10 feet above existing level, and
the water, thus stored, let off just as needed.
While having no special knowledge of
such propositions I am inclined to regard
this as one of the most valuable water
powers in Eastern Maine. It is all going
to waste.

The bridges are all good - they are
generally on small streams, and the
keeping in repair involves but little expense.

The fences are generally good, but fast
disappearing because of "no fence law"
There are no pleasure resorts on the Shet
though the many lovely spots on the Eastern
bay part of Shet, cannot, I think
be many years unimproved.

During the winter, or to be more definite, from 1st of Jan (or thereabouts) until Mch. 15 vessels do not go above Cuggins' Wharf. The many little coasters, whose masters live in vicinity of Pembroke anchor the craft below this place. Generally, the Bay is frozen from this point up to the village.

Pembroke is deserving of fair fame because of its schools. They are exceptionally good, including a high school. This process of education is good for the country at large - the West and South, but does Pembroke but little service. Those of the youths who attain any sort of standing no sooner complete their course of study before they leave the village, for the more prosperous parts of the country. And still Maine goes on educating its youth to labor in other vineyards. The stupid - the afflicted - the unprogressive stay at home. The aged are to be supported by the refuse, who remain.

I am afraid(?) that there will be a circular issued forbidding the discussion of

extraneous subjects, but as primarily
indicated a report confined to the four sides of
a plain table sheet would be very little found.
My chief consolation is that – in soliloquy – no
body will ever read a line of this crudite
production* so I will also escape condemnation
or applause. *Mark twice perhaps! Still it will all be useful perhaps whatever

The summer climate of Section of
Country lying N. of Oakwood Bay is
especially salubrious. The days do not
linger on indefinitely as they are fond of
doing on the outside coast. The heat is
never intense. The northerly winds come
laden with the fragrance of the balsam fir,
the lungs are soothed by their kindly ministration,
and man is forced into the belief that life
is worth the living. The last sentence though
writing over with poetic fancy, is somewhat
literally correct. I failed to mention the existence
of a small saw mill – employing a half dozen chaps
men, or boys. This mill is of such small (calibre) (Small bore saw mill!
(steam) as to have to confine its output to logs used
for shingle packing. There is also a sandpit

factory in which twelve or fifteen people,
Generally boys and girls are employed at irreg=
ular intervals and for indefinite periods.
Also, a cheese factory, which gives employment
to one man for half the year. If this little
circumstance is not foreign to subject I would
like to mention it. The man who is so conspicuous
in the personnel of the cheese factory above
referred to, is an expert cheese maker, from
Oneida County, N. Y. and informed me that
the milk produced in vicinage of Pembroke
was 20 p.c. richer, in cream than any milk
he ever tested in Oneida Co., and that he had
for years examined several thousand gallons
daily. × In my descriptive report of
work of season 1887, and possibly touched
on in reports of former seasons I had occasion
to refer to the low grade civilization which
obtains in the settlements contiguous to coast.
After a season in Pembroke and neighboring
hamlets I am more than satisfied with the
aptness and correctness of my conclusions.
The towns well removed from fishing grounds,

× The Maine farmer (whose stupidity prevents his emigrating) has not learned the Oneida trick of skimming the cream!

though not surrounding by taller soil, water, waterfowl, wood, or any other concomitant of a people's needs, are invariably taller and infinitely higher in the gamut of nineteenth century ideas. Rembrandt and Dunyeville seem to have no visible means of support, notwithstanding which they are practically flourishing, inasmuch as any body lives comfortably and publicly, and there is a very small pauper class. It would be difficult to convey in a paper of this character an adequate idea of the tremendous difference which exist between the Short Lives and those removed from the fishing influence. To make a comparison between say Cutler and Rembrandt in the case of first named village there is adjacent to the town a valley rich in soil, besides many little patches of ground, all of which would yield generously in the few products of the country, but as labor is hopelessly demoralized by the drunkery and vagabondish habits induced by work incidental to the fishery, nought is done by any body for the nine months of the year

when the fish are not "running."

I am fully satisfied that the count of Swans would be a most profitable, and useful section of the county if more another Swan was caught.

There is no Steamer plying between Cumbrae and the outside world. There is a packet (schooner) of about 120 tons running between Cumbrae - Eastport and Pugwash.

Statistical.

Cumbrae Sheet:

Area	27.5 miles = sq. M.		27.5
Shorelines	37.0	"	7.5
Mainshore	5.0		1.0
Roads	37.0		4.0
			40.0

Sheet No. 979 - Shorelines by Asst. Dennis, 1863
detail topog. by Asst. Ellicott, 1888

Roads	3 miles	
Area	1½ "	1.5

For purposes of reckoning cost - Square miles 41.5

Statistical - con.

Party expenses May 14th to Oct. 17	$1900.71
Salary May 14th Dec. 20	902.95
To date, total cost -	$2803.66

$2803.66 = $67.56 per square mile

To ascertain actual cost this should be added, say 1 months pay - a liberal estimate, per cent of completing mile work - 129.20

Transportation eliminated - from Machias, Me. to Washington 32.00

161.20

2803.66

2964.86

Cost per square mile, including above, $71.45 1/3

Weather: during the season the weather was on the whole unfavorable. While pleasant and conducive to good results in June and July it became disagreeable in Aug. and Sept. From Sept. 15th to close of work, Oct. 17

the conditions became unspeakably bad.

I had hoped to finish sheet 980 - three lines of which were executed in 1863 - in addition 979, which was done in bad weather.

It may strike you as unwise to have carried the hypsography so far inland, but as it was done at no extra cost I beg that what was reckon beyond the usual one mile limit will be accepted as so much clear gain. It was necessary to occupy certain stations and hills outside of the flexible one mile limit in order to carry the plane table triangulation along, and at such places it involved no extra expense to determine country within reach, and often I found that I could work a mile or two inland when the fog was hanging over, and quite thick, along the shore.

I will repeat, in this report, a recommendation I made to you in a personal interview: that there be made a survey of the road from Calais to Machias, and all the other road lying between that line and

the work along shore of Ocean, and Cabot coast.
The distance from East Machias to Calais is about 36 miles. Fifteen miles of road - i.e. from near East Machias to Whiting will finish the shore road (not considering the almost impassable link from Cutler to Lubec, which is done) from Mill bridge, and have much further West I do not know, to the Boundary. In case of war with England, which is among the remote possibilities, the network of roads comprehended in this scheme would all be of great importance, especially when it is remembered that there is but one R. R. to the boundary, and that passing through some miles of Canadian territory before reaching Calais.
The Survey should be similar to a good reconnoissance - say, run the roads with level and pocket table, representing the grades, water courses, character of timber contiguous to road, sketch settlements hill tops etc. I think that miles of such work could be done daily, with wagon and light camp outfit.

Chapter VIII end of p. 20

One hundred miles would be a liberal estimate of road distance involved. Two months should suffice to accomplish the undertaking.

I think that when the survey has carried the work a mile, or more inland pretty much the entire length of the Atlantic Coast that there is more than justification in making back at this place to Lincoln referred to above.

I am quite sure that Military and diplomatic authorities would highly esteem such a survey.

Under head 5: Scheduled Statistical subjects.

Here are all the triangulation points needed. Some difficulty was experienced in creating harmony here and there, but I am quite sure that neither the quality of the trigonometrical work, nor the making of projection are at fault. The very infrequent triangle not closing so - usually was probably the case. Of plane table points there were an infinite number - indeed all known and bays were used after once being located. Along the shores I marked, with pole and pile of rocks a large number of p. c. points,

and subsequently traced them, together with shore line, for use of Hydrographical party under charge of Lt. Crosby, of Str. "Sidney."

Concerning character and degree of accuracy obtained, I would say: the roads were run over, ahead of plane table with surveyors level and lunch marks placed. This method gave me a reference point on all the work adjacent to roads. The shore line was carefully and thoroughly done.

Along the N. E. side of sheet the country is extremely rough, and absolutely worthless. It was necessary to generalize a great deal in the contour work. But for the prominence of the range of hills which happen to fall along this side of sheet I would not have carried the work so far back. A vast deal of difficulty, and personal discomfort was experienced in doing so.

I have not attempted to describe the location of Fort Tracy, as it is manifest that reference to this report - an almost impossible contingency - would be subsequent to an examination of the chart.

The population of the town of Pine Grove in 1880 was 2324. Since then the village has lost probably twenty per cent of its inhabitants. In the first instance, and at present, the village represents perhaps seventy five per cent of your population.

I desire to repeat a recommendation contained in my last report: to wit: that there be compiled from various reports, or else get that time and facilities be afforded some one of the County to make a report of the Court and contiguous country from the county (Washington) line, which lies West of Millbridge, to the head of Navigation, St. Croix River.

The present system of practically confining repairs to kinds of street, which are arbitrary, and therefore, careless, beyond the mechanical proportion of keeping on bit of paper over another, as in papering a wall, but without the advantage enjoyed by the latter of regularity.

The prevalent method done by causes

a vast deal of repetition. The reports of the Gentlemen who worked East and West of me during part of Season probably embody the identical ideas I have only had the honor of presenting.

Very respectfully,
Your obedient Servant
Eugene Elliott
Asst C.E.