

MAINE STATE LEGISLATURE

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For the Year 1902.

VOLUME IV.

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KENNEBEC JOURNAL PRINT
1903

REPORT
OF THE
TOPOGRAPHIC SURVEY
COMMISSIONERS

1902

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REPORT.

To His Excellency, John F. Hill, Governor of Maine:

SIR: The sixty-ninth legislature by act, Public Laws of 1899, chapter 99, created a Topographic Survey Commission and charged them with the preparation and completion of a topographic map of the State. The seventieth legislature by resolve, Public Laws of 1901, chapter 216, vested in said commission the direction and control of the geological survey of the State.

Following is a report of the survey commission on its work during the years 1901 and 1902.

In accordance with the provisions of the above mentioned act a contract was entered into with the director of the United States Geological Survey under the terms of which the map was to be constructed by that survey, while the cost was to be borne equally by the general government and the State of Maine. The full text of this contract was included in the first report of the survey commission. The contract was renewed for the years 1901 and 1902. The field and office work have steadily progressed during the two years. The topographic party has been under the charge of Mr. W. H. Lovell and the triangulation party under Mr. E. L. McNair, both trained experts with many years of experience in such work. The region surveyed in 1901 began at Bluehill and extended eastward as far as Cherryfield, an area which required the preparation of seven standard atlas sheets of the map. The topography of this area was completed in 1902. The region north of Waterville and Norridgewock was then undertaken. Primary triangulation was accomplished as far north as Lily bay at Moosehead lake, giving control of eleven atlas sheets on one of which good progress was made in topography, the Anson sheet being completed. The area then in process of mapping at the present time includes about 3,000 square miles.

MAPS.

During the period covered by this report the Bangor, Orono and Castine sheets have been printed and made available. Seven sheets are now in the hands of the engraver and will be completed in the near future. The finished atlas sheets will then number thirty-four, including an area of 5,131 square miles. Each atlas sheet is printed on paper 16½ by 20 inches and covers, on the average, about 215 square miles. The scale is approximately one mile to the inch and differences of elevation are indicated by figures and by lines of equal elevation called "contour lines." These are printed in brown and each line shows changes in height and slope of surface for every 20 feet of elevation. All drainage, as streams, ponds and swamps, etc., is printed in blue; all cultural features, as roads, railways, houses and the names upon the maps are printed in black.

The sheets are sold at 5 cents each or \$2 per hundred and may be obtained of the director of the Geological Survey at Washington. They are also to be obtained of the secretary of the commission at Augusta.

TOWN BOUNDARIES.

In many cases the surveyors in the field have had great difficulty in locating the town boundaries for correct mapping of the towns. Municipal officers are required by law to perambulate the town lines once in five years, or in case stone monuments have been set up in designated places, once in ten years. These provisions of law have been in many cases neglected, so that great uncertainty sometimes exists as to the proper location of such lines. To ensure greater accuracy this commission in 1901 sent out a circular letter calling attention to the law and requesting copies of the records of perambulation and the establishment of stone monuments. This met with ready response on the part of the municipal officers and many satisfactory reports have come to hand. It is hoped to finish this work at an early date so that there will be on file in the office of the commission a complete record of the boundaries of all towns in the State.

HYDROGRAPHY AND GEOLOGY.

The original plan of this survey, as presented to the legislature, provided for the extension of its scope to include the measurement of the flow of water in the streams, for the exact determination of their water power, the location of suitable sites for the construction of reservoirs for the storage of water for manufacturing and other purposes and the investigation and report upon the geological and mineral resources of the State.

The interest in these matters is wide-spread and the results have great practical and financial value in the State's development.

The United States Geological Survey began the work of stream measurements several years ago, and accomplished much good work. The demand for results, however, have been greater than the survey could well meet with the means at its disposal. Something has been accomplished by private parties and a subscription of \$500 was raised among those most interested, to further the progress of the work of the survey. In response to petitions and letters to the director of the survey, urged and reinforced by this commission, the field of work has been extended, so that stations are now maintained as follows: Penobscot river at Montague, Roach river at Roach River, Kennebec river at The Forks, Dead river at The Forks, Kennebec river at North Anson, Carrabassett river at North Anson, Androscoggin river at Dixfield, Piscataquis river at Low's Bridge, Mattawamkeag river at Mattawamkeag, East Branch of Penobscot at Grindstone, Moose river at Rockwood, St. Croix river at Spragues Falls.

Measurements have been made at all of these stations at frequent intervals throughout the past year and rating tables will be constructed and the flow for each day in the year be computed. These results will be published in the next annual report of the United States Geological Survey.

The commission has also arranged for the undertaking of some important geological work. The Bluehill region presented an inviting field. The Geological Survey, during the past season has begun an investigation into the deposits in the towns of Bluehill, Surry, Penobscot, Brooksville, Sedgwick and Brooklin. It is intended to prosecute the survey until the entire area is mapped and described.

EXPENDITURES.

The amount appropriated for the uses of this commission for the years 1901 and 1902 was five thousand dollars. The total expenses for both years were \$4,926.47, leaving a balance of \$73.53 which has been returned to the treasury.

UTILITY OF A SURVEY.

Arguments are no longer needed to demonstrate the utility of a survey organized for the full and complete development of all the natural resources of the State. The value of its results, when completed, may be measured by the almost continuous demands upon this commission for information relating to the undeveloped wealth everywhere so bountifully distributed by nature. The range of inquiries has included questions about sites for the location of manufacturing plants, the climate and topography of summer resorts, the value of water powers, the quality of water supplies and the occurrence of useful minerals and building stones.

RECOMMENDATIONS.

This commission believes that there is an immediate and imperative demand that the work with which it is charged shall be advanced towards completion as rapidly as economy will justify. They therefore recommend that they be authorized to arrange with the director of the United States Geological Survey to enlarge the scope of its work and to include topography, hydrography and geology in its contract with the general government whereby the United States Geological Survey shall expend in the prosecution of the survey an amount equal to that expended by this State. By the terms of this contract the general government, under the supervision of the Survey Commission, will do the work, make the results available and pay one-half the cost. This is the plan adopted in other states where such work is being done and it provides for its accomplishment in the most efficient and economical manner.

They further recommend that there be appropriated for the use of the said commission for the years 1903 and 1904, including all expenses, the sum of ten thousand dollars.

LESLIE A. LEE,
WILLIAM ENGEL,
C. S. HICHBORN,

Topographic Survey Commissioners of the State of Maine.
AUGUSTA, ME., January 29, 1903.