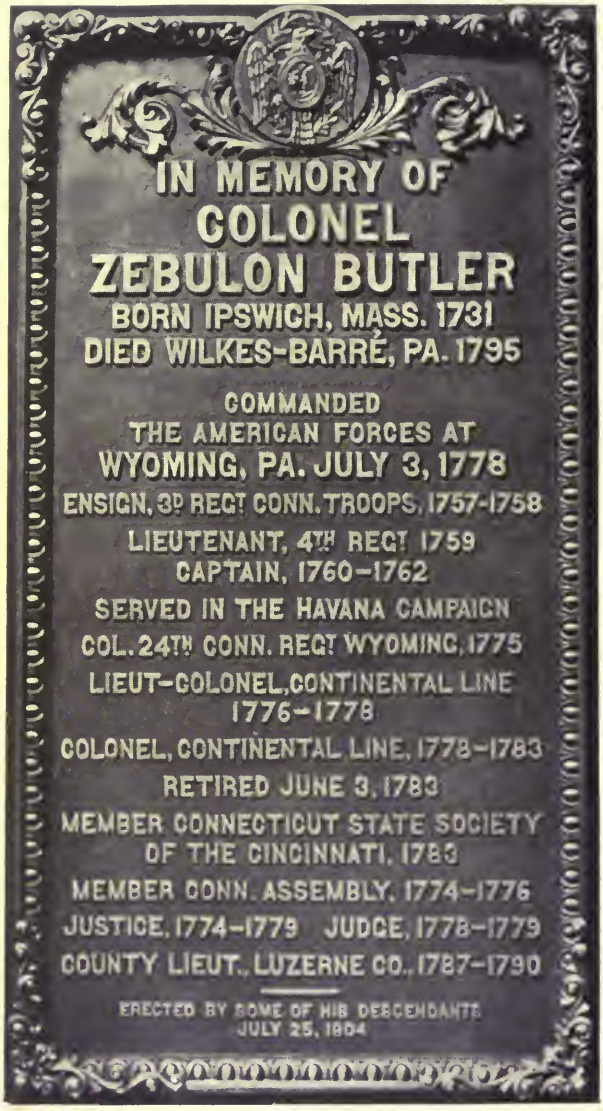
IN MEMORY OF
COLONEL
ZEBULON BUTLER
BORN IPSWICH, MASS. 1731
DIED WILKES-BARRÉ, PA. 1795
COMMANDED
THE AMERICAN FORCES AT
WYOMING, PA. JULY 3, 1778
ENSIGN, 3D REGT CONN. TROOPS, 1757-1758
LIEUTENANT, 4TH REGT 1759
CAPTAIN, 1760-1762
SERVED IN THE HAVANA CAMPAIGN
COL. 24TH CONN. REGT WYOMING, 1775
LIEUT-COLONEL, CONTINENTAL LINE
1776-1778
COLONEL, CONTINENTAL LINE, 1778-1783
RETIRED JUNE 3, 1783
MEMBER CONNECTICUT STATE SOCIETY
OF THE CINCINNATI, 1783
MEMBER CONN. ASSEMBLY, 1774-1776
JUSTICE, 1774-1779 JUDGE, 1778-1779
COUNTY LIEUT., LUZERNE CO., 1787-1790
ERECTED BY SOME OF HIS DESCENDANTS
JULY 25, 1904

PROCEEDINGS

AND

COLLECTIONS

OF THE

WYOMING HISTORICAL AND GEOLOGICAL SOCIETY,

FOR THE YEAR 1905.

EDITED BY

REV. HORACE EDWIN HAYDEN, M. A.,
Corresponding Secretary and Librarian.

VOLUME IX.

WILKES-BARRÉ, PA.
PRINTED FOR THE SOCIETY.
1905.

PRINTED BY THE E. B. YORDY CO.,
Wilkes-Barré, Pa.

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CONTENTS.

PREFACE.

The ninth volume of the Proceedings and Collections of the Wyoming Historical and Geological Society here presented to the members differs from previous issues in the large amount of Ethnological matter it contains.

The Collections of the Society in this department are singularly rich in fine and rare local specimens of the aboriginal art, in many cases unique and most deserving prominence in the printed records of the Society.

It is the purpose of the Publishing Committee to make this department a feature of future volumes.

The valuable paper by Professor Scott, of Princeton, on the Geology of Patagonia, was received too late to be illustrated, but it will repay careful reading. All responsibility for errors must be laid on the members of the Publishing Committee whose reading of proof has been most conscientiously done.

Rev. Horace Edwin Hayden,
Miss Myra Poland,
George Frederick Coddington,
Publishing Committee.

PROCEEDINGS AND COLLECTIONS
OF THE
Wyoming Historical and Geological Society.

Volume IX. WILKES-BARRÉ, PA. 1905.

PROCEEDINGS.

Quarterly Meeting, May 8, 1903.

Mr. S. L. Brown, Chairman; Rev. Mr. Hayden, Recording Secretary, *pro tem.*

The minutes of the annual meeting were read and approved.

There being no regular business, the President introduced Dr. Frederick Corss, who read a brief and interesting paper on "The Buried Valley of Wyoming."

On motion of Mr. Hayden, the thanks of the Society were extended to Dr. Corss, and the paper was referred to the Publishing Committee.

The Corresponding Secretary then read an extended and carefully prepared sketch of "Miss Hannah Packard James, late Librarian of the Osterhout Free Library," and for twelve years an active member of this Society, prepared by a personal friend, and kindly allowed to be read at this meeting. A vote of thanks was unanimously extended to the writer of the paper, and the paper was referred to the Publishing Committee.

The Librarian exhibited a chain "coat of mail," manufactured at Nuremburg, Germany, found in Peru, South America, while excavating in the Alps, by Mr. A. Godfried, of Wilkes-Barré.

The meeting adjourned at 9 P. M.

Quarterly Meeting, October 9, 1903.

Hon. Stanley Woodward, President, in the chair.

The minutes of the last meeting were read and approved.

The Corresponding Secretary reported a donation to the Society by Christopher Wren, of Plymouth, of his fine collection of five thousand local Indian remains, gathered in the Valley, and on the Susquehanna River.

On motion of Rev. Dr. Jones, a vote was extended to Mr. Wren for his generous donation.

The Rev. Mr. Hayden reported the death of the following persons, since the last meeting, all life members of the Society: Hon. Charles Abbott Miner, Rev. Nathan Grier Parke, D. D., Miss Martha Bennett, Mrs. Priscilla Lee Bennett.

The Rev. Dr. Jones presented the following resolution, which was approved by a standing vote, and ordered to be placed on the minutes:

"*Resolved*, That in the decease of the late HON. CHARLES A. MINER, a member of this Society from its foundation, at one time a President, and for many years one of its Trustees, we have lost a valued friend, whose deep interest in all the affairs of the Society was always manifest, and whose counsel and support were ever freely given. Our heart-felt sympathy is extended to those most sorely bereaved."

The following applications for membership, approved by the Trustees, were unanimously elected:

Resident members, Mrs. Eckley B. Coxe, Drifton (Life Member), Mrs. H. H. Derr, Miss Emma J. Jenkins, Miss Myra Poland, Dr. William G. Weaver, Messrs. Charles F. Hill, of Hazleton, E. L. Bullock, of Audenried, and George H. Troutman.

Corresponding member, Mr. Thomas L. Montgomery, State Librarian.

The President then introduced the Corresponding Secretary and Librarian, who read abstracts from the "Reminiscences of David Hayfield Conyngham, 1750–1832," which will be found in Vol. VIII of the Proceedings of this Society.

On motion the Society adjourned at 8.45 P. M.

Quarterly Meeting, January 8, 1904.

Dr. F. C. Johnson, presiding.

The following applications for membership, approved by the Trustees, were elected:

Resident member, Mr. T. Milnor Morris, Jeansville, Pa.

Honorary member, Dr. William Berryman Scott, Professor of Geology at Princeton University.

The Chairman then introduced Dr. Scott, who delivered a charming address on the "Princeton Expeditions to Patagonia." The lecture was illustrated by stereoptican views. A unanimous vote of thanks was extended to Dr. Scott, and the address was referred to the Publishing Committee.

On motion the Society adjourned at 9.30 P. M.

Forty-Sixth Annual Meeting, February 12, 1904.

Hon. Stanley Woodward, President, in the chair.

The Rev. Dr. Jones opened the meeting with prayer.

The minutes of the two preceding meetings were read and approved.

On motion of Mr. Hayden, the President appointed Mr. Christopher Wren, Henry A. Fuller, Esq., and Dr. Frederick Corss, a committee to nominate officers for the coming year.

The Treasurer read his annual report, which, on motion, was accepted and referred to the Publishing Committee.

The committee on nominations reporting the following persons, they were unanimously elected, by the ballot of the Secretary, the officers for the Society for the ensuing year :

President, Hon. Stanley Woodward.

Vice Presidents, Rev. Henry Lawrence Jones, S. T. D., Hon. Jacob Ridgway Wright, Col. George Murray Reynolds, Rev. Frances Blanchard Hodge, D. D.

Corresponding Secretary and Librarian, Rev. Horace Edwin Hayden.

Recording Secretary, Sidney Roby Miner.

Trustees, Edward Welles, Samuel Le Roi Brown, Richard Sharpe, Andrew Fine Derr, Henry Herbert Ashley.

Curators—Archæology, Hon. Jacob Ridgway Wright.
Mineralogy, William Reynolds Ricketts.
Numismatics, Rev. Horace Edwin Hayden.
Paleozoology, Joshua Lewis Welter.
Paleobotany, William Griffith.

Historiographer, Rev. Horace Edwin Hayden.

Meteorologist, Rev. Frances Blanchard Hodge, D. D.

The Corresponding Secretary and Librarian read his annual report, which, on motion, was accepted, and referred to the Publishing Committee.

On motion of Mr. McLean, Mr. Edward Welles and Mr. Charles W. Bixby, were appointed a committee to audit the accounts of the Treasurer.

On motion of Mr. Richard Sharpe, a vote of thanks was extended for all the donations to the Society during the past year, and reported by the Corresponding Secretary ; especially to the ten members who purchased and gave the Berlin collection of Indian relics to the Society, viz : Messrs. Andrew Hunlock, John Welles Hollenback, Edwin H. Jones, Henry H. Ashley, F. M.

Kirby, Andrew F. Derr, Dr. Levi I. Shoemaker, Major Irving A. Stearns, Mr. Charles J. Shoemaker, and Dr. and Mrs. Lewis H. Taylor; to Miss Edith Brower for a rare drawing of the Wilkes-Barré Bridge, 1823; to the family of Mr. H. Baker Hillman, and to Thomas H. Atherton, Esq., for portraits of Mr. Hillman, and Mr. Thomas F. Atherton, Vice President of the Society; to Mr. William Griffith and Mr. William Puckey for valuable geological specimens, and to the Osterhout Library Trustees for two card catalogue cases.

On motion of Mr. Bedford it was resolved that the President appoint a committee of five members to carry out the recommendations of the Trustees and the Librarian to devise means of securing money for the employment of a cataloguer to card-catalogue the library of the Society, and to report to the Trustees within thirty days. The President appointed George R. Bedford, Thomas H. Atherton, Andrew Hunlock, Rev. Dr. Henry L. Jones, Dr. Lewis H. Taylor.

The Librarian offered the following amendment to the by-laws, approved by the Trustees, to lie over until the next regular meeting of the Society:

Proposed amendment to By-Law 14 at the end of the eighth line, viz:

"When, however, in the judgment of the Cabinet Committee, additional aid is needed in any department, above named, Assistant Curators may be appointed or elected from among the members of the Society, whose work shall be under the direction of the Curator of such department, and the Cabinet Committee."

The following applicant for membership, approved by the Trustees, was unanimously elected:

Resident member, Edmund Hurlbut, Kingston.

The President then explained the absence of the speaker of the evening, Governor Samuel Pennypacker, owing to the death of Mrs. Pennypacker's father, and instructed the Corresponding Secretary to express to the Governor the regrets and sympathies of the Society in this bereavement.

The President then introduced the Rev. Sanford H. Cobb, of Richfield Springs, New York, who had consented, at the last moment, to speak, and who delivered an impromptu and scholarly address on the "Growth of Religious Liberty in America."

After a standing vote of thanks to Mr. Cobb for his admirable address, the Society adjourned at 9.30 P. M.

Monthly Meeting, April 15, 1904.

Rev. Henry Lawrence Jones, S. T. D., presiding.

No business being presented, the presiding officer introduced Mr. A. F. Berlin, of Allentown, Pa., who read a very interesting and exhaustive paper on the "Early Pipes of the North American Indians," with illustrations.

On motion of the Librarian, a vote of thanks was extended to Mr. Berlin, and the paper referred to the Publishing Committee.

The Rev. Mr. Hayden also read a paper, written by Mr. Charles F. Hill, of Hazleton, on "Some Early Roman Catholic Indian Relics, discovered in the Wyoming section, and now in the possession of the Society."

On motion of Dr. Johnson, the thanks of the Society were voted to Mr. Hill, and the paper was referred to the Publishing Committee.

After a few remarks by the Corresponding Secretary on the valuable Indian collection of this Society, adjournment was voted at 9.30 P. M.

Quarterly Meeting, May 13, 1904.

President Woodward in the chair.

On motion Rev. Mr. Hayden was made Secretary, *pro tem.*

The minutes of the two preceding meetings were read and approved.

No business was presented except deferred business, the amendments to the by-laws proposed at the February meeting. These were unanimously adopted to read thus :

Article 14, at the end of eighth line, add "When, however, in the judgment of the Cabinet Committee, additional aid is needed in any department above named, Assistant Curators may be appointed from among the members of the Society by the Cabinet Committee, whose work shall be under the direction of the Curator of such department, and of the Cabinet Committee."

The Librarian then announced that under this rule Mr. Christopher Wren was appointed Assistant Curator of Ethnology.

The President then introduced to the Society His Excellency

Governor S. W. Pennypacker, who delivered a very interesting address on "The Early Bibliography of Pennsylvania."

On motion of the Librarian, a rising vote of thanks was extended to Governor Pennypacker, and the address was referred to the Publishing Committee.

The Society adjourned at 9.30 P. M.

October Meeting, October 14, 1904.

Mr. S. L. Brown, in the chair.

The minutes of the last quarterly meeting, May, 1904, were read and approved.

Rev. Mr. Hayden read the report of the committee on card-cataloguing the library, raising funds, etc., as approved by the Trustees. It was, on motion, unanimously adopted.

The following applications for membership, approved by the Trustees, were presented, and, on motion, the Secretary was instructed to cast the ballot of the Society for them, and they were declared duly elected :

Resident members, Eugene C. Franck, Dr. J. Irving Roe, Theodore L. Welles, Charles E. Morgan, James F. Labagh, Miss Clara Walker Bragg.

Mr. Hayden, the Historiographer, reported the death of Col. G. Murray Reynolds, one of the Vice Presidents of the Society, and presented the following resolutions, prepared by Judge Stanley Woodward, which were unanimously adopted by a rising vote, and ordered spread on the minutes :

"*Resolved*, That this Society, in the death of Col. G. Murray Reynolds, has suffered a loss which it is their duty to recognize by a permanent tribute to his memory, to be spread upon the records of the Society as a perpetual memorial.

"For many years he has been an active and interested member of our organization, and for much of that time one of its Vice Presidents. Of none of his contemporaries can it be more truly said than of him, that a whole life has been a continual public service to the community in which he lived. The religious, charitable and business interests of the community all feel his loss, and all, with one voice, testify to his public spirit, his christian benevolence and his untiring devotion to the public welfare.

"*Resolved*, That to the widow of the deceased, also an active and valued member of this Society, and to his surviving family, we tender our profound and most sincere sympathy in this hour of affliction, and that a copy of these resolutions be sent to them."

The Society adjourned at 8.30 P. M.

Quarterly Meeting, December 16, 1904.

The Rev. Dr. Henry L. Jones, Vice President, in the chair.

The minutes of the last meeting were read and approved.

The following applications for membership, approved by the Trustees, were presented, and, upon a motion, the Secretary was instructed to cast the ballot of the Society for them, and they were declared duly elected :

Resident members, Rev. Dr. E. G. Fullerton, Frank Pardee, Israel Platt Pardee, Lyddon Flick, and F. E. Parkhurst.

Honorary members, Hon. Henry Martin Hoyt, Solicitor General of the United States.

The Chairman then introduced to the Society Dr. Frederick C. Johnson, who read a very interesting paper by the Rev. David Craft, Corresponding member, of Angelica, N. Y., on the "Expedition of Col. Thomas Hartley against the Indians in 1778 to Revenge the Massacre of Wyoming."

On motion a vote of thanks was unanimously extended to Mr. Craft for the paper, which was referred to the Publishing Committee, and to Dr. F. C. Johnson for reading it.

The meeting adjourned at 9.30 P. M.

January Meeting, January 13, 1905.

Dr. Frederick C. Johnson called the meeting to order, and introduced Mr. Christopher Wren, who read a paper entitled "Aboriginal Pottery of the Wyoming Valley and Susquehanna River Region." Specimens of the Indian pottery of Wyoming were also exhibited.

On motion of Mr. Welles, the thanks of the Society were extended to Mr. Wren for the address, which was referred to the Publishing Committee.

Society adjourned at 9 P. M.

Annual Meeting, February 10, 1905.

Rev. Henry L. Jones, S. T. D., in the chair.

After prayer by Rev. Dr. Jones, the minutes of the last two meetings were read and approved.

On motion the President appointed Messrs. H. H. Ashley, J. L. Welter and Col. C. Bow Dougherty a committee to nominate officers for the ensuing year.

The annual report of the Treasurer, who was absent by reason of illness, was read by Mr. Hayden, on whose motion it was received and referred to the Publishing Committee.

The committee on nominations for officers presented the names of the following, who, on motion, were unanimously elected by the ballot of the Secretary :

President, Hon. Stanley Woodward.

Vice Presidents, Rev. Henry Lawrence Jones, S. T. D., Irving A. Stearns, Lewis H. Taylor, M. D., Rev. Francis Blanchard Hodge, D. D.

Corresponding Secretary and Librarian, Rev. Horace Edwin Hayden.

Recording Secretary, Sidney Roby Miner.

Treasurer, Frederick Charles Johnson, M. D.

Trustees, Andrew Fine Derr, Samuel LeRoi Brown, Edward Welles, Richard Sharpe, Henry Herbert Ashley.

Curators—Archæology, Christopher Wren.
Numismatics, Rev. Horace Edwin Hayden.
Mineralogy, William Reynolds Ricketts.
Paleozoology, Joshua Lewis Welter.
Paleobotany, William Griffith.

Historiographer, Rev. Horace Edwin Hayden.

Meteorologist, Rev. Francis Blanchard Hodge, D. D.

The Corresponding Secretary and Librarian made his annual report, which, on motion, was received and referred to the Publishing Committee.

The Historiographer reported the death of the following members during the past year : Mrs. Irving A. Stearns, May 6, 1904 ; Dr. Harry Hakes, April 20, 1904 ; Hon. Garrick Mallery Harding, May 19, 1904 ; Joseph C. Powell, July 18, 1904 ; John M. Crane, November 7, 1904 ; Col. G. Murray Reynolds, September 24, 1904 ; Mrs. G. Murray Reynolds, November 13, 1904 ; Major J. Ridgway Wright, January 20, 1905.

The following applications for membership, approved by the Trustees, were presented, and, on motion, the Secretary cast the ballot of the Society for them, and they were duly declared elected :

Resident members, Mr. Alvin Markle, Hazleton, Mr. Charles W. Laycock, Wilkes-Barré.

The following members were reported transferred to Life Membership by the payment of the usual fee : Major Irving A. Stearns, Mr. William R. Ricketts, Mr. Christopher Wren, Mrs. Henry H. Derr.

The Corresponding Secretary reported the following resolution, unanimously passed by the Trustees on this day:

Resolved, That we recommend to the Society assembled to-night the adoption of the following:

"*Resolved*, That the library and collections of this Society are hereby declared permanently free from this day forward for reference to all classes of persons, readers and students each week day from 10 A. M. to 5 P. M."

On motion of Col. C. Bow Dougherty the resolution was unanimously adopted.

Col. C. Bow Dougherty, offering the following resolutions relative to the death of Maj. J. Ridgway Wright, they were, on motion, unanimously adopted by a rising vote:

"*Resolved*, That in the death of MAJOR J. RIDGWAY WRIGHT, which occurred in New York City, Friday, January 20, 1905, the Wyoming Historical and Geological Society has lost one of its most devoted members. He served in the capacity of Recording Secretary two years, Librarian thirteen years, Vice President five years, and Curator of Archæology eight years, during which time his interest and efforts to strengthen, assist and foster the Society has been of incalculable value.

"*Also be it Resolved*, That coincident to the loss which this Society has sustained in the death of Major Wright, this city, in which he was born on July 7th, 1856, has sustained the loss of a citizen whose uprightness of character and splendid attainments won for him a place in the affections of the people which few men ever attain. He loved this community; he served it fearlessly and faithfully in many positions of trust and honor. As a soldier in the National Guard he was *sans peur et sans reproche*. As a legislator in the General Assembly representing the city of Wilkes-Barré; as a member of the City Council, as its President under the old charter, as the President of the Common Council under the new charter, and as the leader of the Citizens' Alliance, his record stands in the clear sunlight of public esteem as one of the city's forceful monuments of public and official integrity unsurpassed in the history of our municipal corporation. He carried with him, in the performance of his public duties and acts, that largeness of kindly fellowship and brotherly love which ever marked him with the characteristics of innate democracy, and a generous belief in the will of the people. No truer, more unselfish public servant ever served this community. With the strength and character of his splendid individuality, his public career shines with a lustre that exalts the service which he rendered so ably, so honestly and so unselfishly. His genial, kindly nature impressed itself upon every one whose pleasure it was to come in contact with and know him. The fellowship of his nature reached out in its broad grasp and encircled a host of friends who now mourn with his family, this Society, and his associates his untimely death.

"*Resolved*, That it is the sense of this Society that we tender to the family of Major Wright our sincere sympathy, and that these expressions be inscribed upon the minutes, and a copy of same be sent to his family, and published in the public press of this city."

On motion of the Secretary, the Society adjourned at 9 P. M.

REPORTS.

Report of the Corresponding Secretary and Librarian for year ending February 11, 1904.

To the President and Officers of the Wyoming Historical and Geological Society:

GENTLEMEN—I respectfully present to you the Forty-sixth Annual Report of this Society for the year ending to-day, a year marked by as encouraging progress as any previous year in the history of the Society. During the past ten months we have approached nearer the real purpose of such an institution than ever before. As has been carefully pointed out to you, it is impossible that this Society, with its present environments and opportunities, should stand still.

In the first place, this is a *public institution*, made so by the voluntary acceptance, years ago, of its official appointment by the United States Government as a public depository for all publications issued by the United States, which already number over 5,000 volumes. It is a public institution by reason of being a public depository of Pennsylvania State publications, the Act of Assembly creating it such having been prepared by this Society and made a law by its active influence. It is such also, as receiving from the county of Luzerne, by Act of Assembly, annually, an appropriation of $200, for its current expenses. This Act applies to all such Societies in the State. Its library and cabinets are, therefore, necessarily open to the public under such limitations as its Constitution and By-laws create.

In the second place, this Society is the permanent legatee of the grandest benefaction ever established in this valley and county by individual generosity—the Osterhout Free Library. While it receives no pecuniary income from this benefaction, it has received its handsome home, permanently, free from charge for rent, heat, light and repairs. Distinct and independent in its character and purpose, it must, if consistent, aim to be and remain, an aid and a supplement of that splendid benefaction. This has been my earnest purpose since you asked me to take the oversight of this Society. With this aim in view you were advised last February that the Trustees of this Society had de-

cided to have these rooms, with the library and museum, opened to the public each week day from 10 A. M. to 5 P. M. and 6 P. M., thus enabling both libraries to avoid the duplication of books which have filled the shelves of both institutions to the severe taxation of means and space. The result of this movement, begun April 15th, 1903, has been most satisfactory. Until then the library was open only in the afternoon of each week day, and two evenings. Meanwhile, the Free Library had been made, by Congressional appointment, a Geological depository, thus duplicating all the subsequent Geological and Scientific publications of the Government supplied to this Society. Under the new rules of opening this library at the same day hours as the Free Library, 10 A. M. to 6 P. M., the latter has been able to dispense entirely with this feature of its work, referring all applicants for geological knowledge to this Society for such works as were needed. Thus the amount of United States and Pennsylvania State publications heretofore required to supply the demands of the reading public on the manifold subjects which they cover, is reduced in the Free Library to a minimum. This Society is the only United States Government depository in this county, and, with the exception of the Scranton Free Library, the only one in northeastern Pennsylvania, possessing an almost complete file of United States publications.

Moreover, the number of visitors to these rooms during the year just ended, has increased by nearly 1,000—4600 in 1902, 5500 in 1903, and the number of students who use the library has doubled. The Society, with its rich cabinets and many attractions, is really becoming almost as well known in this historic valley, as an educational factor, as it has long been known outside this section. The public schools and seminaries are making increasing use of its cabinets. Possessing 1,200 volumes of local and other newspapers, the journalist is a frequent visitor; having the largest geological library in northeastern Pennsylvania, the geologist and the civil engineer find their information here ; with the only complete set of United States Patent Office reports, the only full set of United States Laws, and the only full set of State Documents in this large area, the lawyers, inventors and politicians are frequent visitors. With a library of over 16,000 volumes of American History, of which nearly 1,000 are rich in data for the genealogist, students of family history come here from all parts of eastern Pennsylvania. All of this material is distinct from that supplied by the Osterhout Free Library.

Now, in order to make this already established division of library, historical and scientific resources successful, for the benefit of the public, this Society must be placed on the same plane as that of the Osterhout Free Library, by means of a Card Catalogue, thus making every book or title accessible to the public reader. The advantages this will give, not only to the public, but to the Free Library, can readily be seen. The latter provides for the public 96 literary and other periodicals and magazines annually. This Society provides for the public over 90 historical, geological and genealogical magazines and periodicals, of which only two are to be found duplicated in the large number of the Free Library. It is so in the other special lines of this Society library.

On this subject of a Card Catalogue, I made last year an earnest appeal with a request that a committee of members be appointed to consider the proposition and report within thirty days to the Trustees. The appeal met with no response whatever ! And yet without this Card Catalogue the rich library of the Society must continue to be largely a sealed spring to the public. Permit me to repeat briefly what was said last year :

"It is very important that, as soon as possible, the library of this Society should have a Card Catalogue for the benefit of the public. It is true that the present Librarian is entirely familiar with the library, but visitors must appeal to him to know what books we have ; and should his services be ended by any Providential cause, whoever might fill his place would be very grievously hampered by the lack of a Card Catalogue. Such a catalogue the Librarian has himself endeavored to make, but the pressure on his time and strength of the immediate duties of his various offices have made the effort futile. The cost of such a catalogue, including cases, would not be less than $1,000, as the work is necessarily expert work, and would require fully twelve months to complete."

The annual income of the Society will not, at this time, permit this expense. If the invested funds of the Society, now only $22,500, cannot be immediately increased by $15,000 or $20,000 the means necessary for making the Card Catalogue might be secured by special subscriptions among the members.

It is with sincere gratification that I add here the unanimous action taken by the Trustees of this Society, at the annual meeting held yesterday morning :

"The Trustees most earnestly recommend to the members of

the Society the great necessity of a Card Catalogue for this library of nearly 20,000 books, and as the annual income of the Society is not sufficient to meet the expense necessary to employ a skilled Cataloguer, we urge upon the Society the duty of appointing, at this annual meeting, a committee of five members to devise means to carry out this object in accordance with the report of the Librarian ; the committee to report within thirty days, at which time a meeting of the Trustees will be held for the purpose of considering the report."

During the past year the Ethnological department of the Society has been enriched by the addition of 10,000 specimens, many of which are of the finest quality and very rare. Mr. Christopher Wren generously donated to the Society, in October, his rich collection of 7,000 pieces, the result of some years of careful selection, from the water shed of the Susquehanna river. This gift is especially valuable from the local character of the pieces. It is rich in stone pestles, mortars, axes, hatchets, celts or skinners, blades, gouges. discordal stones, ceremonials, drills, knives, sinew dressers, beads, war club-heads, and includes fifty of the large circular net-sinkers from five to six inches in diameter, to be found apparently nowhere but in the Wyoming Valley, as they were, until now, unknown to the Bureau of Ethnology. This collection is an object lesson in the *local* material, brown, red and black flint used by the Indians in their manufacture, and in practical illustrations of the manner of making these relics of the stone age.

In October, Mr. A. F. Berlin, of Allentown, Pa., who, for thirty years, has been a careful collector of choice pieces, and who had accumulated a collection of 3,000 unusually fine specimens, selected for their beauty and finish, was led, by severe family bereavement, to offer this rich treasure to this Society at the modest price of $500. This offer was undoubtedly prompted also by the knowledge that here his work of years would not be distributed, but be preserved as a whole, bearing his name. Each piece is carefully numbered, and the collection represents the Stone age of Ireland, Denmark, Switzerland and America—more than one-third are of Pennsylvania manufacture. Here are axes and hatchets of the finest quality, weighing from one pound to fourteen pounds ; agricultural implements of flint fourteen inches long, discoidal stones and chungke stones of high art and polish, beautifully finished ceremonials and plummets, bird stones, etc., of banded slate, blades of obsidian,

flint, calcedony, jasper, agate, pipes and knives of rare beauty, each piece carefully catalogued; representing Pennsylvania, West Virginia, Ohio, Kentucky, Tennessee, Alabama, Mississippi, Oregon, etc., etc. The price asked for this collection was beyond the means of the Society, but after a careful examination of the pieces by Mr. Wren and Mr. Hayden, ten members of the Society were readily found who donated fifty dollars each towards the purchase of the entire collection, which now graces our Ethnological Department, and satisfies every one who sees it, of the wisdom of the purchase, viz: Mr. Andrew Hunlock, Dr. and Mrs. L. H. Taylor, Mr. J. W. Hollenback, Mr. E. H. Jones, Mr. H. H. Ashley, Dr. L. I. Shoemaker, Major I. A. Stearns, Mr. A. F. Derr, Mr. C. J. Shoemaker, and Mr. F. M. Kirby. The collection will always be labeled "The Berlin Collection."

In addition to this nearly 1,000 pieces of fine quality found at Firwood, Riverside and elsewhere in the valley, have formed the "Col. Zebulon Butler Fund Collection," which also includes a rare "pot," nine inches in height, found in Tioga county, Pa. Eight hundred pieces have also been placed in the collections of the Society by Samuel W. Sutton, of Wyoming, the result of his diligence during the past few years.

During the year five meetings of the Society have been held. At the annual meeting February 11th, 1903, when the reports of officers were read and the regular officers elected, Mr. Wren read an interesting paper, written by Mr. A. F. Berlin, of Allentown, on a very fine flint spear head found by him on the ground where now stands the Wyoming Monument.

At the quarterly meeting, May 8th, 1903, Dr. Frederick Corss read a supplemental paper on "The Buried Valley of Wyoming," which will appear in Vol. VIII of the Proceedings, and Mr. Hayden read a sketch of the late Miss Hannah Packard James, Librarian of the Osterhout Free Library.

At the quarterly meeting, October 9th, 1903, Mr. A. F. Berlin was expecting to read a paper on the "Pipes of the North American Indians," but owing to the sudden and fatal illness of Mrs. Berlin, who died a few weeks ago, he was unable to be present. The Librarian read, instead, a portion of the "Revolutionary Reminiscences of David H. Conyngham, 1775–1783," which will also appear in Volume VIII.

At the special meeting, January 8th, 1904, Mr. William Ber-

ryman Scott, Ph. D., Professor of Geology in Princeton University, delivered an address before the Society on the "Geological Expeditions of Princeton University to Patagonia," illustrated by stereoptican views.

All of the above papers were referred to the Publishing Committee, and will appear in the annual volumes of the Society.

Of articles presented to the Society, in addition to the 10,000 Indian relics already noted, some are highly deserving of special notice. Miss Edith Brower has enriched the Art Department by a gift of a very valuable drawing in pencil and sepia, of the first Bridge erected across the Susquehanna at Market street. It was drawn in 1823 by Baldwin Brower, a boy of eleven years of age, who had no instruction with pencil or brush. It is exact and minute in details, and as the only picture of this bridge extant, the bridge having been blown down in 1824, it is a unique and remarkable work of art.

The portraits of the late H. Baker Hillman, a Life Member of the Society, presented by his sons, and the late Thomas Ferrier Atherton, Esq., Vice President, 1869, presented by his nephew, Thomas H. Atherton, Esq., have been added to the portraits in the Society. Others have been promised, especially one of the late Hon. Charles A. Miner, so long a Vice President, and in 1881 a President of the Society, and Rev. Nathan Grier Parke, D. D., a Life Member.

A collection of fossil shells from San Manuel Coal Mine, Sonora, Mexico, by Mr. William Griffith ; six pieces of pottery made by the Astec Indians, from Adamana, Colorado, by Miss C. M. Alexander, and twelve pieces of extinct household ware and implements used in 1778–1800, by the Gallup family of Wyoming, presented by Mrs. Haywood, of Kingston, are especially deserving of notice. Also two card catalogue cases for a Genealogical Catalogue, by the Osterhout Free Library. Mr. William Puckey has presented to the Society one hundred and fifty minerals from Par Consols Tin Mines, Cornwall, England.

As Corresponding Secretary, I have received, during the year, 650 letters and other written communications, and have written and copied 550 letters, besides many acknowledgments of donations and exchanges—a total of over 1,000 pieces of written mail. The letter book of the Society, in which every written communication is copied, will show the wide extent and varied character of this correspondence with Historical and Scientific Societies and persons in all parts of North America and Europe.

As Librarian, I have to report the receipt of

Bound volumes		978
Pamphlets		550
Total		1528
Deducting duplicates		300
Total added to the Library		1228
Received from U. S. Government	545	
" by Purchase	60	
" " Exchange	381	
" " Gift	242	
		1228

Among the gifts were 240 volumes, bound, of local newspapers, given to the Librarian by the Leader Publishing Co., and the City Council, and presented by the Librarian to the Society. Nearly one hundred of these were exchanged with the Library of Congress for eighty volumes, in fine order, of the London "Notes and Queries," a valuable addition to any library. Nearly as many were added to the newspaper files of the Society, entirely completing the *Leader* and the *Scranton Republican* files, and increasing the Newspaper Library of the Society to 1,200 volumes.

During the year the R. D. Lacoe Fund has been increased, by the sale of publications, to $512. The Charles F. Ingham Fund has been increased to $403.50; the Zebulon Butler Fund, by subscription, to $675, and the Invested Fund of the Society, which amounted to $21,700 last February, to $22,500.

The Butler Fund will be used, in part, to erect, on the outer wall of the Society building, this Spring, a large bronze tablet in memory of Col. Zebulon Butler.

Owing to the excessive duties of the Corresponding Secretary the annual volume of "The Proceedings and Collections of the Society" for 1903, has been unusually delayed. It will be issued in March, and will be the largest, most interesting and best illustrated volume ever sent from the press of the Society, and will fully compensate members for their patience in waiting its issue. It will be necessary, however, to make Vol. VIII the annual volume for 1903 and 1904. I again commend my proposition of 1902, of a Publication Fund, to be invested, and the income to be used in printing the annual volume.

The present membership of the Society is Life, 118; Resident, 213; total, 331.

During the year four Life Members have died : Hon. Charles A. Miner, Rev. N. G. Parke, D. D., Mrs. Priscilla Lee Bennett and Miss Martha Bennet, and one Resident Member, Miss Hannah P. James.

To the Resident Members, eighteen have been added ; thirteen transferred to the Life Membership ; among those added to the Life Membership are : Mrs. Eckley B. Coxe, Miss Emily Ryman, Mr. George C. Lewis, Miss Rosalys Ryman, Mr. William John Raeder, Mr. John M. Crane, Mr. Christopher Wren, Hon. G. M. Harding, and Mrs. Eliza Ross Miner.

The Curator of Mineralology reports that two hundred additions to his department have been received from Mr. William Puckey, Rev. H. H. Jessup, D. D., Major E. N. Carpenter ; while the Curator of Paleozoology reports the addition of fifty or more specimens to his collection, and the Curator of Paleobotany has, himself, added fifty specimens to his department.

HORACE EDWIN HAYDEN,
Corresponding Secretary and Librarian.

Report of the Corresponding Secretary and Librarian for the year ending February 11, 1905.

To the President and Officers of the Wyoming Historical and Geological Society :

GENTLEMEN : I have the honor of presenting to you the report of this Society for the past twelve months of its existence, this being the forty-seventh anniversary of its institution.

While the continued success of the Society, as shown in this report, will give us cause for sincere gratification, our hearts will be saddened at the harvest death has reaped among our members since our last annual meeting. As Historiographer, I have to report the death of three Life Members, and five Annual Members. From the Life Member's roll Hon. Garrick Mallery Harding, Mr. John M. Crane, and Hon. Jacob Ridgway Wright, who, since 1885, has filled the various offices in the Society of Recording Secretary, Vice President, and Curator of Archæology and History.

From the Annual Membership list, Col. George Murray Reynolds, one of our Vice Presidents since 1895 ; Mrs. George

Murray Reynolds, Mrs. Irving A. Stearns, Dr. Harry Hakes, and Mr. Joseph C. Powell. These eight were all actively interested in the Society, and their places will be difficult to fill.

While the death of a Life Member does not remove his name from our membership list, that of the Annual Member does. The necessity and duty of adding new members to our list as it is lessened by death should be realized by all of us. Likewise should we be impressed by the value to the Society of having our names on that "Memorial Roll" of Life Members which death cannot lessen.

During the past year four members have become Life Members, and thirteen new Annual Members have been added, making the Life Members 121, and the Resident Members 213, a total of 334.

During the year six meetings of the Society have been held. The Annual Meeting, Friday, February 12th, 1904, when the reports of officers were read and the officers for the ensuing year were elected, at which meeting his Excellency Governor Samuel W. Pennypacker, an Honorary Member of the Society, was to have read the address, but was prevented by a death in his family circle. In his absence the Rev. Sanford H. Cobb, of Richfield Springs, N. Y., also an Honorary Member of the Society, kindly consented to address the Society, which he did with the greatest acceptance, on the subject of "The Growth of Religious Liberty in America." As this address was extemporaneous it was not possible to secure it for publication.

The meeting of April 15th was called to listen to a valuable, illustrated paper by Mr. A. F. Berlin, of Allentown, Pa., on "The Early Pipes of the North American Indians." Another paper on "Some Early Religious Relics of the French Indians found in the Wyoming Section, and in the Possession of this Society," written by Mr. Charles F. Hill, a member from Hazleton, was read by Dr. F. C. Johnson. Both of these papers will appear in Volume IX during this year.

The Quarterly Meeting of May 13th was marked by an address by his Excellency Samuel W. Pennypacker, on the "Early Bibliography of Pennsylvania," which will appear in this year's volume.

A meeting was called October 14th for the purpose of taking action on the death of our Vice President, the late Colonel George Murray Reynolds. For the resolutions adopted at this meeting see the Proceedings of this date on page 12.

The meeting of December 16th was marked by the presentation of an interesting paper written by Rev. David Craft, of Angelica, N. Y., Corresponding Member, entitled "The Expedition against the Indians, September, 1778, by Col. Thomas Hartley, to avenge the Massacre of Wyoming."

The first meeting of 1905 was held January 13th, when Mr. Christopher Wren, Curator of Ethnology, read a paper of extensive research on "Aboriginal Pottery of the Wyoming Valley and the Susquehanna Region." These last two papers will also appear in the annual volume.

One of the most interesting meetings held during the year, but not mentioned in the above, assembled in the rooms Friday night, November 19th, when the superintendents, foremen and five fire bosses of the Wyoming division of the Lehigh Valley Coal Company were addressed by Joshua L. Welter, Esq., Curator of Paleozoology, on the "Crust of the Earth and its Strata." The attendance was large, and the interest manifested has induced the Librarian to prepare for holding similar meetings during the present year.

The annual volume for 1903 was not issued until early in 1904. Circumstances over which the editor had no control, i. e., the importance and value of the historical part of the work which entailed careful and great labor in annotations, and the pressure on his time of many duties in the Society not pertaining to the offices he holds, were responsible for the delay. This made it necessary for the Publishing Committee to unite in one volume the annual volumes for 1903 and 1904. The result was the issuing of volume VIII of 320 pages, handsomely illustrated, a publication which has elicited the highest commendation, not only from members, but from many kindred Societies. The geological and ethnological parts of the volume, the new light thrown on Count Zinzendorf's connection with Wyoming Valley, and the annotated diary of David H. Conyngham, 1750–1834, have justified the delay and given the Society a volume of which it can be very proud.

To the portrait gallery six portraits have been added since the last annual report. One in oil of Mr. John Welles Hollenback, Vice President 1876–1878, and President 1879–1880, added through my earnest and persistent solicitation, as Mr. Hollenback still lives, and it is hoped may be with us for many years. The others, in crayon, are those of Hon. Ziba Bennett, an original member, and Vice President 1874–1878, presented

by his family; Rev. George Peck, D. D., an original member, and author of "Peck's History of Wyoming," presented by his son, Mr. William H. Peck, of Scranton; Rev. Nathan Grier Parke, D. D., Life Member, presented by his family; Andrew Jackson Griffith, of Pittston, whose fine Ethnological Collection was donated to us in 1896, presented by his family; and last, but not least, Hon. Charles Abbott Miner, for forty years a member, Vice President 1877–1880, President 1881, and Trustee of the Society from 1877–1904, also presented by his family. Other portraits of deceased members and pioneer settlers are promised us.

During the spring of 1904 the unanimous recommendation of the Trustees and the Society, relating to card-cataloguing the library of the Society, which will be found in my annual report for 1904, was acted upon. It was found that the sum of $1500 would be needed for the successful prosecution of this work. Printed circulars were mailed by the Trustees to all members, asking subscriptions of from $5 to $50. These elicited prompt responses from nearly one-half of the members from whom the sum of $900 was received, enough to meet the expense of the cataloguing, cases, cards, and the Cataloguer for one year.

In August the services of Miss Clara Walker Bragg, of Cazenovia, N. Y., a graduate of the Pratt Library School of Brooklyn, N. Y., were secured, and the work begun September 1st, 1904, has now continued with most satisfactory results for five months. The labor of this work was much increased by the fact that the Dewey classification generally used for free libraries was not found adapted to special libraries, historical and geological.

It was learned, from a visit to the Historical Society of Pennsylvania, with its 70,000 volumes, that a modification of the usual system was really essential. But the training of Miss Bragg, with consultation with the State Historical Society at Philadelphia, enabled her promptly to develop a modification of the Dewey and other systems, called "The Wyoming Historical Classification," that will be fully satisfactory to all demands from the student.

When it is remembered that a card catalogue of such a library as this requires not simply a cataloguing of each book, but a catalogue analysis of its contents, the extent of the labor of cataloguing 18,000 volumes and pamphlets must be apparent to anyone, when each book in that number must be accessioned

or recorded in a special "accession book" with such minuteness of detail as will make it the basis of recovery from losses by fire. The completion of the work will require about two years, and the balance of the $1500 will be needed. If each of the one hundred and fifty members who did not respond to the appeal of 1904, will do so in 1905, the $600 needed for the completion of the work will be easily secured.

The Trustees to-day directed the Librarian to issue, in their name, circulars similar to those of last year asking contributions to this purpose from those who did not respond at that time.

The Corresponding Secretary reports having received during the year 475 letters and communications, and sending out more than 500 letters, which will be found copied in the letter press showing the transactions of the Society for the period named. This does not, however, include the regular acknowledgments of donations and exchanges, or the issue of nearly 400 copies of our Proceedings, all of which would bring the total mail output to near 1500 pieces.

The Librarian reports the following additions to the Library for the year:

Books			770	
Pamphlets			484	
				1254
Added by purchase,	Books	81		
" " gift,	"	312	Pamphlets,	90
" " exchange,	"	83	"	35
" from U. S. Gov.,	"	293	"	360
		769		485 1254

Among the gifts to the Library 50 volumes were presented by the family of the late William P. Miner, Esq., 34 by George B. Kulp, Esq.

The Curator of the Ethnological or Indian department report that the collections of the Society have been increased by 1300 fine specimens, of which 1,000 are from the treasured collection of our member the late Capt. L. Denison Stearns, presented by his family. The forthcoming annual volume will indicate, by its Ethnological papers the active interest that has marked the work of this department.

The Curator of Mineralogy reports having completed the first part of his catalogue, and begs to acknowledge his indebtedness to Mr. O. B. Hillard for assistance.

The Curator of Paleobotany reports some very fine additions to his department, being ten or more unusually beautiful specimens of fossil plants, by Mr. P. M. Boyle, Inspector of Mines, Wilkes-Barré.

The Curator of Paleozoology also reports continuous and progressive work in his department.

The Treasurer's report will show an increase in the special fund of the Society by the sale of its publications. To the Ingham fund $100. To the Lacoe fund $100, and to the Zebulon Butler fund $75. The latter fund reached the sum of $750. Part of this fund was contributed on the condition that a bronze tablet should be erected to the memory of this gallant hero of Wyoming, and a handsome and suitably inscribed tablet was placed July 25 last, on the anniversary of his death, on the front wall of the Society building, at an expense of $200. The Butler fund now amounts to $550, the Lacoe fund is $600, and the Ingham fund $500.

HORACE EDWIN HAYDEN,
Corresponding Secretary and Librarian.

Treasurer's Report.

RECEIPTS.

February 11, 1903—February 11, 1904.

Balance, February 11, 1903,	$ 299 84	
Interest on Investments,	1,036 25	
Dues of Members,	1,050 00	
Luzerne Co. Commissioners, 1901–1902,	400 00	
Benjamin Reynolds, Book Case,	18 25	
Mrs. Sheldon Reynolds, "	18 25	
Hon. J. Ridgway Wright, "	18 25	
Subscriptions for Berlin Indian Collection,	500 00	
		$3,340 84

EXPENDITURES.

Salaries—Librarian, Assistant, and Janitor,	$1,226 89	
Publications,	393 85	
Books, General Fund,	75 00	
" Wright Fund, Interest,	50 00	
" Reynolds Fund, "	50 00	
Insurance, three years,	112 50	
Incidentals,	218 48	
Address and Stereopticon,	35 00	
Book Cases, Frames and Furniture,	124 68	
Postage and Notices,	57 40	
Berlin Indian Collection,	500 00	
Butler Fund, Ethnological, Interest,	7 50	
Lacoe " Geological, "	17 50	
Ingham " " "	25 00	
Balance,	447 04	
		$3,340 84

Treasurer's Report.

RECEIPTS.

February 11, 1904—February 11, 1905.

Balance, February 11, 1904,	$ 447 04	
Interest on Investments,	1,084 00	
Dues of Members,	914 50	
Fees of Life Members,	300 00	
Commissioners of Luzerne County,	200 00	
Mrs. G. W. Guthrie, Case,	20 00	
Major I. A. Stearns, "	50 00	
Mr. Wm. L. Conyngham, for Vol. VIII,	200 00	
Mrs. Charles Parrish, " "	160 00	
Mr. William H. Shepherd, Case,	35 16	
Mr. Frederick B. Peck,	10 00	
		$3,420 70

EXPENDITURES.

Publications and Printing,	$ 746 30	
Librarian, Assistant, and Janitor,	1,235 97	
Books, General Fund,	100 00	
" Wright Fund, Interest,	50 00	
" Reynolds " "	50 00	
Charles F. Ingham Fund, Interest,	15 00	
R. D. Lacoe Fund, Interest,	17 50	
Col. Zebulon Butler Fund, Interest,	15 00	
Life Member, Christopher Wren,	100 00	
Book Cases,	70 31	
Address, Rev. David Craft,	25 00	
Incidentals, Express, Postage, &c.,	224 96	
Balance in Check Account,	470 66	
Savings Account, three Life Members,	300 00	
		$3,420 70

By the Will of the late Isaac S. Osterhout, Esq., the Society is provided with a permanent home in the fine building it now occupies free from expense for rent, heat and light.

SPECIAL.

Catalogue Fund to February 11, 1904, . . .	$811 50	
Unpaid Pledges, ...	88 50	
		$900 00
To Salary of Cataloguer, 5 months to date, . .	$300 00	
" Catalogue Case, ...	135 00	
" Stamp, Cards, &c., ...	70 00	
		505 00
Balance, ...		$400 00

INVESTMENTS.

		Par value.	
7 Bonds,	Spring Brook Water Co., . .	$7,000 00	5 pr. ct.
6 "	Plymouth Bridge Co., ...	6,000 00	5 " "
1 "	Miner-Hillard Co., ...	1,500 00	5 " "
1 "	Sheldon Axle Works, ...	1,000 00	5 " "
1 "	People's Telephone Co., . . .	1,000 00	5 " "
4 "	Webster Coal & Coke Co., . .	4,000 00	5 " "
1 "	United Gas & Electric Co., N. J.	1,000 00	5 " "
3 "	Westmoreland Club, . . .	300 00	3 " "
		$21,800 00	
Savings Account, ...		750 00	3 pr. ct.
Total, ...			$22,550 00

These investments comprise the following Special Funds:

Life Membership Fund, ...	$12,000 00	
Harrison Wright Fund, ...	1,000 00	
Sheldon Reynolds Fund, ...	1,000 00	
Matthias Hollenback Fund, ...	1,000 00	
L. Denison Stearns Fund, ...	1,000 00	
Charles F. Ingham Fund, ...	500 00	
Ralph D. Lacoe Fund, ...	600 00	
Zebulon Butler Fund, ...	550 00	
		$17,650 00
General Fund, ...		4,900 00
Total, ...		$22,550 00

SPECIAL FUNDS.

Included in above Resources, the interest of which is expended for the Library and Cabinets.

HARRISON WRIGHT MEMORIAL FUND.

Used for English Family History.

By Cash invested at 5 per cent.,	$1,000 00
" Interest for 1904, expended for books,	50 00

SHELDON REYNOLDS MEMORIAL FUND.

Used for rare American History.

By Cash invested at 5 per cent.,	$1,000 00
" Interest, 1904, expended for books,	50 00

DR. CHARLES F. INGHAM MEMORIAL FUND.

Geological.

By Cash invested at 5 per cent.,	$500 00
" Interest for 1904, expended for books,	15 00

RALPH D. LACOE MEMORIAL FUND.

Lacoe Palaeozoic Collection.

By Cash invested at 5 per cent.,	$600 00
" Interest, 1904,	20 00

COL. ZEBULON BUTLER FUND.

Ethnological.

By Cash invested at 5 per cent.,	$750 00
To Tablet,	200 00
	$550 00

F. C. JOHNSON,
Treasurer.

THE GEOLOGY AND PALÆONTOLOGY OF PATAGONIA.

BY

WILLIAM BERRYMAN SCOTT, PH. D.,

Blair Professor of Geology, Princeton University.

READ BEFORE THE WYOMING HISTORICAL AND GEOLOGICAL SOCIETY, JAN. 8, 1904.

Ever since Owen published his descriptions of the curious fossil bones brought to England by Captain Sullivan and Mr. Darwin, Patagonia has been a region of unusual interest to all classes of naturalists. This interest was still further increased by Bravard's alleged discovery of *Palaeotherium* and *Anoplotherium* in that country. For a long time this was one of the stock puzzles of geographical distribution; it seemed so utterly inexplicable that the same animals should be found in Europe and in the southern extremity of South America and yet be absent from North America. Many were the hypotheses invented to account for this supposed paradox, but they have all been rendered superfluous by the proof that the paradox was an imaginary one and that the identification of the European genera was a mistake.

In 1877 Patagonia was explored by Sr. Moreno, who brought back to Buenos Aires many interesting fossils. Moreno was almost immediately followed by Sr. Carlos Ameghino, who for years past has been collecting fossils in all parts of the country. The very extensive collections thus made have been described by Dr. F. Ameghino, now Director of the National Museum at Buenos Aires. The work of the brothers Ameghino has revealed such an astonishing number of extraordinary animals, which are found fossil in the rocks of Patagonia, as to attract the interest and attention of geologists and palæontologists the world over. The theoretical results reached by Dr. Ameghino are, in many

respects, not at all in accord with those which had been worked out in the northern hemisphere, and thus they have been received with considerable skepticism by the geologists of Europe and North America.

Mr. J. B. Hatcher, while connected with Princeton University, conceived the idea of a thorough exploration of Patagonia, in order to acquire the necessary materials for a comparison between the strange fossils of that country and those which had long been known in the northern hemisphere. Accordingly, he conducted three expeditions to the region, beginning in March, 1896, and returning from the last one in the latter part of 1899. He was at all times handicapped by insufficient means and equipment, but nevertheless, his great skill as a collector and his indomitable energy triumphed over all obstacles and he succeeded beyond the utmost expectations of those who had sent him. The scope of the work was gradually broadened, so as to include almost all departments of natural history and most valuable collections were made, illustrating the zoology, botany, geology and palæontology of southern Patagonia. At the same time, the principal object of the expedition was held steadily in view, namely, to solve the problems of geological correlation and mammalian evolution which had been raised by the work of the brothers Ameghino. In this the success was most gratifying and the collections of fossils, in particular, are of extraordinary richness and variety.

This evening we shall deal only with the geological and, more especially, the palæontological work of the expeditions. Leaving aside some of the region along the Straits of Magellan, the succession of formations in southern Patagonia has been worked out by Mr. Hatcher and M. Tournouet, of the Paris Museum, who have reached results in gratifying accordance. With the earlier portion of Tertiary history we have, at present, nothing to do, because the collections made by the expeditions do not represent this part

of the geological succession. As Tournouet has shown, however, we have in the Tertiary history of Patagonia two terrestrial periods, with a great marine period intervening between them. The beds of this marine period constitute what is known as the Patagonian formation, and are exceedingly rich in all classes of marine invertebrate fossils. These fossils have been very fully described and illustrated by Dr. A. E. Ortmann in Volume IV of the "Reports of the Princeton University Expeditions to Patagonia," with conclusions of far-reaching importance. Dr. Ortmann has shown that the South American geologists had placed the Patagonian beds too low in the geological scale, demonstrating that they are referable to the lower Miocene, and he has further pointed out the close similarity between the fossils of the Patagonian beds and those of corresponding age in Australia and New Zealand. As the animals represented are of shoal water types, which could not have crossed great depths or widths of sea, this similarity is strong evidence for the former existence of a land connection between South America, Australia, and New Zealand. Very probably the connection was by way of the Antarctic continent and across the South Pole rather than by a land bridge through the South Pacific. The marine fossils, of themselves, do not prove the full connection by land of the southern continents, for the distribution of the animals would be accounted for by continuous shoal water and chains of islands between the regions in question.

The Patagonian beds are overlaid by the Santa Cruz, which is a great terrestrial formation, several hundred feet in thickness. The formation covers a very large area of Patagonia, extending from the mountains to the sea and forming the high cliffs along the Atlantic coast down to the Straits of Magellan, and probably into Tierra del Fuego. They also extend eastward for an unknown distance under the waters of the Atlantic and a large part of the Santa

Cruz collection was obtained where the water is from twenty to thirty feet deep at high tide. The tide, which has here a greater rise and fall than on any other open coast in the world, sometimes made matters exceedingly interesting for the collector, who, in the absorbing interest of his work, forgot the flight of time.

The Santa Cruz beds, though, for the most part, very regularly stratified, are chiefly composed of volcanic materials, which were apparently laid down upon a land surface and the stratification of which is largely due to the sorting action of the wind. The beds of ash and tuff are very soft and easily eroded, some of the areas having a striking resemblance to the famous "Bad Lands" of our own West. They contain an extraordinary abundance of fossil bones and it is a surprising fact that, as yet, the bones have been found only in the more or less consolidated volcanic tuffs. This explains the occurrence of such a very unusual number of nearly or quite complete skeletons, even of the smallest and most fragile animals. The carcases had not been transported by water, but were buried where they lay on the surface of the ground, and I think it exceedingly probable that many of the animals were caught alive, suffocated and buried in the showers of volcanic ashes and dust. Extensive lava flows cut through or are interstratified with the beds of tuff, and a chain of old volcanoes extending north and south through the plains is the probable source of supply for the materials of the formation. These cones have suffered greatly from long continued denudation and some of them, like the Sierra Ventana, are reduced to mere stumps. Not all of the Santa Cruz beds, however, are of volcanic materials. Cross-bedded sandstones, indicating the courses of ancient river channels, and certain water-made deposits, probably laid down in ponds, or small lakes, are not infrequent, but so far, no fossils have been found in these aqueous beds.

In the foot-hills of the Andes, Santa Cruz strata are found

at very considerable elevations above sea-level, and though composed of a similar material, are very much harder and more compact than the beds of the plain and the sea-coast. The fossils collected from these mountain localities have not yet been fully studied, but they appear to belong to different species of the same genera as those to which the fossils of the coastal region are referable. It is probable that in these beds is contained a slightly older fauna than that of the coast, and no doubt future investigation will show that the Santa Cruz formation is divisible into several distinct horizons and zones.

The Santa Cruz epoch was succeeded by a period of erosion, which was perhaps of long continuance, and then came an extensive depression of the country and invasion of the sea. The marine strata laid down in this sea were first discovered by Mr. Hatcher and were by him named the "Cape Fairweather beds;" their numerous and well preserved fossils show that these beds are of Pliocene date. In most places the Cape Fairweather formation has been removed by erosion, except in the foothills of the Andes, where it is quite extensively preserved and its strata overlie those of the Santa Cruz unconformably. There is no difference of dip between the two series, but the later beds rest upon the eroded surface of the older. It was very unexpected to find marine Pliocene upturned in the Andes, for this discovery shows that the final elevation of the mountains did not take place until after the close of the Pliocene period, a very much later date than any one had ventured to suggest. The interval between the Santa Cruz and the Cape Fairweather is not represented by any formation known in Patagonia, but farther north, in Argentina proper, the Catamarca formation (and perhaps also the Monte Hermoso beds) is probably referable to this time.

Finally, we have the great Shingle Formation, which so interested Mr. Darwin and has been such a puzzle to geolo-

gists. This mass of coarse gravel and shingle covers the country in a continuous sheet, hill and valley alike. As Mr. Hatcher has shown, the shingle is of marine origin and indicates a final submergence of the region and transgression of the sea. Mingled with the gravel is a good deal of ice-borne material, including some enormous blocks, such as could have been transported only by glaciers and icebergs. Evidently, the glaciers at that time descended to a much lower level than at present and actually entered the sea, where they gave rise to icebergs. The age of these deposits is clearly Pleistocene. The succession of the geological formations of Southern Patagonia is given in the following table:

PLEISTOCENE	Shingle Formation.
PLIOCENE	Cape Fairweather.
MIOCENE	Santa Cruz
	Patagonian.
OLIGOCENE?	Pyrotherium beds.

The fossils of greatest interest secured by the expeditions are the birds and mammals of the Santa Cruz beds. It is evident that at that period South America could have had no connection with the northern continents and, in consequence of this isolation, the fauna is one of extreme peculiarity. To the observer who examines these fossils for the first time it is like getting into a new world, where all the animals are different from the familiar types of North America, Europe and Asia. From the terrestrial origin of the beds it is not surprising that no fishes or Amphibia have yet been found in them and very few reptiles; fragments of lizards have been obtained, but no trace of any turtle or tortoise has been discovered. Birds, on the other hand, are quite common, surprisingly so when the usual scarcity of fossil birds is remembered. Most of the Santa Cruz birds were evidently incapable of flight and some of them are of exceedingly large size. The most abundant and best known

genera, though flightless, are most nearly related to the South American cranes and not at all to the ostrich type.

Far more abundant and important than the birds are the mammals, which have been obtained in bewildering number and variety. The following table displays the orders and suborders which compose the Santa Cruz fauna:

I. MARSUPIALIA.
II. EDENTATA.
  1. Dasypoda.
  2. Glyptodontia.
  3. Gravigrada.
III. INSECTIVORA.
IV. RODENTIA.
  Hystricomorpha.
V. TOXODONTIA.
  1. Toxodonta.
  2. Typotheria.
  3. Homalodotheria.
VI. ASTRAPOTHERIA.
VII. LITOPTERNA.
VIII. PRIMATES.

A glance at the table shows what a peculiar assemblage of mammals this is: it contains no Carnivora, no squirrels, marmots, beavers, mice, rats, hares or rabbits, no Artiodactyla, Perissodactyla, Proboscidea or Prosimia, all of which were abundant in the northern continents. In short, the difference between the Santa Cruz fauna and that of the contemporary formations in the northern hemisphere, is not a difference of species, genera and families, but of orders and suborders.

I. The Santa Cruz Marsupials are of two principal types, the carnivorous, or polyprotodont, and the herbivorous, or diprotodont. The carnivorous marsupials were the only flesh-eaters of the region and entirely took the place of the true Carnivora; they are very numerous and, within certain

well-defined limits, are very varied in size and structure. Opossum-like forms are not uncommon, but of greater interest are the genera which are closely allied to *Thylacynus*, the so-called "Marsupial Wolf" of Tasmania, and are referable to the same family. The genera belonging to the diprotodont or herbivorous series are very similar to the modern Australian Phalangers and are represented in recent times by the curious little *Caenolestes*, the last South American survivor of a once extensive group. The presence of these numerous and diversified marsupials in the Santa Cruz beds strongly confirms the conclusion drawn from the study of the invertebrates of the Patagonian formation, that South America and Australia were connected in early Tertiary times.

II. One of the most abundant and characteristic orders of the Santa Cruz fauna is the Edentata, of which South America is till the headquarters. Of the three existing suborders only one, the Armadillos (Dasypoda), has been found in the Santa Cruz beds; the other two, the Sloths and Anteaters, were doubtless already in existence as such, but are to be sought in some other region of the continent. In place of these we find two extinct groups, the Glyptodonts and Ground Sloths (Gravigrada) which are represented by an astonishing variety of species; they flourished as late as the Pleistocene, when they disappeared completely and with apparent suddenness.

1. Santa Cruz armadillos are, for the most part, not the ancestors of those which now exist, whose forerunners, like the ancestral sloths and anteaters, should be looked for in some other part of South America. However, the armadillos of the Patagonian Miocene give us welcome information as to the evolution of the group. For example, the carapace in these genera is made up of transverse, overlapping and movable bands, without anterior fixed shield and only a small posterior shield. Some of the genera are

highly specialized and speedily died out, while others continued in the Pleistocene, terminating in gigantic forms.

2. Compared with the gigantic glyptodonts of the Pampean (Pleistocene) those of the Santa Cruz are very small, but the latter are clearly the ancestors of the former and, as would naturally be expected, are much more primitive in structure, to some extent bridging the gap between the glyptodonts and the armadillos and demonstrating that those two groups were derived from a common stock. It is impossible to go into details, but it may be said that the ancestors of nearly all the great Pampean glyptodonts have already been identified in the Santa Cruz forms.

3. The Gravigrada are of extreme interest from the evolutionary standpoint, but from the systematic point of view they are heart-breaking. Among all the hundreds of specimens that I have examined there are hardly two individuals that are clearly and satisfactorily referable to the same species, the individual variability being incredible. This, however, is a minor matter; the important fact is the plain evidence as to the descent of the great Pampean genera from those of the Santa Cruz, for it is now possible to determine the ancestor of almost every Pleistocene genus of North and South America. Comparing the Gravigrada of the Santa Cruz with those of the Pampean, we may note the following differences: (1) A very great increase in size, the later genera all being very large, and most of them gigantic, while the Miocene forms are small, some of them extremely so. (2) In the Pleistocene genera there is a notable shortening of the trunk accompanied by a great reduction in the number of vertebræ; at the same time the structure of the vertebræ takes on a greatly increased complexity. (3) The limbs are much less specialized in the Santa Cruz genera; the feet are pentadactyl and plantigrade, the digits provided with the normal number of phalanges and all of them armed with claws, while the extraordinary

rotation of the hind foot upon the leg is in only an incipient stage.

It is of particular interest to observe that the Santa Cruz Gravigrada show many more points of resemblance to the true sloths and to the anteaters than do the highly specialized Pampean genera. It is not to be supposed that sloths and anteaters have been derived from the Gravigrada, but rather that all three groups have descended from a common ancestry, just as we saw was the case with the armadillos and the glyptodonts. We may now take an additional step and say that the Santa Cruz fossils distinctly prove that all the American edentates form a homogeneous, monophyletic group, derived from a common stock, to which the co-called edentates of the Old World seem to be in no way related.

III. As is well known, continental South America to-day has no representatives of the Insectivora. It is therefore all the more interesting to find this group in the Santa Cruz beds, where it is represented by a single genus, *Necrolestes*. I have not yet concluded my study of this animal, but I decidedly incline to the opinion that it is closely allied to the "Golden Moles" of South Africa. This is additional evidence as to a former land connection between Africa and South America, which has frequently been suggested upon other grounds.

The absence of bats from the Miocene fossils of Patagonia is probably due to the accidental circumstances of preservation rather than to the fact that they had not reached South America. Their capacity of flight gives to these animals unusual powers of dispersal and they are at present cosmopolitan, occurring on remote islands which have no other mammals. That South America was separated from the northern continents during the Miocene period, would not have prevented the bats from reaching it.

IV. The Santa Cruz Rodentia are very numerous and of suprising variety, yet they all belong to the single suborder

Hystricomorpha, to families (and, with one exception, even to subfamilies) which are still living in South America. Some of these families are also represented in Africa. The Miocene rodent fauna has thus a very modern appearance and several of the ancestors of modern genera are clearly determinable. Among these it is interesting to find the forerunner of the Canada porcupine, a group which did not reach North America before the Pliocene period, when the great intermigrations between the two Americas took place. On the other hand, the squirrels, rats, mice, hares, etc., which now inhabit South America are of northern origin and came to the southern continent in the migration just referred to. The role of the rats and mice was filled in Miocene times by tiny little creatures of the tree-porcupine group and constitute a peculiar subfamily, now extinct. The disappearance of these little animals was no doubt due to the competition of the better adapted mice, when the latter arrived from the north.

V. Extremely strange is the assemblage of Santa Cruz hoofed-animals. First in order of abundance is the order Toxodontia, which as Roth has lately shown in an extremely valuable and suggestive paper, is characterized by exceptional peculiarities of the auditory region of the skull, and is divisible into three well-defined suborders.

1. First, in point of frequency is the suborder Toxodonta, perhaps the commonest of Santa Cruz fossils being the genus *Nesodon.* It may be true, as some writers contend, that this genus was not the direct ancestor of the massive Pampean *Toxodon,* but, at all events, it is so nearly allied to that still unknown ancestor as to be but a slight modification of it and displays the evolution of the series almost as well as if it were itself in the direct line. *Nesodon* is one of the larger of the Santa Cruz animals and must have been a clumsy, slow-moving beast, with large head and trunk, short neck and limbs, and ludicrously small, three-toed feet and, judging

from the abundance of the remains, it must have lived in great herds upon the Patagonian plains. The animal is remarkable for the changes which the teeth undergo in the lifetime of the individual, to which fact it is chiefly due that nine genera and twenty-seven species have been constructed from one species, *N. imbricatus!* So great is the difference between the young animal and the old that, in the absence of the intervening stages, one would hardly venture to unite them in the same species. In fact, the number of species is not yet determinable, but was evidently not great.

2. The Typotheria, the second suborder of the Toxodontia, are likewise exceedingly abundant in the Santa Cruz, where they are represented by a large number of genera and species, which may be grouped into three families They are all small animals, which vary greatly in minor characteristics; one of the families comprises species of short-tailed little creatures, which in size and appearance, and probably in gait, must have been very much like rabbits. The other two families are made up of bullet-headed, long-bodied and long-tailed animals, with short legs and feet. The Typotheres of the Santa Cruz, which are not ancestral to the very much larger species of the Pampean, but form a side branch of that line, have a number of striking resemblances to the existing Hyracoidea of Asia and Africa. I am not yet prepared to state whether these resemblances are superficial, or are indicative of genetic relationship, though, at present, I incline somewhat to the latter opinion.

3. The Homalodotheria are exceedingly curious animals, which resemble the Toxodonta in the pattern of the grinding teeth and in skull structure, but have undergone remarkable modifications in the limbs and feet. The feet bear some semblance to those of the ground-sloths, to which isolated bones belonging to this suborder have sometimes been erroneously referred. In particular, the hoofs have become claw-like and the feet are much like those of the northern

Ancylopoda. Apparently the Homalodotheria stand in much the same relationship to the Toxodonta as the Ancylopoda do to the Perissodactyla.

There remain two orders of hoofed animals, the systematic position of which is far from clear and has given rise to much discussion. In my opinion these orders are more nearly related to the Toxodonts than to any northern group.

VI. Of these the first is the Astrapotheria, some species of which are the largest animals yet discovered in the Santa Cruz beds. In the form of the teeth the Astrapotheres are suggestively like the rhinoceroses, yet the skull is radically different. Unfortunately, hardly anything is known concerning the skeleton of these animals and, until the feet have been discovered, no final decision as to their relationships can be reached.

VII. The second of these orders is the Litopterna, beyond all comparison the most remarkable of the Santa Cruz mammals. The group is represented in these beds by two families, one of which gives us the direct ancestor of the Pampean *Macrauchenia*. This ancestral genus, *Theosodon*, is a very longed-necked, long-legged animal, not without some resemblance to the lamas, but in no way related to the latter. The second family comprises graceful, slender animals which form the most extraordinary imitation of the horses. Most of the genera in this family are three-toed, though the lateral digits are mere dew-claws and can have had little functional importance, but in one genus, *Thoatherium*, even the horse is outdone; the feet are strictly monodactyl, the most completely so of any known mammal, for the splint-bones are reduced to mere nodules. In this genus the limb-bones, teeth and skull all have a decided resemblance to those of the primitive horses and yet, extraordinary as it may appear, it is not even distantly related to the horses and does not belong to the Perissodactyla.. This is the most remarkable case of the independent acquisition of similar characters in two widely separated lines that has yet been demonstrated.

VIII. Remains of monkeys are exceedingly rare in the Santa Cruz beds, probably because at that time Patagonia was an almost treeless plain and monkeys are strictly arboreal in their habits. Rare as they are, these fossils are sufficient to prove that monkeys of the characteristic South American type were present in the Miocene of that continent.

Finally, we may observe that the study of the Santa Cruz fauna throws much light upon the problems of geographical distribution and enables us to analyze the mammalian fauna of modern South America, determining which of its elements are indigenous and which are immigrants. At the close of the Miocene period North and South America were joined together and a great migration of mammals took place from each continent to the other, a migration which was not checked by the climatic barriers which would limit it under modern conditions. To North America came the great ground-sloths and glyptodonts and the hystricomorph rodents, though only the latter persist till recent times. On the other hand, South America received from the north many of the mammals which now characterize it. Thus all the true Carnivora, the wolves, weasels, skunks, otters, raccoons, bears and cats, are immigrants; also all the existing hoofed-animals, tapirs, llamas, and deer, all the rats, mice, squirrels, hares and rabbits, had a similar origin. The horses and mastodons made their way at the same time to the southern continent, but became extinct in the Pleistocene. The edentates, armadillos, sloths and anteaters, the hystricomorph rodents, which are still so numerous and varied, and the monkeys, may be called indigenous as they were present in the Miocene and even earlier.

This brief sketch is most inadequate as a picture of the rich and diversified life of Patagonia in Santa Cruz times, but it will suffice to show how great is the interest attaching to the vast collections brought home by Mr. Hatcher and his associates.

PIONEER PHYSICIANS OF WYOMING VALLEY, 1771-1825.

BY

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[In this paper no attempt has been made to distinguish between men who were educated physicians and those picturesque characters who, in one crude form or another, ministered to the ills of suffering humanity. To have passed as doctors is sufficient warrant for including them in the present narrative.]

To-day there is a practicing physician for every 700 inhabitants of Luzerne County and perhaps every square mile will average a disciple of the healing art. To-day, with a busy population of a quarter of a million souls, it is with difficulty that we can picture this same portion of Pennsylvania as it was in the half century up to 1825, the period with which this paper has particularly to deal.

As originally erected in 1786, Luzerne County stretched along the Susquehanna River from the mouth of the Nescopeck Creek, opposite Berwick, northward to the New York State line, a distance of 150 miles by the rough bridle paths of that day, whose trails are now occupied by our modern iron highways, or 120 miles as the bird flies.

Of this vast wilderness, covering the northeastern quarter of Pennsylvania, Wilkes-Barré (or Wyoming, as it was called), was the centre, and here lived the doctors, here were the courts, here was the capital of old Westmoreland (belonging to Connecticut, though geographically separated from it), and here were contested the rival claims of Pennsylvania and Connecticut for a fair valley whose tragic history is known wherever the English language is spoken.

So far as the records show there was no physician with

the first adventurers from Connecticut to Wyoming in 1763. True to their New England instincts every attempt at settlement witnessed the presence of a school teacher and a minister of the gospel, but no special inducements were held out to followers of Esculapius.

But such were not slow in coming and some of them left a marked impression upon a community which had already received a baptism of blood and which was to be wasted by internecine strife for a period of 30 years.

True there was little opportunity in a vast wilderness like Westmoreland for the practice of medicine in the earlier days. The population was widely scattered and—what was a greater obstacle to doctors than all else—hardy. The sturdy life of the pioneer had few emergencies which called for medical interference. Under these circumstances the doctors who came had necessarily to identify themselves with other callings in order to earn a living. Like other settlers they took up tracts of land, or "pitches" as spoken in the language of that day. Sometimes it was for making homes for themselves, but as often it was for speculation.

EARLY DISEASES.

Probably the same causes which in our day produce febrile disorders of a malarial type have always been operative. "At all events, fever and ague," says Pearce, "has raged at various periods along the Susquehanna, ever since the white man lived on its banks, and even earlier, for Shikellimus, the viceroy of the Six Nations, died at Shamokin (now Sunbury) from this malady in 1749."

The most dreaded malady of that day was small-pox. The first epidemic which swept over the settlement at Wyoming was in 1777, in which year the infection was brought from Philadelphia.

Vaccination being then unknown, the only means for combating the disease was inocculation. Great alarm prevailed, but a town meeting was held and measures were taken to

fight the disease with the utmost vigor, the result being to allay the public fear and to keep the disease within bounds. Persons desiring this protection could not receive the virus at their own homes, but were compelled to resort to a pest house, one of which was established in each township, half a mile from a traveled road. As far as possible these rude hospitals were quarantined.

Small-pox was a great terror to the Indians and well it may have been, for the red man has never been able to withstand its ravages, and it is the disease, which more than all others combined, has wasted his tribes, generation after generation, and which will not long hence complete the work of extermination.

Pearce says that when the Indians entered Forty Fort on the day of the massacre, the women cried out "Small-pox," with a view of frightening away the savages, but without success, the latter understanding the ruse and going on with their work of plunder. Pearce mentions the presence of typhus fever in 1778. Miner says that in 1780 there was an endemic fever, widespread in extent, and distressing in its severity. An unusually hot summer was followed by an autumn of unprecedented sickness. The prevailing malady was fever—remittent and intermittent—of a particularly severe type on the Kingston side of the river. "Dr. Wm. Hooker Smith skillfully dispensed calomel, tartar emetic and Jesuit bark, and the number of deaths, though considerable, bore a very small proportion to the great number afflicted."

The next year (1781) was also very sickly, typhus being added to remittent and intermittent fever. Among the victims was Lydia, the wife of Col. Zebulon Butler, who was the daughter of Rev. Jacob Johnson. A servant of Capt. Mitchell fell dead at the fort. A son of Capt. Durkee died of nose bleed.

The spring before the massacre was memorable by reason of what was called "putrid fever," a malignant and conta-

gious disease, which claimed among its victims the wife of Dr. William Hooker Smith, and his daughter Mrs. Dr. Gustin.

The first medical man to visit Wyoming Valley, was Dr. J. M. Otto, of Bethlehem, who was sent for to attend Christian Frederick Post, the Moravian missionary among the Indians. This was in the summer of 1755, prior to the settlement of the valley by the whites.

DR. JOSEPH SPRAGUE.

The first to locate and practice medicine in old Wyoming was Dr. Joseph Sprague, who came with his family from Poughkeepsie, N. Y., between 1770 and 1772. In an original "List of Settlers on Susquehanna River, October, 1771," his name appears. Where and when he was born and when and where he died the present chronicler cannot say. "The prospective profits from land speculation probably contributed more," says Hollister, "to bringing him hither than any expectation of professional emolument or advantage in a wilderness."

Shortly after his coming to Wyoming the Wilkes-Barré people offered him a settling right in the township. Like every other settler he was required, under the rules of the Susquehanna Company, to give bonds for the discharge of whatever responsibilities he assumed as a settler. Here is the minute of his admission, by the people in town meeting assembled:

"At a meeting of the inhabitants of Wyoming, legally warned and held at Wilkes-Barré, January 21st, 1772, it was Resolved, That Dr. Joseph Sprague shall have a settling right in the Township of Wilkes-Barre provided he give bond for Fifty Dollars to Capt. Butler and the rest of the Committee for the use of the Company."

He was prompt in executing his bond, for the record is as follows:

Feb. 1772. "Joseph Sprague, late of Poughkeepsie Duchess County, N. Y., executes to Z. Butler, Stephen Fuller and Timothy Smith, Committee of settlers from Wilkes-Barré township, bond for £30—to pay £15, with interest, on or before July 1, 1773, for settling right in Wilkes-Barré."

A still earlier vote to admit him reads as follows:

"Wilksbury, Sept. 30, 1771. Voted in town meeting that Doctor Joseph Sprague shall have a settling in one of ye five towns."

On Dec. 17, 1771, town meeting at Wilkes-Barré "voted that Joseph Sprague (and others named) have each a settling right in ye township of Lackaworna."

Miner says Dr. Sprague was here as early as 1770, and says this may be regarded as the date of the first permanent settlement of Wyoming. When Dr. Sprague came the town plot was covered with pitch pines and scrub oak. The inhabitants occupied the stockade at Mill Creek. There were but five white women in Wilkes-Barré Township besides his family. Miner also says:

"The Mill Creek stockade covered perhaps an acre, a ditch was dug around the area; logs 12 or 14 feet high, split, were placed perpendicularly in double rows, to break joints, so as to enclose it. Loop holes to fire through with musketry were provided. There was one cannon in the fort, the only one in the settlement, but it was useless, except as an alarm gun, having no ball. Within this enclosure the whole settlement was congregated, the men generally armed, going out to their farms to work during the day, and returning at night. The houses, store and sheds were placed around against the wall of timbers. Matthias Hollenback, then about twenty, full of life and enterprise, had just come up the river with a boat load of needed goods and opened a store. On the left was the house of Capt. Zebulon Butler. Next on the right was the building of Dr. Sprague, the

physician of the settlement, who added to his scant income by keeping a boarding-house, the largest building in the stockade. Here Mr. Hollenback and Nathan Denison, then twenty-three, had their quarters. Having seen near 40 years afterwards, their venerable forms wrapped in their cloaks, as associate judges of Pennsylvania, we could not repress an allusion to the contrast. Capt. Rezin Geer, who fell in the battle, was here.

"For bread they used corn meal, as the only mill in the settlement was a samp mortar for pounding grain. Dr. Sprague would take his horse with as much wheat as he could carry and go out to Coshutunk (Cochecton) on the Delaware to have it ground. A bridle path was the only road, and 70 or 80 miles to mill was no trifling distance. While at the Delaware settlement having his grist ground he would buy a few spices and a runlet (small cask) of Antigua rum. The cakes baked from the flour, and the liquor, were kept as dainties for some special occasion, or when emigrants of note came in from Connecticut.

"No furniture, except home-made, was yet in the settlement. Venison and shad were plenty, but salt was a treasure. All were elate with hope and the people, for a time, were never happier.

"But soon work came for Dr. Sprague. Zebulon, a son of Capt. Zebulon Butler, died, also two daughters of Rev. Jacob Johnson, and Peregrine Gardner and Thomas Robinson. Lazarus Young was drowned in bringing up mill-irons for the Hollenback mill. At this time the Indians were numerous about the settlement, some of them very friendly, belonging to the Moravian Society. For about two years the people made their headquarters at the fort, then became numerous and feeling secure, they scattered over the valley."

There were no Indians resident in the valley at this time, though occasional visits were made by the Christian Indians

of Friedenshütten (present Wyalusing), in search of game, or fish, or wild hemp. The Indian occupancy of Wyoming Valley as a place of residence, ceased soon after the tragic death of Teedyuscung in 1763.

A great deal of light is thrown upon the values of those early days, as well as upon the modes of living, by the account books of Elisha Blackman, a farmer of Wilkes-Barré, now Hanover Township. These are in the possession of his great-grandson, Henry Blackman Plumb, Esq., author of the "History of Hanover Township." Here is an account with old Dr. Sprague, the amounts being carried out in Connecticut currency, 6 shillings being equivalent to a silver dollar. After 1786 and the establishment of the Pennsylvania claim to the soil, the Connecticut reckoning gave way to Pennsylvania reckoning—7 shillings and 6 pence making a dollar. The reckoning of accounts in pounds, shillings and pence continued in Wyoming Valley considerably after 1800. (Plumb 212.)

Wilkes-Barré, June 1, 1772.

Doctor Joseph Sprague,

To Elisha Blackman, Senior, Dr.

	£.	s.	d.
To Cash, Lawful money.....	0	8	8
" Work with two men and two horses, plowing an acre of land.....	0	6	0
" Plowing two acres between corn...	0	3	0
" One day's work.....	0	3	0
" Plowing two acres of corn.....	0	3	0
1773, To One quart bottle.....	0	1	6
To Cash, one dollar.....	0	6	0
To One acre of stalks.....	0	4	0
To 1 Bushel and half peck of corn....	0	3	7
To ferry to fetch one bushel of corn...	0	0	8
To A turn with Mr. Porter.....	0	2	6

	£.	s.	d.
1774, July—To the three boys a day (Elisha, Ichabod, Eleazer)	0	3	0
To Eleazer, half a day	0	0	6
To Ichabod, one day	0	1	0
To 20 pumpkins	0	1	8
To the three boys one day stripping tobacco	0	3	0
To one boy a day	0	1	0
To one pig	0	2	0
1775, January 10—To ½ a bushel of potatoes	0	1	0
To 1 bushel of potatoes	0	2	0
To 10 bushels of corn	0	10	0
1775, June ye 26—Settled with Mr. Joseph Sprague and found due to him	0	2	0
[No date]—To payment for doctoring	1	1	9
To 2½ bushels of corn for Douglas Davison	0	7	6
To 3 bushels of corn	0	9	0
To 1½ bushels of corn	0	4	6
To 1 bushel of corn	0	3	6
To 4 bushels of corn	0	14	0

This pioneer doctor does not seem to have had permanent residence in Wilkes-Barré. Hollister says, page 150: "Of the yet uninhabited forest, called in the ancient records 'Ye Town of Lackaworna,' Dr. Sprague was one of the original proprietors. His first land sale was for meadow lot No. 13 in Lackawanna Township, sold to Jeremiah Blanchard in May 1772. For a period of 13 years [1772 to 1785], with the exception of the summer of 1778, Dr. Sprague lived near the Lackawanna, between Spring Brook and Pittston, in happy seclusion, practicing medicine when opportunity offered, and in fishing, hunting and farming, until, with the other Yankee settlers, he was driven from the valley in 1784 by the Pennamites. He died in Connecticut." Miner says he died in Virginia. As shown elsewhere he was living in Wilkes-Barré in 1774 and 1776.

Dr. Sprague was twice married. Prior to his joining the Wyoming colony he had married for his second wife Eunice Chapman, who was born at Colchester, Conn., in 1732. He had several children by his first wife. A son fell in the battle of 1778. At the erection of Luzerne County, in 1787, there was a Joseph Sprague, who was chosen court crier. Whether he was a son or not, I have not learned.

The following from unpublished records is furnished by Oscar J. Harvey, Esq.:

May 27, 1772. Joseph Sprague of Wilkes-Barré conveys to Jeremiah Blanchard of Coventry, Kent Co., Rhode Island, for £50, one settling right "in township of Lackawanna, so called.

In April or May, 1772, when there was a final distribution of lots to the proprietors of Wilkes-Barre, Joseph Sprague drew:

Lot No. 46, 1st Division (on Jacob's Plains).
Lot No. 45, 2nd Division (town plot).
Lot No. 30, 3rd Division (back lots).
Lot No. 31, 4th Division (5-acre lots).

About 1773, or 1774, he disposed of lot No. 45, 2nd Division—evidently to the town of Wilkes-Barré—and it ultimately became the public grave-yard where the City Hall now stands. It extended from the present corner of Washington and Market Streets to corner of Market and Canal, and along Canal and Washington Streets, each, 332 feet. The lot contained three acres and 136 perches.

In March, 1774, Dr. Sprague was living on lot No. 30, 3rd Division of Wilkes-Barré. He was still there in October, 1776, when, for £110, 10 sh., he sold to Darius Spofford "the whole of said lot on which I now dwell—to extend from the Centre Street (now Main Street) eastward." This lot lay at the corner of the present Ash Street and South Main Street.

March 9, 1774, Dr. Joseph Sprague of Wilkes-Barré deeded to Dr. Samuel Cook of Poughkeepsie, N. Y., for £52, 8 sh., Lot No. 46, 1st Division, or Meadow Lots—35 acres at Jacob's Plains. This lot lay along the river and was about where Port Bowkley now is. This sale must have fallen through, for on July 28, 1774, Dr. Sprague conveys the same lot to Dr. Wm. Hooker Smith, for £100.

Under date, Wyoming, November 25, 1786 (just after the passage of the Act erecting Luzerne County), Dr. Sprague writes to the Supreme Executive Council of Pennsylvania relative to the strife between the adherents of Pennsylvania rule and its opponents:

"The present Surcomstances of this Place Stops the mouth of Every one that is a friend to government; Know one Dare to say one word in behalf of government, or mutch more to inform government, as he would amedely fall a Sacrifice to Lawles and arbartary Power; for this Reseon thar is many good Sitezens in this place that Dare not apeare in the behalf of government but are obliged to be Silent and mute. * * * The true State of afares here at Wyoming is in fact a total Rejection of government, and are at this time forming and modeling a new form of government among them Selves."

Sometime subsequent to 1786, and prior to 1790, Eunice Sprague of Wilkes-Barré, filed in the Luzerne County Court a libel in divorce against "Joseph Sprague of sd. Wilkes-Barré, Practitioner of Physic." The prayer of the libellant was addressed to "the Hon. Thos. McKean, Doctor of Laws, Chief Justice of the Supreme Court of Penna., and his Associate Justices of the same Court," and set forth that in the year 1769 she was lawfully joined in holy bonds of matrimony with Dr. Sprague. The grounds alleged were: "barbarous and cruel treatment," etc. The divorce was granted.

Dr. Sprague's widow did not long remain in Connecticut after the expulsion by the Pennamites, but she returned to

Wyoming and joined with her old friends and neighbors in renewing a home in the wilderness. The influence of her husband's medical skill was not lost on the wife, and when thrown on her own resources she engaged in midwifery, and practice among children, for which by nature she was well fitted. Dr. Hollister says of her:

"Dr. Sprague's widow, known through the settlement as Granny Sprague, returned to Wyoming in 1785 and lived in a small log house then standing in Wilkes-Barré on the southwest corner of Main and Union Streets. She was a worthy old lady, prompt, cheerful and successful, and at this time the sole accoucheur in all the wide domain now embraced by Luzerne, Lackawanna and Wyoming Counties. Although of great age, her obstetrical practice as late as 1810, surpassed that of any physician in this portion of Pennsylvania. For attending a case of accouchement, no matter how distant the journey, how long or fatiguing the detention, this sturdy and faithful woman invariably charged one dollar for services rendered, although a larger fee was never turned away if anyone was able or rash enough to pay more."

Previous to her marriage to Dr. Sprague, Eunice Chapman had been married to a Mr. Poiner at Sharon Nine Partners, N. Y.

After a long and useful life she died in Wilkes-Barré April 12, 1814. In accordance with the usual brevity with which the newspapers of that day disposed of interesting happenings, the *Wilkes-Barré Advertiser* of April 15, 1814, says:

"Died in this town on Tuesday evening last, Mrs. Eunice Sprague, aged 82 years. She was one of the first settlers of this place."

What a thrilling story could have been written then of the life of a good woman, who may most fittingly be included in the pioneer practitioners of medicine. She was 46 years old

at the time of the battle and her recollections of early times were largely utilized by the earlier historians of the valley.

One of her children by her first husband, Phoebe Young, died in 1845, aged 89 years, was 22 years old at the time of the battle, and was the last of the survivors of the infant colony which occupied the stockade at Mill Creek. Charles Miner gives a sketch of Mrs. Young in the appendix of his History of Wyoming, and pays her a deserved tribute. Her husband was in the battle of Wyoming but escaped. She, with Mrs. Col. Lazarus Denison, Mrs. Jonathan Fitch, Mrs. Betsey Shoemaker and their children, escaped down the Susquehanna in a canoe and made their way in safety to Harrisburg.

The following concerning Mrs. Sprague, is from the pen of Wesley Johnson, Esq., in the Historical Record, Vol. 3, page 165:

"Mrs. Eunice Sprague, was in all probability the first woman to practice medicine in these parts. I do not myself remember her, but often, when I was a small boy, heard the old people speak of "Granny Sprague" as a successful practitioner of midwifery and of the healing art among children. Mrs. Dr. Sprague's residence and office, which I well remember, was a one-story log house on the corner of Main and Union Streets, then known as Granny Sprague's corner, where the Kessler block now stands. The old log house was demolished long years ago, but the cellar was plainly to be seen up to the time of erecting the present block of brick buildings. Mrs. Sprague, if I am not mistaken, was the mother of "Aunt Young," who lived in a small, one-story frame house on Canal Street, still standing, a short distance below Union Street, who used to tell us boys how she often listened to the cry of wild cats and wolves in the swamp in front of her place, about where the line of several railroads pass up the valley. I remember that in going to Mrs. Young's place, out Union near the Van Zeek house, we had

to pass a water course about where Fell Street joins Union, which at times, after heavy rains, would be quite a formidable stream for children to ford. It was here, as I have heard said, that old Zimri, the town fiddler, was drowned on a dark night as he was on his way home, perhaps slightly boozy, after having delighted the boys and girls during the first part of the night with the exciting dancing music of 'Money Musk' and 'The Devil's Dream,' drawn from his miraculous violin."

DR. WILLIAM HOOKER SMITH.

Soon after the arrival of Dr. Sprague came an interesting personage who figured, not only as a physician, but as a participant in public affairs generally, and whose influence upon the community was marked—Dr. William Hooker Smith.

Dr. Smith, who was born in 1724, located in Wilkes-Barré as early as 1772, his father, Rev. John Smith, who died at White Plains, N. Y., before the Revolutionary War, having been a Presbyterian clergyman in the city of New York. Rev. John Smith was the only Presbyterian clergyman in New York City in 1732; and such was the feebleness of his congregation, that he preached one-third of his time at White Plains. (Hist. Coll. N. Y.)

Soon after Dr. Smith's coming to Wyoming Valley he purchased land and made settlement. A purchase was made by him and his son-in-law, James Sutton, who had come form North Castle, Westchester Co., N. Y., Feburary 1, 1773, of three tracts of land, meadow lot No. 32 in "Kingston," containing about 46 acres, also house lot No. 29, containing 5 acres, and also lot No. 7, 3rd Division, 86 acres, in Kingston Township. Mr. Sutton had settled at what is now Plains, then called Jacob's Plains. Afterwards he moved to Exeter where he built a grist-mill and saw-mill.

In 1772 he was the only physician, except Dr. Sprague, in a territory of 150 miles in extent, from Cochecton on the Delaware to Sunbury. He is thus described by Dr. Hol-

lister in his History of Lackawanna Valley: "The doctor was a plain, practical man, a firm adherent to the theory of medicine as taught and practiced by our sturdy ancestors of those early days. He was an unwavering phlebotomist. Armed with huge saddle-bags, rattling with gallipots and vials and thirsty lance, he sallied forth on horseback over the rough country calling for his services and many were the cures issuing from the unloosed vein. No matter what the nature or location of the disease, bleeding promptly and largely, with a system of diet, drink and rest, was enforced on the patient with an earnestness and a success that gave him a widespread reputation as a physician.

"Though the doctor was a Yankee by birth, habit and education, such confidence was reposed in his capacity and integrity that he was chosen the first justice in the Fifth District of the new county of Luzerne. His commission, signed by Benjamin Franklin, then President of the Supreme Executive Council of Pennsylvania, bears date May 11, 1787."

In 1779, when 55 years of age, he is said, though this is doubtful, to have accompanied General Sullivan as surgeon on his expedition to the upper waters of the Susquehanna, to punish the Six Nation Indians for their atrocities of the preceding year at Wyoming and Cherry Valley. A score of years after his death Congress in 1838 recognized his Revolutionary services by voting $2,400 to his heirs. The petition to Congress was presented by his descendant, Dr. Andrew Bedford of Waverly, Pa.

The Committee on Revolutionary Claims to which was referred the petition of the heirs of Dr. Smith, reported December 22, 1837:

"It appears from the testimony that Dr. Smith was appointed a surgeon's mate in the Pennsylvania Line, on Continental establishment, at an early period of the Revolutionary contest and continued in service to the end of the

war. It appears further from the depositions of Thomas Williams, Geo. P. Ransom, Rufus Bennet, Elisha Blackman and Gen. William Ross that from July 3, 1778, until the close of the war, Dr. Smith acted as surgeon at the post of Wilkes-Barré, Wyoming Valley, and that he was the only officer of the medical staff attached to that post during that period. The garrison consisted of two companies of regulars and the militia of the valley. These facts sustain, in the opinion of the committee, the claim and a bill is accordingly reported."

The then hidden mineral wealth of the Wyoming Valley and adjacent territory, now making Luzerne County the fourth in importance in the Commonwealth of Pennsylvania, was early recognized by this pioneer physician.

Dr. Smith was a man of many eccentricities but he was a generation ahead of his time in recognizing the existence of our subterranean mineral treasures and in making purchases of lands, of little market value then, but destined to become sources of great wealth when the deposits of coal should become known.

The use of coal except as it had been burned under a bellows blast in the smithy's forge of Obadiah Gore, was wholly unknown, and its availability for domestic fuel was not recognized until Jesse Fell discovered in 1808 that anthracite coal could be burned in an ordinary grate, without the aid of a bellows or other artificial draft.

Yet we find Dr. Smith, as early as 1791, purchasing the right—the first in our local annals—to dig iron ore and mine stone coal near Pittston. The first purchase was made of a Mr. Scott of Pittston, for a sum of five shillings, Pennsylvania currency. Numerous other such investments were made by Dr. Smith throughout the valley between 1791 and 1798, the result being to stamp the purchaser as an enthusiast and to make him the object of ridicule.

He located permanently on the Lackawanna two or three

miles above Pittston, at a place since known as Old Forge, from the fact that he and his son-in-law, James Sutton, erected a forge there in 1789, for converting ore of the locality into iron. The forge produced iron for several years, the product being floated down the Susquehanna to market. The ore was, however, lacking in quality and quantity, competition had sprung up at Slocum Hollow, now Scranton, and the enterprise had to be abandoned. Dr. Smith removed up the Susquehanna to a point near Tunkhannock, where he died July 17, 1815, at the age of 91 years.

Miner says, Appendix, p. 43: "Dr. Smith filled a large place in public estimation at Wyoming, for nearly half a century. A man of great sagacity and tact as well as of an excellent education, his influence was extensively felt and acknowledged. For many years he held the first rank as a physician, and from the numerous cures performed the old people thought him unequaled. The extraordinary cases of the recovery of Follet and Hagaman excited wonder, but he was modest enough to say that nature was the physician and made the cure. [Follet had not only been scalped but had been wounded by an Indian spear which penetrated his stomach so that its contents came out of his side.] To great skill in his profession Dr. Smith united a large share of that capital ingredient—common sense.

"Both the partiotic spirit and activity of Dr. Smith are shown by the fact that while he was relied on as chief medical attendant, by the settlement, he yet accepted and exercised the post of captain, commanding in Wilkes-Barré the Reformadoes, as the older men who associated to guard the fort were called. Subsequently in the absence of the younger men in the Revolutionary Army, when numerous troops were stationed at Wyoming, Dr. Smith was still the principal physician."

The following incident, which occurred in 1788, during the Pennamite war, is related by Miner, and shows the

scarcity of medicine in those early days: "During an encounter between the contending factions at Wysox, one Joseph Dudley was wounded. Pickering thus describes it: 'Dudley was put into a canoe and taken to Wilkes-Barré, a distance of perhaps 60 or 70 miles. The doctor was sent for but had no medicine. I had a small box of medicine that had been put up under the care of my friend, Dr. Benjamin Rush. Of these, upon application of the physician, I furnished all he desired. But Dudley survived only two or three days.'" (P. 420.)

Dr. Smith was twice married. His first wife, and their daughter, Mrs. Dr. Gustin, died of "putrid fever" in 1778. His second wife was Margery (Kellogg) Smith, widow of William Smith. (Harvey Book, 350.) She had been one of the fugitives from the Wyoming massacre, escaping down the river in a boat. Her son William (of whom Dr. Wm. Hooker Smith was step-father) was killed in an encounter of the Yankees with the Pennamites at Wilkes-Barré in 1784. His grave-stone in the City Cemetery at Wilkes-Barré bears the following inscription:

> "Here lies the body of William Smith.
> Mortals attend, he was called forthwith.
> He left the world at twenty-five, .
> A warning to all who are left alive.
> His zeal for justice, though hard to relate,
> It caused his flight from this mortal state."

Dr. Smith had a numerous family.

1. John, "of Kingstown," deeded a piece of land on Jacob's Plains to his brother-in-law, Dr. Lemuel Gustin, in 1776. In 1781 he deeded to his father 36 acres in same locality, formerly belonging to Dr. Joseph Sprague.
2. William, died in Wyoming County after 1845, aged upwards of 85 years.

3. A daughter, married Isaac Osterhout, their son, Isaac S. Osterhout, being the founder of the "Osterhout Free Library" in Wilkes-Barré.
4. Sarah, married James Sutton of Exeter, who had come from North Castle, West Chester Co., N. Y. Sarah was born January 18, 1747, and died in Exeter July 19, 1834.
5. Susannah, married Dr. Lemuel Gustin, and died in 1778, aged 28 years.
6. Olive, a half-sister of Susannah, if not of the others, married Naphthali Hurlbut, one of the early sheriffs of Luzerne County.

There may have been other children. His daughter Sarah was the grandmother of Dr. Andrew Bedford, a practicing physician in old Luzerne County, born in 1800.

Dr. Smith was the possessor of certain eccentricities, one of which was his belief that he had discovered the secret of transmuting base metals into gold. When in advanced life he published a book with the following title: "Alchymy Explained and made Familiar; or, a Drop of Honey for a Despairing Alchymist; collected from the Alchymist's Rock, or Philosopher's Stone. By Wm. Hooker Smith, M. D., Putnam Township, Luzerne County, Jan. 1, 1811. Printed for the author."

Dr. Smith's will, written in his own hand in 1810, says:

"I recommend my soul to Almighty God that gave it to me, nothing doubting but that I shall be finally happy. My destiny, I believe, was determined unalterably before I had existence. God does not leave any of his works at random subject to change, but in what place and when and how I shall be happy, I know not. Now to the sacred spring of all mercies and original fountain of all goodness, to the Infinite and Eternal Being, whose purpose is unalterable, whose power and dominion is without end, whose compassion fails not, to the High and Lofty One who inhabits eternity and dwells in light, be glory, majesty, dominion and power, now and forevermore. Amen."

DR. LEMUEL GUSTIN.

Dr. Lemuel Gustin, sometimes spelled Gustine, was born in Saybrook, Conn., in 1749, and came to Wyoming about the time he attained his majority, which was coincident with the first permanent settlement. Under date of March 10, 1778, he bought of Israel Walker a house lot in "Kingstown." He studied medicine with Dr. Wm. Hooker Smith, and married his daughter. Her death occurred from "a malignant putrid fever," a fortnight before the massacre of Wyoming. A stone in Forty Fort Cemetery, which is part of the historic battle ground, reads thus:

In Memory of Susannah,
wife of Dr. Lemuel Gustin,
and daughter of Dr. Wm. Hooker Smith.
Born at White Plains, N. Y.,
18 Nov., 1750.
Died at Wyoming 12th of June, 1778."

The stone gives Dr. Gustin's name as Samuel, a misprint which has crept into nearly all the books.

Both Dr. Gustin and Dr. Smith were in the Wyoming battle of 1778 and attended to the wounded.

Dr. Gustin was a signer of the articles of capitulation, and is said by Peck to have been the bearer of the flag of truce to the British commander. He was one of the last to leave the bloody field. The British invasion of Wyoming was fixed at a time when the two Wyoming companies were with Washington's army and therefore unable to defend their own homes. After the battle Dr. Gustin and Dr. Smith embarked their families on a raft or rude boat and escaped down the Susquehanna. Dr. Gustin subsequently practiced medicine at Carlisle, Pa., where he died October 7, 1805 at the age of 56 years.

By his first marriage, to Susannah, daughter of Dr. Wm. Hooker Smith, he had one daughter, Sarah, who, in 1792, became the wife of Rev. Nathaniel Ross Snowden, whose father, Isaac, was a prominent Philadelphian during the

Revolutionary War. Isaac Snowden had five sons, all of whom were graduates of Princeton College and four of whom were ministers. (See Historical Record, Vol. 5, page 146.) Dr. Gustin's second wife was Rebecca Parker, of Carlisle, concerning whose family there is an article in Egle's Pennsylvania Genealogies, page 520. Of Dr. Gustin's six children by Rebecca Parker, there were three physicians —James, Samuel and Richard. From this source it is learned that they had four sons and two daughters.

A sketch of Dr. Lemuel Gustin is given in "Men of Mark of Cumberland Valley, Pa." He was, the article says, a man of great strength and activity, as well as of courage. While the Indians were plundering Forty Fort one attempted to take some property or apparel from the doctor. He resisted, and giving the Indian a trip, threw him to the ground. The other Indians were so much pleased at the doctor's courage and activity that they handed him a rope and said, "Indian is a drunken dog, tie him." The article goes on to relate the escape down the river of Dr. Gustin and his little 3-year-old daughter, Sarah, whose mother died shortly before the massacre, and is buried at Forty Fort. Sarah, 17 years later, married Rev. Nathaniel Ross Snowden, then a licentiate of the Presbytery of Philadelphia, who studied divinity at Carlisle.

Dr. Gustin's grandfather died near Augusta, Sussex Co., N. J., and was buried on his own estate. The epitaphs still remaining on the tombs of himself and wife are as follows:

Here Lies ye Body of
John Gustin.
Deceased, A. D. Oct. 15, 1777.
Being in ye 86 Year of his Age.

Here Lies ye Body of
Mary Gustin,
Wife to John Gustin,
70 Years Old.
Deceased, Dec. 3, A. D. 1762.

They were ancestors of the Gustins of Honesdale, to one of whom, the late Geo. W. Gustin, the author is indebted for most of the early history of the family. Thomas Gustin, an uncle of Dr. Lemuel Gustin, married Ruth, sister of Rev. Anning Owen, a pioneer of local Methodism at Goshen, N. Y., and later in Wyoming Valley. They are buried under the old church at Florida, Orange Co., N. Y.

The following was furnished by the late George Wilmot Gustin, of Waymart, Pa., who gave much study to the genealogy of the Gustin family and whose manuscripts on that subject, bequeathed to the author of this pamphlet, are deposited in the Wyoming Historical and Geological Society:

"Dr. Lemuel Gustin was fourth in descent from Capt. Augustine Jean, born at Le Tocq, St. Ouens, Isle of Jersey, Jan. 9, 1647, son of Edmond Jean, who m. April 25, 1638, Esther, dau. of Jean le Rossignot, of Le Tocq. Both of these families were of great antiquity in the island, and both were 'followers of the sea.' Capt. Augustine Jean, who describes himself as a 'Mariner of the Isle of Jerzey,' came to Reading, Mass., in 1675. The circumstances that caused his name to be changed to John Gustin, without any such wish or intention on his own part, are unparalled in the history of any family in New England.

"At first his name of Augustine Jean was anglicized by scriveners to John. Afterwards they transposed Augustine Jean to John Augustine and finished by mutilating Augustine down to Gustin. In the 'Genealogical Dictionary of New England' the family is called Augustine, but Mr. Savage explains that the change to Gustan or Gustin was gradual. The old man made his last protest against this barbarous mutilation, on his death bed, July 3, 1719, drawing an enormous AU before the name Gustin, with which his will was signed. This document is found in Sargeant's Wills.

"We must now refer to him as John Gustin. During the latter part of Philip's war he served as sergeant in the

company of Capt. Beers, and received a grant of land from President Danforth at Falmouth and bought more with money left him by his father and mother. In his will he describes these lands as 'lying in Casco Bay, at Martin's Point and Pasumscot River,' now the city of Portland, Maine.

"He had married, Jan. 10, 1678, Eliza, dau. of John Brown, of Watertown, and in the following year moved to his new possessions where was born his first son, Samuel, and a daughter Sarah.

"On May 26, 1690, the French, assisted by a party of Abenakis Indians, captured, sacked and burned Falmouth, John Gustin and family being among the very few who escaped from that slaughter pen. He fled to Lynn, where he remained until 1719.

"There were born the following children: John, Nov. 6, 1691; Abigail, Dec. 9, 1693; Ebenezer, Oct. 4, 1696; Thomas, March 5, 1698-9; David, Feb. 6, 1702-3.

"Although the records of the descendents of these children are wonderfully complete, there seems to be lacking positive proof as to which of the above was the grandfather of Dr. Lemuel Gustin. If, as his descendents claim, he was a brother of Dr. Joel T. Gustin of Winchester, Va., then it was the John mentioned and his father was Rev. Alpheus Gustin, born May 29, 1722, married Mary Aberdy and settled in Berkeley, Va., at the outbreak of the Revolutionary War."

Subsequent to furnishing the above Mr. Gustin treated the subject in somewhat greater detail in an article in the Honesdale, Pa., *Independent,* May 31, 1888, as follows:

"The promised publication by the Wyoming Historical Society of a memoir of Dr. Lemuel Gustin, written by Dr. F. C. Johnson, will necessarily give publicity to a part of the family history that I should like to make verifiable.

"Some years ago the Rev. Geo. M. Bodge, A. M., His-

torian of King Philip's War, called my attention to the singular transpositions of names in the case of my ancestor, Augustine John, sometimes John Gustin, on the official records of Massachusetts. In the Genealogical Dictionary of N. E. the family is mentioned under the heading of Augustine, but Mr. Savage explains that the change to Gustan or Gustin was gradual. This, however, in no way explains the transposition referred to. The second son of Augustine, John, Jr., my great, great grandfather, was born in Lynn, to which place the family had fled after the sacking and burning of Falmouth, Maine, May 26, 1690. The Lynn records contain the following: 'John ye sonn of John Gustin and Elizabeth his wife, was born, Nov. ye 5th, 1691.'

"In deeds conveying lands at 'Glassenbury,' Conn., to his sons, 1740-45, and on all occasions he signs as above, so we must return to his father.

"In Massachusetts Archives (Philip's War), Vol. 68, page 158: Among the men left at Quabang (now Broodfield) March 4, 1675-6, was Augustine John. At the same time in 'Hull's Journal accounts' he is frequently and invariably referred to as John Gustin.

"June 29, 1677, he executes a deed (Suffolk Deeds 10,131) to the famous Rev. John Brock, of 'Reading,' wherein occurs the following: 'As the same was given and left or otherwise ordered unto mee the said Augustine John by my faather and mother, namely, Edmund Jean and Esther his wife, late of the Parish of St. One (St. Ouens) in the said Island of Jerzey, decd.'

"Jan. 10, 1678, 'John Gustin' married Elizabeth, daughter of John Brown, of Watertown, and grand daughter of Thomas Makepeace, of Dorchester, Bond 145, York records.

"Nov. 20, 1697, John Brown dates his will at Watertown, and mentions 'my son-in-law John Gustin.' Hon. Wm. Wills, in his history of Portland Maine, refers to Augustine Jean, a native of the Isle of Jersey. Afterwards John Augustine, etc.

"July 3rd, 1719, at Falmouth, now Portland, on his death bed, John Gustin signs his will as follows:

"John AUGustin. This will, with a facsimile of the curious mark will be found in 'Sargeant's (Maine) Wills, 1640, 1750.' It forms the basis of all the title deeds to a great portion of the present city of Portland. His lands 'lying in Casco Bay, at Martin's Point and Pasumcot river,' having been granted him by 'the Colony of Massachusetts Bay' for his services in King Philip's War. He bought more with money left him by father and mother. The record at St. Ouens, of which I give as much as is necessary to make the matter clear, is as follows:

"Edmond Jean de Le Tocq., Oct. 1597, Nov. 12, 1674. St. Ouens, Jersey, married, April 25, 1638, Esther, daughter of Jean le Rossignol; she died June 25, 1672. Children: Katherine, daughter of Edmond Jean, baptised Oct. 2, 1642; Augustine, son of Edmond Jean, baptised Jan. 9, 1647. Marguerite, daughter of Edmond Jean, baptised Nov. 24, 1650. Edmond, son of Edmond Jean, buried April 14, 1676.

"These Jeans and Le Rossignols were families of great antiquity in the island, and both were followers of the sea, one of the latter having traded with the nations at Acadia, North America, as early as 1604.

"I close with a Jersey tradition—dating probably from 1720: 'There were four brothers (children?) and they went at sea. They were captains in the merchant service and trading to America. One of these captains married in America and by that marriage a son was born. When he got of age he came over to Jersey to see if he could claim any of his father's property. So these other brothers of deceased by all appearance gave him a certain amount or sum of money. So he returned to America and since then has not been heard of and by all appearances they live near Le Tocq."—Hacquoil.

GEO. W. GUSTIN."

DR. JOHN CALKINS.

In 1773 Dr. John Calkins, sometimes spelled Corkins, visited Wyoming Valley, having come from New London, Conn. The people, desirous of inducing him to settle among them, drew up a subscription, proposing "to pay Dr. John Calkins, in case he should settle among us in the quality of a physician, the sum set opposite our names, the money to be laid out in land for his benefit and use." The subscription was drawn by Henry Carey, and among the signers are Anderson Dana, whose subscription of £2, 8s, was the largest. Miner calls him a noted surgeon and says he has not been able to learn the issue of the negotiations. Evidently he did not accept at once, for we find that it was two years before any land was deeded to him. Under date September 11, 1775, Anderson Dana and Jabez Fish convey to Dr. John Calkins as follows: "In consideration that Doctor John Calkins settle in the District of Wilkes-Barré, in Westmoreland, as a physician, do give to said John Calkins one certain parcel of land lying in said District of Wilkes-Barré, bounded as follows—Beginning on ye Main road at ye corner between Lots Nos. 27 and 28 of ye 3rd Division, thence on said road northerly six rods; thence S. 50° E. 27 rods; thence southerly a parallel line with said road 6 rods to said line, thence N. W. 27 rods to beginning, containing two acres and eight rods."

Steuben Jenkins told me that in his opinion Dr. Calkins, though owning land here, did not locate at Wilkes-Barré, but settled at Cochecton on the Delaware, from which point he made occasional visits to this locality. As bearing on this point he (American Archives, 1775, Vol. 3, page 968) made an affidavit December 12, 1775, before Zebulon Butler, justice of the peace, in which he said he had often been at Cochecton and had been acquainted with that settlement 15 years. He was mentioned as "of Westmoreland."

However, it seems hardly likely that Anderson Dana and Jabez Fish would have made the foregoing conveyance unless the grantee had fulfilled the condition of settling in the district of Wilkes-Barré.

He evidently was here often after December, 1775, even if he were not located here, for Henry Blackman Plumb, author of History of Hanover Township, has kindly given me access to the account book of Elisha Blackman, beginning December 6, 1775, running to February 2, 1778, then intermitted for 10 years and continuing again in 1788 and 1789. The charges against Dr. Calkins were for board for self and horse and such supplies as were obtainable from a farmer. Here are some of the entries:

Dr. John Corkins

To Elisha Blackman, Dr.

	£.	s.	d.
1775, Dec. 6—			
3 lbs. Pork	0	1	6
2 bu. Oats	0	3	0
15 lbs. Pork	0	5	0
Lending lines and breach collar	0	6	0
25 bundles Oats	0	6	0
Killing a hog and salting	0	2	0
1776, Mar. 29—			
83 wt. Beef	1	0	6
1 load wood	0	2	0
1777, Jan. 30—			
Cutting and carting two loads wood	0	2	0
Killing a hog	0	1	0
Plowing garden and carting a load of wood	0	6	0
Board five weeks	1	17	6
grain for horse	0	4	0
1 bushel Oats	0	1	10
mending your boots	0	1	6
keeping horse to hay	0	2	6

	£.	s.	d.
1778, Feb. 2—			
1 load of wood	0	6	0
May 18—			
Time spent to do your business	0	6	0
1½ bu. Oats	0	2	9
Sep. 29—			
5 days yourself and horse	0	7	6
1789, Oct. 10—			
8 days board	0	8	0
8 days board horse	0	4	0
3 pecks oats	0	1	4
3 days board and horse	0	5	0
1775— CREDIT.			
Cash, five shillings	0	5	0
Cash, two dollars	0	12	0
1788—			
20 lbs. pork at 8 d	0	13	4
turn with Gore	1	5	0
½ lb. tea	0	2	6
turn with Gore	0	7	0
½ bu. rye	0	4	6
cash, one dollar	0	7	6

Note the changed value of the dollar.

DR. ATKINS.

A skillful young physician, Dr. Atkins, a native of Boston, settled in Kingston prior to 1825. He had been thoroughly educated and had supplemented his medical studies in his own land by valuable experience in the hospitals of Europe. He was pre-eminently a surgeon and achieved local reputation by cutting for stone in the bladder. Col. Charles Dorrance informed me the stone was as big as a walnut and the patient was a Mr. Davenport of Plymouth. Another operation was the excision of portions of the leg

bones and the saving of a leg which other physicians had pronounced a case for amputation. The patient was a man named Sutton, in Exeter Township, who had been thrown from a horse, sustaining a compound comminuted fracture of the lower third of the small bones of the leg. The surgeon removed the spiculae, sawed off the projecting extremities, made extension, constructed a fracture box and was rewarded with an excellent result. This operation, like that for stone in the bladder, is common enough in our day, but required a boldness that was rare in the country doctor of the first quarter of the 19th century.

At this time Dr. Atkins was boarding with Col. Dorrance's father. He was aristocratic and was too proud to seek practice. He seemed a disappointed man. Practice came slowly on account of his lack of cordiality, and to intensify his disappointment, his fiancé, daughter of a wealthy Philadelphian named Asley, died.

He bought the Dr. Whitney place (now Samuel Hoyt) in Kingston. After practicing about 10 years in Kingston he moved to New York. He married a daughter of Ebenezer Bowman. Her sister, Lucy E. married Dr. Thomas W. Miner, *q. v.*, and another, Caroline B., married George Denison.

DR. SAMUEL BALDWIN.

Dr. Samuel Baldwin lived in Wilkes-Barré as early as 1810, but afterward removed to Forty Fort or Wyoming. He went to Oxford, N. Y., about 1821, and died there, somewhere about 1834. He was somewhat eccentric and labored long to invent perpetual motion. He left a machine intended to solve the problem.

In the Steuben Jenkins papers it would appear that he lived in the neighborhood of Wyoming in 1807, as John Jenkins let him have vegetables, grain and meat and several bars of iron. Perhaps the latter was for his perpetual motion machine.

That he was a resident of Wilkes-Barré is shown by the following from a local paper:

Married, at Wilkes-Barré 15 July, 1810, by Rev. Ard Hoyt, Mr. Epaphras Miller, of Oxford, N. Y., to Miss Betsy Baldwin, daughter of Dr. Samuel Baldwin of Wilkes-Barré.

DR. ALDEN I. BENNETT.

Egle's Pennsylvania Genealogies (183) says Dr. Alden I. Bennett was the first physician in Nanticoke, in 1825. He married Mary A. Bennett, daughter of Thomas Bennett, who was born in Connecticut in 1765, and came to Wilkes-Barré about 1770.

DR. OLIVER BIGELOW.

In the *Wilkes-Barré Gazette and Luzerne Advertiser* for January, 1798, Dr. Oliver Bigelow had an announcement that he was practicing in Kingston. He married Esther, daughter of Stephen Harding, and lived opposite the residence of S. B. Vaughn. Practiced for a time on Ross Hill, Plymouth, then at Wilkes-Barré and subsequently removed, about 1800, to Palmyra, N. Y. These facts are learned from Steuben Jenkins.

DR. ETHEL B. BACON.

"Married July 5, 1809, by Rev. Ard Hoyt, Dr. Ethel B. Bacon to Miss Anna Hoyt, daughter of Capt. Daniel Hoyt of Kingston." He lived for a time at Wyoming and removed to Tioga County, Pa.

DR. ANDREW BEDFORD.

Dr. Andrew Bedford was born in Wyoming, Luzerne County, April 22, 1800, and died at Waverly, Pa., in his 90th year. Dr. Bedford came from pioneer medical stock, his grandmother, Sarah Smith, having been a daughter of Dr. Wm. Hooker Smith. Her sister, Susannah, married Dr. Lemuel Gustin. Dr. Bedford's mother was Deborah,

daughter of James Sutton and Sarah (Smith) Sutton. Deborah was born in 1799 and died in 1869. He graduated from the medical department of Yale College, and began to practice at Dundaff in 1825, settling in Waverly the next year. He never actively practiced medicine after 1840, but gave his time to public affairs. He was one of the first directors of the Delaware, Lackawanna and Western Railroad. He was a delegate to the constitutional convention of 1837 and 1838. He served as prothonotary of Luzerne County from 1840 to 1846. He was the first burgess of Waverly and the postmaster of that borough. He was a Democrat and a Methodist. He left six children, one of whom, Geo. R. Bedford is a prominent member of the Luzerne Bar.

DR. FRANCIS CAREY.

Dr. Francis Carey, born in 1799, lived between Wilkes-Barré and Pittston, but left the valley in 1831.

DR. EBENEZER CHAMBERLAIN.

Dr. Ebenezer Chamberlain located in Plymouth in 1816, and practiced there until his death in 1866. He was born in Swanzey, Cheshire Co., N. H., Dec. 1, 1790. (Wright 336.) He served as county commissioner from 1843 to 1846, and was a justice of the peace. His daughter Elizabeth was the first wife of John J. Shonk of Plymouth.

DR. LEWIS COLLINS.

Dr. Lewis Collins was born in Litchfield, Conn. He married a daughter of Hon. Oliver Huntington, of Lebanon, in that State, moved to Salem in 1801, and bought of Moses Dolph the Jacob Stanton farm at Little Meadows. His daughter, Philena, sister of Oristus Collins of Wilkes-Barré, married Dr. Virgil Diboll, *q. v.*

DR. SAMUEL COOK.

In 1777 Dr. Samuel Cook deeded a lot in Hanover Township to John Staples. Whether he was a resident does not appear. The following advertisement is from the *Wilkes-Barré Advertiser,* March 31, 1815:

"Dr. Cook respectfully informs his friends and the public that he has returned to his former residence in Bridgewater, Susquehanna Co., where he will attend to all calls in the line of his profession. All persons indebted to him are earnestly called upon to settle their accounts without delay."

DR. FRANKLIN CRISSEY.

Dr. Franklin Crissey was registered as a physician on the Hanover Township assessment for 1799 (Plumb 250), and his property was valued at $150. This included a horse.

DR. MATTHEW COVELL.

Dr. Matthew Covell was a native of Glastonbury, Conn. He settled in Wilkes-Barré when a young man and practiced medicine there during the remainder if his life, ranking among the first as physician and surgeon. He was born in 1760, and died May 18th, 1813, of what the newspapers called "the prevailing fever." He was a man of devout Christian principles and had the confidence of a large circle of acquaintances. He was a member of the board and treasurer of the old Wilkes-Barré Academy. Caleb E. Wright describes him as "a tall, slim man, with his elbows nearly touching on the back as he stood. He was highly educated and for a long time was the reigning functionary of his profession. He had the field almost to himself."

DR. EDWARD COVELL.

The following is taken from the obituary publication, Dec. 29, 1826:

"Dr. Edward Covell, son of Dr. Matthew Covell, suc-

ceeded the latter in his practice. He was born in Wilkes-Barré May 12, 1792, and died Dec. 27, 1826. After having received an early and liberal education he was prepared under the instructions of the celebrated Dr. Benjamin Rush, of Philadelphia, and others of his school for the practice of medicine. He entered upon the duties of his profession at an early age and soon acquired an extensive practice. As physician no man of his age held a higher rank. The suavity of his manners and the kindness of his expressions upon entering a sick room were ever calculated to inspire the confidence of his patients and to soothe the feelings of their anxious friends.

"As a gentleman, his society, company and conversation were highly esteemed by all who appreciated literature, science and morals. As a Christian he was not ashamed to own his Master, and after having publicly professed his religion for a number of years, he spoke of his dissolution with the utmost composure and died in a firm hope of a glorious immortality.

"As a son, as a husband, as a father, and in all the endearing relations of life he was everything the man of worth should be. In short, no man lived more respected or died more regretted than Dr. Covell."

He married Sarah Sterling, daughter of Gen. Wm. Ross, May 7, 1817, born August 25, 1793, died July 9, 1864. Children: Miss Eliza Ross Covell; Martha L. Catlin, born October 11, 1819, died 1871; Mary Bowman, wife of Dr. Wey; Edward M. Covell, attorney-at-law, born Jan. 8, 1822, died Sept. 5, 1864.

DR. MASON CRARY.

Dr. Mason Crary was born in Stonington, Conn., November 15, 1779, of Scotch descent, the family coming over to Connecticut in 1644. His father moved from there to Albany County, New York, in 1784. He studied medicine in Albany. He came to Luzerne County in 1804, and was

married to Desire Beach, one writer says daughter, Steuben Jenkins says sister of Nathan Beach, Esq., of Beach Grove, Salem Township, in 1806. They had these children:

Darwin, who studied medicine and settled in Hazleton.
N. Beach, who went to Ohio.
Mason, who settled in Shickshinny.
Helen, unmarried, and one other.

Soon after his marriage, in 1806, he located in Berwick and practiced there until about 1814, when he removed to Wilkes-Barré, residing at the corner of South Main and Northampton Streets, in what is known as the Perry house, one of the first brick houses in Wilkes-Barré. He thus announced himself in the *Literary Visiter (Sic)* of July 22, 1714, then published by Steuben Butler:

"Dr. Crary will attend to the practice of Physic and Surgery in Wilkesbarre and the adjacent town; having had an opportunity of a regular study under the direction of eminent physicians, and having since had an extensive and successful practice for a number of years in city and country, he flatters himself that by assiduous attention, he may merit public approbation."

Here he manufactured for general sale, "Dr. Crary's Anti-Bilious Family Pills."

There was no machinery in those day for working the pills into shape, and the doctor employed the boys of the neighborhood to pinch off from the mass a portion of proper size to roll into a pill, which they did between their fingers and thumb. The pills were said to have been of calomel, jalap and rhubarb.

The doctor was an advertiser and there is little in the Wilkes-Barré local papers during his stay that is of greater interest than his curious advertisements. Here is one:

"Dr. Crary informs the public that he has removed his family to the house lately occupied by Judge Gibson in Wilkesbarre, and has just received a fresh supply of genuine drugs and medicines. Crary's Antiseptic Family Physic

in Pills, will be sold by the dozen or single boxes; great allowance by the dozen and the money returned at any time if the Pills are not damaged. Storekeepers will find it to their advantage to keep a supply of the above cheap and safe Family Physic. He is not ambitious of being called a half price Physician, yet he disapproves of raising wages in consequence of ardent spirits being a little higher; he prefers taking a little less stimulus and using more industry; his charges shall be as low as any regular bred practitioner, always favoring the industrious and virtuous poor, and discharge his duty without prejudice or partiality, either religious or political. He will not, under any pretence, call to see other physicians' patients and endeavor to prejudice them against their physician. He gives advice, either written or verbal, gratis, at his shop. Wilkes-Barré, July 1, 1814."

He resided in Wilkes-Barré until 1824, his practice extending for miles up and down the Susquehanna and becoming so arduous as to require an assistant, in the person of Dr. Lathan Jones, q. v., then a young man starting in the practice of medicine. In 1824 he sold out to Dr. Jones and returned to Salem Township, where he continued in his professional duties to within about ten years of his death, which occurred in 1855, at the age of 75 years. He was a physician of marked success, his ability being not limited to practice alone, but reaching out to the writing on medical subjects. In fevers his success was considered almost marvelous. Dr. A. B. Longshore of Hazleton, is a nephew.

His mother was a Mason, hence his Christian name. She was a lineal descendant of Capt. John Mason, a noted Indian fighter in the early days, who was originally of Dorchester, Mass., then of Windsor, of Saybrook and of Norwich, 1659. John was four years representative, eighteen years Assistant, eight years Department Governor and then Major General, but his reputation as Captain won in the Pequot War, made that title so honorable that he was always called the Great Captain in preference to any of his subsequent official titles.

DR. CHARLES FRANCIS JOSEPH CHRISTEL.

Charles Francis Joseph Christel was born in Munich, Bavaria, February 12, 1776, son of Philip and Cecelia (Roth) Christel, and, immigrating to America when a young man, settled in the township of Salem, Luzerne County, Pennsylvania, in 1797 or 1798. Having studied medicine he removed about 1800 or 1801 to the adjoining township of Huntington, and became the second resident physician there —the first being Dr. Charles E. Gaylord. Doctor Christel's home in Huntington was at the present village of Harveyville.

Doctor Christel practiced his profession in Huntington and neighboring townships until about 1812 or 1813, when he removed to the Township of Hanover in the Valley of Wyoming, and entered into practice there. (This was at Buttonwood, a little south of Wilkes-Barré.)

In 1822 he also began to keep an inn in Hanover, and he was thus employed—as innkeeper and physician—until 1825, when he removed to the borough of Wilkes-Barré. Here, until his death, he owned and ran what was long known as the "Wyoming Hotel"—which stood on the west side of South Main Street, where the present "Christel Block" was erected in 1882.

Doctor Christel was married in 1810 to Elizabeth Stookey, born March 31, 1788; died August 10, 1856, daughter of Benjamin and Martha (Irwin) Stookey of Salem Township. He died at Wilkes-Barré February 21, 1838.

Dr. Christel's daughter Lucinda was the wife of Henry Cady, who for a number of years, until 1831, was one of the principal merchants in Wilkes-Barré. His store was on South Main Street near Northampton, where the Cady building now stands. Another daughter, wife of Augustus C. Laning, died in 1875. (Harvey book, page 814.)

DR. SHADRACH DARBEE.

Under date of November 5, 1777, Wm. Darbee, of Canterbury, Windham Co., Conn., deeds to his son, Dr. Shadrach Darbee of Westmoreland, one-half right in Susquehanna purchase. No other information.

DR. VIRGIL DIBOLL.

Dr. Virgil Diboll came from Colchester, Conn., and after a stay in Cherry Ridge, Wayne County, where he married, he settled in upper Kingston, now Wyoming. He married Philena, daughter of Dr. Lewis Collins, and sister of Judge Oristus Collins of Wilkes-Barré. He removed from Wyoming about 1829 and located at Northmoreland, present Wyoming County, where he died. In a reminiscent article in the Wilkes-Barré *Record,* March 23, 1901, Samuel H. Lynch recalls that there was a boarding school at Northmoreland, Wyoming County, to which boys were frequently sent from Wilkes-Barré. He says Dr. Diboll led the singing in the Presbyterian Church, assisted by his wife and daughter, Arethusa. The doctor would pitch the key on his tuning fork, and starting the tune, he would call to his daughter, "Strike in, Thusa," when the music went off in fine style. Steuben Jenkins says that Dr. Diboll was a great stammerer and afforded much amusement to the children when aiding the tuning fork with his own local effort.

As illustrating the varying forms of spelling a name, Steuben Jenkins furnished me the following from the Colchester records, which may have some genealogical value:

Ebenezer Dibel's daughter Elizabeth was born August 8, 1701.

Mary, ye wife of Ebenezer Dibell, died Sept. 21, 1703.

Ebenezer Dibell and Ann Horton were married August 29, 1706. Ann born 27 June, 1708.

Ann, the wife of Ebenezer Dibell, dyed the 22 July, 1708.

Ebenezer Dibell and Mary Lewess were married December 30, 1708.

Mary, wife of Ebenezer Dibble, died 5 March, 1736.

George Saxton and Elizabeth Dible married March 22, 1716.

Joseph Pepoon and Mary Dibell married Decr ye 12th, 1717.

In another place the name is spelled Dibbel.

REV. DAVIS DIMOCK.

"At the opening of the century," says Blackman's History of Susquehanna County, "there was living in Exeter, Davis Dimock, born in Connecticut in 1776, his father, David Dimock, a lieutenant in the Continental Army. In 1790 the family had followed the tide of emigration from Connecticut and gone to Wyoming, settling in Wilkes-Barré. In 1801, while carrying on the business of farming and distilling ardent spirits, he was converted, united with the Exeter Baptist Church, receiving baptism from Elder Jacob Drake, the pioneer Baptist minister of the Valley. Two years later he was ordained to the ministry and went from settlement to settlement through the forest preaching the gospel. He had studied medicine in his earlier years and his medical services were frequently called into action. Finding it an aid rather than a detriment to his gospel ministry, he continued more or less to practice medicine during subsequent life. He died in Montrose in 1858, at the age of 82 years."

His wife was Elizabeth, daughter of Benjamin Jenkins, who died from cruelties inflicted on him by the Pennamites in 1787. He was a brother of Col. John Jenkins, and a son of Judge John Jenkins. Benjamin Jenkins' widow (whose maiden name was Affa Baldwin) married John Harding, whose brothers were slain by the advance guard of the Indians, who were approaching to destroy the settlement in 1778. Mrs. Dimock died in 1853, aged 72 years.

In his address (1892) on The Fathers of the Wyoming Baptist Association, Hon. Theo. Hart said:

"Among them many who were converted under the preaching of Elder Jacob Drake, as he traveled over the extensive county, covering what are now Luzerne, Lackawanna, Susquehanna, Wyoming and Bradford Counties, were Davis Dimock, Joel Rogers (who was the ancestor of Dr. Joel J. Rogers) and several others who joined him in the work of the ministry. These itinerants traveled and preached on the same plan pursued by Elder Drake upon his old field on the Hudson River, and their converts were all enrolled as members of the Exeter Church, which had been organized in 1792, but organized in the several localities as branches, with some of the powers of independent bodies. Davis Dimock was ordained at the yearly meeting in 1803. Upon Elder Drake's death in 1806, Davis Dimock became the recognizer head of the Baptists upon this extensive field, and succeeded Elder Drake in the charge of the Exeter Church. The mantle of this remarkable man had fallen on one worthy to wear it, and the work among the scattered branches prospered in his hands. He was a very successful preacher, naturally well endowed, and his spiritual gifts gave him power with God and men. When approaching age compelled him to give up the arduous labor in which he had been engaged for over 40 years, it seemed that his place would never be filled. He withdrew from active pastoral work in 1846, and spent the closing days of his life with his daughter, Mrs. Lydia C. Searle, in Montrose."

DR. JOSEPH DAVIS.

Dr. Joseph Davis located in Wyoming Valley, according to family records, in 1787. He was born July 19, 1732, at New Haven, Conn., and came here from Oxford, in that State. He died at Spring Brook in July 1830, having reached the advanced age of 98 years. Hollister says he died

at Slocum Hollow, but this is an error. His wife was Obedience Sperry and they had two sons and five daughters:

Joseph, unmarried.
John, married and lived in Wilkes-Barré.
Sarah, married Ebenezer Slocum.
Lovica, married an Ogden.
Lavina, married Hosea Phillips.
Betsey, married Benjamin Knapp.
Hulda, married a Booth.

In a note to the author a granddaughter, Mrs. Sarah S. Gardner of Dalton, Pa., says: "I do not know whether all his children were born in Connecticut or not, but my grandmother, Sarah Davis, was sixteen years old when they came to Pennsylvania. Dr. Davis practiced medicine in Wilkes-Barré. Dr. B. H. Throop, in his book says, Dr. Davis was the first doctor in Slocum Hollow, but that is a mistake, I am sure, as I have heard my mother tell of grandmother going to Wilkes-Barré to be treated by her father, as there was no physician nearer Slocum Hollow in 1800, than Dr. Giddings at Pittston.

"I came to Slocum Hollow with my parents, Elisha Hitchcock and Ruth Slocum, his wife, July 5, 1826, a girl of nine years, and I remember very distinctly that Dr. Davis was then living with his daughter, Betsey, who married Benjamin Knapp. They lived at the mouth of the Spring Brook. He died at Mr. Knapp's and I remember very distinctly attending his funeral services at the house, and that his remains were carried to Wilkes-Barré for interment."

According to Hollister, his son-in-law Ebenezer Slocum, and his brother, Benjamin Slocum, purchased land largely at Slocum Hollow, present Scranton, and for 28 years made iron there, as Dr. William Hooker Smith had done at Old Forge. Frances Slocum who was carried into captivity in 1778 was their sister.

The statement, somewhere published, that he was a grad-

uate of Yale College, I think is an error, as his name is not in the list of alumni. He practiced medicine in Wilkes-Barré until 1813, when he removed up the Lackawanna River to Spring Brook. He was a man of fertile resources, as shown by a catheter in the possession of Dr. B. H. Throop, made from the leg bone of some wild bird. His manners are described as eccentric and his appearance as uncouth, but he controlled the surgical practice for a large territory. He was a hoarder of money and after his death quite a sum of silver coin was found secreted.

In the collection of the Wyoming Historical Society (No. 2134) is an ancient compass which is described in the place-book as having been used by Dr. Joseph Davis and others in running the lines of the Seventeen Townships under the Susquehanna Company, prior to 1778. It was presented to the Society in 1873, by his granddaughter, Elizabeth Knapp.

DR. HENRY GREEN.

In 1817 Dr. Henry Green was receiving his mail through the Wilkes-Barré post office. He was located, and had been for some years, at Factoryville. Had a son Norvin and grandson, Douglas N. Green of Scranton.

DR. CHARLES E. GAYLORD.

"Dr. Charles E. Gaylord informs the inhabitants of Kingston and vicinity that he intends removing to Kingston soon to practice his profession as a Physician and Surgeon. He has long been in practice in Huntington Township."

This was the announcement in the Wilkes-Barré *Gleaner* for December 6, 1816, of a gentleman whose medical practice covered nearly three-quarters of a century. He was a native of Wyoming Valley. Mrs. Hartman, in her sketches of Huntington Valley, says that he was probably the first physician who located in Huntington Valley as a permanent settler. He located there as soon as the people felt free

from Indian molestation, which, Mrs. Hartman says, was soon after the British market for scalps closed. The following is from the Harvey Book, page 349:

"Charles Eleazer Gaylord, the only child of Charles and Hannah (Andrus) Gaylord, was born in Bristol, Hartford County, Conn., March 21, 1770. He accompanied his parents in 1773 to Plymouth, Pennsylvania, whence he returned to Connecticut with his mother after the death of his father. When his mother remarried, and removed a second time to Plymouth, he went with her. Later he was sent to Connecticut to be educated. His brother Asher perished in the massacre.

"Having received a good common school education, he studied medicine under the direction of Dr. James Henderson, of Connecticut, and then returning to Pennsylvania, settled in Huntington Township (at the present village of Huntington Mills) about the year 1792. He was the first settled physician in this township, and he continued in the practice of his profession there for thirty years or more. In 1792 and during several succeeding years he was Constable of the township, and for a number of years, about 1812, Justice of the Peace.

"On September 22, 1795, he was married to Esther (born 1777), daughter of William and Margery (Kellogg) Smith, of Wyoming Valley. At the time of the massacre Margery Smith, then a widow, escaped with her infant daughter down the river in a canoe. Returning to the Valley some months later she subsequently was married, as his second wife, to the well-known Dr. William Hooker Smith, of Wyoming.

"Doctor Gaylord and his wife removed in 1822 from Huntington to the village of Plymouth, where he died February 4, 1839, and his widow died October 8, 1854. Colonel Wright, in his 'Historical Sketches of Plymouth,' says of Dr. Gaylord: 'He had an excellent reputation as a physician

and surgeon. He was a man very highly respected for his social virtues.' He was considered one of the ablest physicians in the territory of old Westmoreland.

"The only child of Dr. Gaylord was James Henderson Gaylord, born in Huntington Township October 9, 1796."

DR. NATHANIEL GIDDINGS.

Dr. Nathaniel Giddings is said to have settled in Wyoming Valley in 1789, when a lad of 18. According to the "Giddings Family" he was born at Norwich, Conn., September 30, 1761 (but this should be 1771). It has been stated that he graduated from the medical department of Yale College, in 1789, but this cannot be true as Yale had no graduates in medicine until 1814. He located first in Plymouth Township, but after a year or two removed to Pittston, where he practiced medicine until his death, February 10, 1851, at the age of 80. He at Pittston Ferry, and Dr. Robinson at Providence, were the only physicians between Wilkes-Barré and Carbondale.

He was married November 30, 1793, to Lucinda Silsbee, who died November 27, 1815. Children, all born at Pittston:

Louisa, married ———— Decker.
Sarah.
Nancy.
Dr. Nathaniel C., married Mary C. Leach.
Myra, married Stephen Reynolds and Elisha Blackman.
James L., a physician.

At the Baptist Centennial, in 1876, a paper on Dr. Giddings was read by Elder Wm. K. Mott, in the course of which he said:

"In 1792 Dr. Giddings came to Pittston from Norwich, Conn. He was then 21 years old, married, and was the first physician in the settlement. The doctor was called to part with his excellent wife by the hand of death many

years before I knew the family, but the cloth on that hospitable table was spread by another whose worth it was my privilege to estimate by personal acquaintance for many years. I knew Dr. Giddings for a period of eighteen years, and spent more hours with him in pleasant and profitable conversation than with any other man now living or dead during the same time. He was a specimen of the complete New England gentleman in his day. His social powers were of the very first order. It was a charm to listen to him. His piety was warm and deep, but not spasmodic. I never knew him gloomy or discouraged in his views of matters, however depressing they might seem. In his profession he stood unrivaled at the time of his advent in this Valley, and for many subsequent years. He had the largest and best selected private library, at the period of my first acquaintance, that I had met with, and he knew what it contained. He manifested a deep interest in all the great questions that agitated the world. He was prompt and punctual in his attendance on all meetings of the Church. Unlike some physicians, he found time to look after the welfare of his patients without losing his place in the house of God. The doctor loved singing, knew how to sing, and did sing to the last. For nearly seventy years he led the singing in the church. Age, for a portion of the time, impaired his voice, but the heavenly radience that beamed upon his face, indicating not merely worship but ecstacy, more than compensated for the tremulousness of his voice, in estimating the power of this service for the edification of the church. He also served the church as deacon for many years with great acceptance. Dr. Giddings continued to reside in Pittston until his death in 1851, at the age of eighty. He left a bequest to aid in the erection of the meeting house long afterward built, from which over $3,200 was realized."

Near the Giddings homestead, in Pittston, which was demolished in 1898, was erected the first public school in Pittston, which was taught by John Jenkins. This old school

remained until 1810, when Dr. Giddings supervised the construction of another on the same site.

Dr. Giddings was a Baptist in religious faith and was immersed at Pittston Ferry by Elder William Bishop. He was a man of liberal culture, sound judgment, charitable, candid, a reliable adviser and a consistent Christian. He was one of the most devoted lay workers in the Baptist Church at Pittston. This church was established in 1776, but owing to the Revolutionary War its growth was slow and uncertain. In 1787 it had 32 members. Under James Finn, its first pastor, 134 members were reported in 1792. Dr. Giddings appears on the church records as early as 1802, and probably earlier. (Jubilee sermon by Rev. Geo. Frear, D. D., 1892.)

The Baptists were represented with the first party of Connecticut pioneers who undertook to settle the Wyoming Valley in 1762-3. Elder William Marsh accompanied this party in its second visit, as its preacher and school teacher. They located at the mouth of Mill Creek, near Wilkes-Barré, and in 1763 the settlement was utterly destroyed by a force of hostile Indians. Elder Marsh was among the slain. The survivors fled back to Connecticut and no further attempt was made to settle Wyoming Valley until six years later. Baptist missionaries made their appearance in 1773 and later, and in 1776 there was constituted at Pittston a Baptist Church for Westmoreland, a territory comprising the greater portion of northeastern Pennsylvania. There were 26 members, about half having letters of dismissal from the church at Warwick (then Goshen), Orange County, N. Y.

The grandfather of Dr. Giddings was Captain Nathaniel Giddings, a leading man in Norwich, Conn. Captain Giddings, married, June 12, 1728, Mary, daughter of Captain Williams, of England, and their daughter, Mary, born November 28, 1730, became the wife of Rev. Jacob Johnson of Wallingford and Groton, Conn., subsequently the first settled pastor in Wilkes-Barré.

DR. ORLO HAMLIN.

The first physician to practice in Providence was Dr. Orlo Hamlin, who with his young wife, settled a mile north of Allsworth in 1813, but as Dr. Hollister says "this locality, fresh with ozone from the forest, offered so little compensation to a profession without need of appreciation among the hardy woodmen, that the doctor removed the next year to Salem, Wayne County."

DR. SAMUEL JAMESON.

Dr. Samuel Jameson began practicing medicine in Hanover Township in 1799. He was the son of John Jameson, who came to Wyoming from Voluntown, Conn., in 1773. His father was in the Wyoming battle and escaped, but was killed by the Indians four years later, near what is now the Hanover Green burying ground, the spot being marked by a stone erected by his descendant, the late Stewart Pearce, one of the historians of Luzerne County. When the family fled down the Susquehanna River after the Wyoming battle, he, an infant of ten months, was carried away in the arms of his mother. They afterwards returned to Wyoming Valley. The genealogy of the Jamesons is given in the Harvey Book.

Dr. Jameson was born in Hanover Township, August 29, 1777, and died there March 27, 1843. On the 30th of September, 1800, he was united in marriage to Hannah, daughter of Jonathan Hunlock, the knot being tied by Squire James Campbell. The doctor had three daughters, one of whom married Anderson Dana. (Harvey Book, 565.) He was a Mason, an assessor in Hanover Township, and a justice of the peace. In his later life he was actively identified with the Presbyterian Church of Hanover. Harvey describes him as a man of amiable character and of sound judgment and integrity.

He appears (Plumb, 250) on the 1799 assessment of Han-

over, as having 400 acres of improved land, valued at $1500, a house, a yoke of oxen, a cow, a log house, a frame house and a frame barn. He also appears on assessment of 1830 (Plumb, 282). On page 437, of Plumb, his genealogy is given. His sister, Hannah, was the mother of Stewart Pearce, author of "Annals of Luzerne County," whose family monument at Hanover Green, refers thus to Dr. Jameson:

"Samuel Jameson, born in Hanover August 29, 1777, died March 27, 1843, married Hannah Hunlock, born July 11, 1779, died March 6, 1851. Children: Maria, born June 14, 1801, died December 22, 1827; Eliza, born April 22, 1803, died June 8, 1818; Ann, born January 1, 1806, died May 27, 1832, married Anderson Dana. Children: Maria E. Dana, born March 6, 1828, died December 19, 1849; Augusta P. J. Dana, born May 31, 1830, died October 26, 1848. Family extinct." (Egle's Notes and Queries 2d S. ii. 312.)

He lived about one mile north of Nanticoke, on the River Road, since known as the Dr. Harry Hakes' place. Squire Jameson was one of the best and most favorably known of the early physicians, and his was the place where the over sanguine farmers were bled by the same hand that pulled the teeth and ears of our bashful grandmothers. He was a farmer and justice of the peace.

DR. LATHAN JONES.

Dr. Lathan Jones was an early practitioner of medicine in Wilkes-Barré, though how early, I have not been able to learn. He died January 11, 1867, aged 71 years. His children were James (who was identified with the Wyoming National Bank), William L., Alvin, Caroline (who married Edward Walter), Harriet (who married Thomas Wilson), and Annie, who was unmarried. He practiced medicine for many years on North Main Street, near Union, adjoining the residence of Dr. C. S. Beck, as early as 1824. On

the occasion of his death the *Record of the Times* said of him

"For many years Dr. Jones was one of our most respected citizens; a congenial companion, an excellent physician, quiet and unobtrusive, a warm advocate of the temperance cause; he pursued the even tenor of his way and we have never heard he had an enemy in the world. For the past few years he has resided in Abington, but died in Wilkes-Barré while on a visit to his son, James. His was a green old age, but time touched him lightly and his step still retained much of the elasticity of youth."

DR. JOHN McMILLAN.

There was a Dr. John McMillan, a graduate of the University of Dublin, who settled in Exeter Township about the time of the massacre, living on lands belonging to Lieut. John Jenkins.

DR. MORELAND.

About 1814 or 1815 a Dr. Moreland practiced a couple of years in Plymouth and was succeeded in 1816 by Dr. Ebenezer Chamberlain.

DR. ANNA MORSE.

Col. Wright, in his history of Plymouth, says that the first physician residing in Plymouth, so far as he knew, was Dr. Anna Morse, a stout, old lady of 200 pounds, of whom he gives some entertaining reminiscences. Col. Wright says she invariably prescribed for all disorders a hemlock sweat and a dose of calomel and jalap. She also kept a licensed tavern.

DR. GEORGE MINARD.

There was a Dr. George Minard.

DR. REUBEN MONTROSS.

In 1812 there settled in Exeter an eccentric individual, Reuben Montross, whose practice is described as something on the faith cure order. He was reputed to be the seventh son of a seventh son, no daughters intervening to break the magic chain. Later he removed to Northmoreland and traveled through Wyoming County and the region above. Although an uneducated man he had a great reputation for setting broken bones and dislocated joints, and for curing chronic sores. He consequently exerted upon the scattered and superstitious inhabitants of the country a power long felt, and they credited him with almost miraculous gifts. He was thought to have the power of "taking the fire out" of burns.

Here is a reminiscence of an old settler, which shows how he was looked upon by the country folk:

"Yes, I remember Dr. Montross. He went up to Nehemiah Ide's; the old lady had been bedridden for seven years, but before he left her he ordered her to go down and bring him cider from the cellar, and she did. Yes, she was well for years after. A man had a swollen face from the toothache, and the doctor put his finger against his cheek and the swelling left and went into his fingers. He had great power and I do not understand it. He did not give much medicine."

Dr. Hollister says he was born in Duchess County, N. Y., in 1770, and died in Wyoming County in 1857. His second wife was the mother of Angelo Jackson, father of Ernest V. Jackson, of the Luzerne Bar.

DR. THOMAS WRIGHT MINER.

Dr. Thomas Wright Miner, born in Wilkes-Barré, August 23rd, 1803, was the eldest son and second child of Asher and Mary (Wright) Miner. He was a nephew of Charles Miner, the historian of Wyoming, and a cousin of William P.

Miner, the founder of the Wilkes-Barré *Record*. He accompanied his parents to Doylestown, where he resided until 1825, when, having been graduated from the Medical School of the University of Pennsylvania, he returned to Wilkes-Barré to practice medicine, and resided here until his death. He was a man of marked genius. He was not only a skillful and successful physician and man of business, but he was a pleasing writer and a graceful speaker. He wrote ably, and his ideas were always clothed in beautiful language. When the Wyoming Artillerists of Wilkes-Barré, left for the Mexican War, a public meeting was held in the M. E. Church, the soldier boys being presented with Testaments. Dr. Miner made the address. He gave some attention to journalism and edited the *Wyoming Republican* at Wilkes-Barré from 1837 to 1839. A lecture, entitled "Our Country: its Dangers and its Destiny," was a masterly production. For many years he was active in politics—especially during the anti-Masonic era—and in 1832 was a candidate for Congress, but was defeated by Andrew Beaumont. He was an anti-Mason. He married Lucy E. Bowman, born October 12th, 1806; died May 15th, 1842, daughter of Ebenezer and Esther Ann (Watson) Bowman of Wilkes-Barré. Doctor Miner died at Wlikes-Barré October 21st, 1858, and was survived by his son, Dr. E. Bowman Miner, who was a practicing physician in Wilkes-Barré. (O. J. Harvey's History of Lodge 61, p. 477.)

DR. ISAAC PICKERING.

Dr. Isaac Pickering came to Wilkes-Barré from Massachusetts, and about 1820 married Nancy, daughter of Judge Jesse Fell. He removed from Wilkes-Barré to Catawissa where he practiced medicine for a time, and then moved up to Pittston and boarded with Samuel Fell, on what is known as the Richard Brown place, just below Marcy's. From there he removed to Huntington, where he continued to practice, boarding for a time with Esquire Dodson. From

there he removed to Michigan, where he and his wife died, leaving two children, Elizabeth and Isaac. He was reputed to be a graduate of a medical college, and quite skillful. He was a man of large size, weighing 190 to 200 pounds, with black, curly hair, and of an intelligent, imposing appearance. This information was derived from Steuben Jenkins.

DR. WILLIAM R. N. NICHOLS.

Dr. William R. N. Nichols was practising at Abington until his death in 1824.

DR. ELEAZER PARKER.

Dr. Eleazer Parker migrated from Connecticut to Great Bend, Susquehanna County, in August, 1807, where he practiced two or three years. He married a daughter of Jonathan Dimon, and in the year 1810 he moved to Kingston, Luzerne County. He was a teetotaler and never prescribed alcohol in a practice of 60 years. In his old age he returned to Susquehanna County where he died about 1877, at the age of about 95 years. It is interesting to note that he had an extra finger on each hand, and, as I am informed by Dr. L. L. Rogers, this peculiarity passed to his daughter, Mrs. Holgate of Kingston, and through her to her children. In 1808 he was appointed the first postmaster in Susquehanna County. He introduced vaccination into Susquehanna County. His practice extended over a circuit of 50 miles. In 1808 he successfully performed tracheotomy and removed a watermelon seed from the windpipe of a two-year old child. During the war of 1812 he was examining surgeon of the 35th Pennsylvania Regiment. (Blackman's History of Susquehanna County, page 86.)

DR. ROBERT H. ROSE.

Not everybody knows that Montrose was founded by a physician. An interesting old volume in the Osterhout Library, is entitled "Letters From the British Settlement in

Pennsylvania," dated 1819. The author is "C. B. Johnson, M. D.," though this is believed to be only a *non de plume.* The book bears both a Philadelphia and a London imprint and was intended to induce English mechanics and others to settle on the lands of Dr. Robert H. Rose, in Susquehanna County, he having purchased 100,000 acres along the New York line. Montrose (or Mont Rose) perpetuates his name. The book resulted in attracting quite a number of English and Scotch people, but the British Settlement met with many discouragements incident to frontier life, and did not prove to be of very long duration, though many of the present population are descendents of these hardy people. The volume is accompanied by two steel maps, one showing such portion of the United States as was then opened for settlement, extending but little beyond the Mississippi River. The other map shows such portions of Pennsylvania, New York and New Jersey as were contiguous to the British Settlement, indicating also the turnpikes, one leading eastward 110 miles to Newburg on the Hudson, where steamboats were running from New York, a second leading to New York, 130 miles, and a third to Philadelphia by way of Wilkes-Barré. The country was painted as a paradise, and the map predicted great improvements in the way of stage roads which never came. A "proposed canal" connected the Lehigh at about what is now Penn Haven Junction with the Susquehanna near Nescopeck Creek, and another connected the headwaters of the Schuylkill at about Nesquehoning, with the Susquehanna at Nescopeck—two canals from Carbon County to the Susquehanna over the roughest of mountains. Still another "proposed canal" connected the Lehigh at a point near Stoddardsville with the Susquehanna at Wilkes-Barré.

Dr. Rose was a pioneer of whom Susquehanna County may well be proud. Though his schemes were visionary in some particulars he was a generation or two ahead of his

time, and it was left for others to profit by his early labors. He lived in splendor in the northern wilderness and his scheme was so promising as to elicit favorable mention from Hon. Charles Miner in his newspaper. Many interesting particulars of Dr. Rose and his British Settlement, together with an engraving of his place in the wilderness, are given in Miss Blackman's History of Susquehanna County.

DR. SILAS B. ROBINSON.

Dr. Silas B. Robinson settled in Providence, Pa., in 1822 or 1823, where he practiced his profession nearly 40 years. So long had he lived in the township and so well was he known for his blunt manners, blameless life and kind heart, even with all his pardonable eccentricities, that his presence was welcome everywhere and his sudden death in 1860 was widely lamented. He was born February 25, 1795, in Hartwick, N. Y. Dr. Throop in "Half Century in Scranton" says he received his diploma from the Otsego Medical Society in 1821. He had a large practice in Lackawanna Valley and neighboring counties. Dr. Hollister said of him:

"During his long practice he always carried his own medicine, which he purchased in Wilkes-Barré, at the nearest drug store, 19 miles away. He always went on foot, no matter how great the distance or urgent the case. A colt once ran away with him and never afterwards would he ride in a wagon. He always carried his rusty turnkeys to twist out teeth. He had two peculiarities, one was to always read the Bible at the bedside of his patient, and the other was his great habit of profanity. He would rarely utter a sentence without an oath. He had no competitor in the field, while Dr. Nathaniel Giddings, at Pittston Ferry, Dr. Andrew Bedford, of Abington, and Dr. Thomas Sweet of Carbondale were his nearest colleagues."

DR. JOHN SMITH.

At a meeting of the Luzerne County Medical Society, held October 21, 1896, Dr. Olin F. Harvey presented a portrait of Dr. John Smith, one of the early members of the society. He subsequently read a biographical sketch, from which the following extracts are made:

"Dr. John Smith of Wilkes-Barré, was a native of Kingston, Luzerne County, where he was born November 4, 1789, the son of Captain Benjamin and Welthea Ann (York) Smith. Captain Benjamin was son of Captain Timothy, who was son of John. The last named was an original proprietor in the Susquehanna purchase, and was a justice of the peace in Wyoming in 1772.

"Through his mother Dr. John Smith was descended from Lieutenant Thomas Miner, and also from James York, both natives of England, but early settlers in Stonington, Conn."

Miner says in his "History of Wyoming," that Captain Timothy Smith, the paternal grandfather of Doctor John, "was a leading man in the Susquehanna Company, at their meetings in Hartford, before settlement was made in Wyoming. Choosing Kingston for his residence, his name is recorded as one of the '40,' or earliest settlers. * * * Captain Benjamin, father of Dr. John, was a man of singular benevolence, and an admirable nurse of the sick. When, in 1815, the typhus fever prevailed throughout the country, he threw himself in the midst of it, took the disease and died." The "typhus" fever mentioned was denominated by Dr. Edward Covell of Wilkes-Barré, in 1819, as *pulmonic* fever, and was described as having been "epidemic over the country generally" in the winter of 1815-16. There were eleven deaths due to it in Wilkes-Barré—the population of which, at that time, was only seven hundred.

Captain Benjamin Smith was also *Doctor* Benjamin, for he was not only "an admirable nurse of the sick," as Miner

has recorded, but was a practicing physician for a number of years in Kingston. He died there January 19, 1816, aged 57 years.

In August, 1815, Dr. John Smith began the practice of medicine in New Troy (now the Borough of Wyoming). For twenty-one years thereafter he made New Troy his home, although his practice was not, by any means, confined to that locality. In 1836 he removed to Wilkes-Barre, and leased his home in New Troy to Dr. George Wurts, who succeeded to a share of his practice on the west side of the river.

When Dr. Smith located in Wilkes-Barré (1836) the population of the borough was only fifteen hundred, and there were already in practice here at least three active, intelligent physicians—E. L. Boyd, Thomas W. Miner, and Lathan Jones. There may have been others, there certainly were others residing in Plymouth, Hanover and Kingston, who shared, with the Wilkes-Barré doctors, the practice throughout the valley.

Dr. Smith worked diligently in his profession, and for years—even up to within a few years of his death—his field of practice extended from Pittston to Nanticoke. From the outset he had his share of the general practice in the valley, and, owing to his kindheartedness and easy-going ways, had *more* than his share of non-paying patients. He was always particularly kind and attentive to those whom he knew to be poor and in straitened circumstances, and during the Civil War it was his rule to make no charge for professional services which he rendered to the families of men who were enlisted and serving in the union army, unless they were well able to pay for the services.

In 1819 Doctor Smith was appointed, by Governor Findlay, a justice of the peace in and for Kingston Township, and for several years he performed the duties of the office. During the years of his middle-age he devoted considerable

attention to politics. In 1828 the anti-Masonic political party sprung into existence. It flourished in Pennsylvania until 1838, during that period many of the prominent citizens of Luzerne County allied themselves with the party, and became active workers and leaders in it, among them being Chester Butler, Oristus Collins, Col. H. B. Wright, Sharp D. Lewis, Dr. T. W. Miner and Dr. John Smith. The party was at its zenith in this State in 1835, when Joseph Ritner, their candidate, was elected Governor. He appointed Dr Smith Prothonotary and Clerk of the Courts.

Dr. Smith held these offices until February, 1839. Upon the adoption of the new constitution in 1838, the office of prothonotary became elective, and in 1840 Dr. Smith was a candidate for it, but was defeated by Dr. Andrew Bedford of Abington.

For several years Dr. Smith was a member of the Borough Council of Wilkes-Barré, and was president of it from May, 1850, to May, 1851. He was also for a time president of the Board of School Directors.

During his residence in Wilkes-Barré quite a number of essays on various subjects were contributed by him to the local newspapers. During the last years of his life there was printed in *The Record of the Times* of Wilkes-Barré, a series of articles written by him, which was denominated by the editor as "chapters of exceedingly interesting history."

Doctor Smith was married in 1814 to Mehitable Jenkins of Kingston, a granddaughter of John Jenkins, Esq., an early settler in Wyoming, a justice of the peace for several years, a representative from Wyoming, or Westmoreland, to the Connecticut Assembly upon several occasions, and prominent in other ways in this locality for several years. John and Mehitable (Jenkins) Smith were the parents of five sons and five daughters. Mehitable (Jenkins) Smith was born March 18, 1796, and died July 6, 1862. Mrs. Gould P. Parrish was her daughter.

Doctor Smith having practiced his profession in Wilkes-Barre for nearly thirty-three years, died here August 24, 1869, in the eightieth year of his age, and his remains were interred in the old cemetery at Forty Fort.

DR. JOSEPH VON SICK.

The Wilkes-Barré Federalist, for November 2, 1810, mentions the presence of Dr. Joseph von Sick, and Dr. G. W. Trott speaks a good word for the new-comer. The doctor subsequent got to be treasurer of Luzerne County, and while in that office he re-issued county orders that had been redeemed and for which he had been credited. See Quarter Sessions Records of Luzerne County for indictment, 1815.

He had eleven children. The family left Wilkes-Barré about 1817, 1818 or 1819. Mention is made of him in the Historical Record, volume 3, page 96.

DR. WALLIS.

There was an early Dr. Wallis here for a time.

DR. BENJAMIN SMITH.

Dr. Benjamin Smith, also called Capt. Smith, practiced in Kingston. He died there January 19, 1816, aged 57 years. (See John Smith, his son.)

DR. SCHOTT.

There was a Dr. Schott practicing in Kingston soon after 1800. He was a son of Capt. John Paul Schott.

DR. ELISHA NOYES SILL.

Dr. Elisha Noyes Sill, born in Connecticut in 1761, came with his parents to Wyoming, enlisted in Capt. Durkee's company at the age of 15. Subsequently he returned to Connecticut and became a distinguished physician. (Miner, Appendix, page 50.)

DR. THOMAS SWEET.

There was a Dr. Thomas Sweet in Carbondale as early as 1823.

DR. GEORGE W. TROTT.

As early as 1810 Dr. George W. Trott was practicing medicine in Wilkes-Barré. In September of that year he married Lydia Chapman, a sister of Isaac A. Chapman, the first historian of Wyoming. Their daughter, Sarah Elizabeth, born June 21, 1810, died June 25, 1869, married George W. Woodward, Chief Justice of Pennsylvania.

Dr. Trott was a native of Norwich, Conn. He was licensed to practice in 1802 by the Connecticut Medical Society, certificate signed by James Potter, president, by Avery Downer and John O. Miner, committee for the county of New London.

He studied four years with Dr. Philander Tracy of Norwich, who gave him, under date of Noevmber 3, 1803, the following: "This may certify that Doct. Geo. W. Trott has resided with myself nearly 4 years as a student in physic, etc. His opportunity has been good, both as to theoretic improvement and observation in practice. I think he may safely be confided in as a young man of skill in his profession and of unexceptionable moral character."

In a biographical sketch by the late Judge E. L. Dana, it is stated:

"Dr. Trott was a skillful physician and had acquired a large practice; but in that early day, ere the mineral wealth of the valley was known, or its agricultural resources developed, amidst a people impoverished by the exhaustive struggle between Connecticut and Pennsylvania, from which they had recently emerged, he had acquired little more than a reputation, a practice and a long list of uncollectible accounts. His death occurred in 1815, when a daughter, then 5 years old, and her widowed mother were left dependent upon their

own exertions for support. Mrs. Trott, a lady of culture, then devoted herself to teaching. The daughter in 1832 married Geo. W. Woodward."

The following reminiscence of Lydia Chapman, when she was a young woman of 26, and eight years prior to her marriage to Mr. Trott, is taken from a local paper

"Our grandmothers were just as fond of finery as we are, if not fonder, for what Wilkes-Barré woman now would be so eager for a new bonnet as to spend two days and two nights on a stage trip over villainous mountain roads in search of a milliner. An enthusiastic young woman, whose account of such a trip is appended, was Lydia Chapman, sister of Isaac A. Chapman, one of the historians of Wyoming, and mother of the late Chief Justice George W. Woodward. She was 26 years of age at the time and it was not until eight years later that she married."

"An entertaining journal of a stage trip from Wilkes-Barré to Easton, made by her in 1802, states that,

She set out from Wilkes-Barré with Mr. and Mrs. A. Colt, on a frosty November morning before sunrise, a sip of hot sling at Ike's proving very acceptable. Stopped at Sock's at noon and proceeded in a pouring rain, finding shelter over night in an humble wayside abode. The next day they got an early start over the barren Pocono, had refreshments at Merwin's, brandy at Bushkirk's and put up for the night at Miller's at the Wind Gap. They reached Easton on the morning of the third day. Here she hunted up a milliner and bought a straw bonnet and did other shopping. Took tea with Mrs. Arndt, received calls from Dr. Covell and George Schotts, and breakfasted next morning with Mr. and Mrs. Dick, also taking dinner there and drinking several glasses of wine. Admired the beautiful home of Mr. Sitgraves. Only one church in town—a German one. The journal breaks off very abruptly, leaving the reader disappointed at its not being continued.

The charming writer of this quaint old diary has been at rest for many years. Not long ago I saw her tombstone and it reads thus

"Mrs. Lydia Trott
widow of
Dr. George W. Trott
born at Norwich Conn
Mar 16, 1776
died at Philadelphia.
Oct 6. 1857."

DR. ASA C. WHITNEY.

I was informed by Col. Charles Dorrance that Dr. Asa C. Whitney was a New England man and that he came from Bradford County to Wyoming Valley from 1810 to 1815. He followed Dr. Baldwin. He was a son of Elisha Whitney, who moved to Wyoming Valley from 1810 to 1816, when he removed to Wysox, Bradford County. Elisha was a native of Spencer, Mass., where he was born in 1747. He married Esther Clark of that place and they had ten children. Dr. Asa Whitney was a justice of the peace in the Wysox region in 1810. In 1820 he was elected Register of Wills and Recorder of Deeds in Luzerne County. His first wife was Betsey, daughter of Lieut. Col. George Dorrance, whom he married February 21, 1809. They had two sons and a daughter. His second wife was Susan, a daughter of Col. Edward Inman, and their daughter was Mrs. Angelo Jackson, mother of E. V. Jackson, Esq. His sister Elizabeth was the mother of Victor E. Piollet of Bradford County. Dr. Whitney lived in Kingston, where now stands the former residence of Samuel Hoyt, but sold to Dr. Atkins and bought the Sinton, later the McCarragher, property in Wilkes-Barré, at corner of Hazle Avenue and Park Avenue. He practiced there during the rest of his life, his death occurring in 1824, at the age of 39.

Dr. Whitney was regarded as one of the most skillful men in the Valley. A daring surgeon, with rough exterior, but competent and successful.

These epitaphs can be seen in Forty Fort Cemetery:

In memory of
Dr. Asa. C. Whitney,
Who departed this life
Dec. 10, 1824,
Aged 39 years.

In memory of
Elizabeth, wife of
Dr. Asa C. Whitney,
Who departed this life
April 20, 1820.
Aged 41 years.

[*Extracts from H. L. Fisher's "Olden Times."*]

When the ever-famous healing art was in its infancy,
It often happened on the score of sheer conveniency,
That the family doctor also doctored, family, horse and cow,
For doctors were much *rarer* then that the rarest of them now.

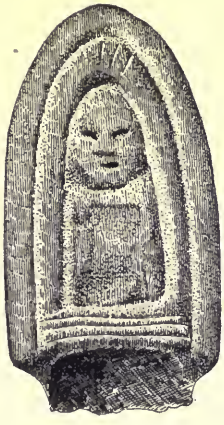
They always rode on horseback, and gen'rally the gallop,
With saddle-bags and pockets full of calomel and jalap,
And Epsom salts and senna too, and hellebore and borax,
And herbs and teas for stomach-aches, the bowels and the thorax;
And aloes for cathartics mild and ipecac-emetics,
Peruvian bark in Holland gin for gentle diuretics.

If the case was chills and fever, or of trouble in the head,
The first thing to relieve it was to have the patient bled;
And next to have him blistered, just for counter-irritation,
Then twenty grains of mercury for final salivation.

The blacksmith and the tailor and Saint Crispin's cobbling snob,
By turns each took his turn to do a little healing job;
To let, or check, or stop the blood, or break the spell of witch,
While each one had the *only* salve that would surely cure the itch.

There were hundreds of home-remedies for all kinds of complaints—
All better than the best faith-cure or the prayers of the saints;
If the children had the measels or the matter was in doubt,
They had to drink sheep-saffron tea to drive the rascals out.

And if a child was liver-grown, or seemed to have a spell,
Three times put through a horse-collar would always make it well;
The blooming youths who freckels had, went on the first of May,
And with the early virgin-dew they washed them all away.



IROQUOIAN PIPES.

BY PERMISSION OF THE ETHNOLOGICAL BUREAU—20 ANNUAL REPORT.

EARLY SMOKING PIPES OF THE NORTH AMERICAN ABORIGINES.

BY

ALFRED FRANKLIN BERLIN.

READ BEFORE THE WYOMING HISTORICAL AND GEOLOGICAL SOCIETY, APRIL 15, 1904.

The author wishes here to thank the following authors from whose writings he has often quoted. Professor William H. Holmes of the U. S. National Museum; the late Col. C. C. Jones of Augusta, Ga.; Dr. C. C. Abbott of Trenton, N. J.; Mr. David Boyle of Toronto, Canada; the Rev. W. M. Beauchamp of Baldwinsville, N. Y.; Gen. Gates P. Thruston of Nashville, Tenn., and the late Mr. Joseph D. McGuire of Ellicott City, Maryland.

As inveterate a smoker as his white successor to whom he taught the habit was the American Aborigine. The tobacco plant which he used most in the function of smoking, undoubtedly a long time before the advent of the European, was, we are told by reliable writers, indigenous to the North American Continent.

The first reference to the use of this plant, although not by name, was that reported to Columbus by two of his men while on his first voyage to the coast of Cuba. The Genoese mariner believed that he had landed on a part of the mainland of Asia. Assured of this he sent with two native guides two of his Spaniards, Rodrigo de Jerez of Agramonte, and a learned Jew named Luis de Torres, who could speak Chaldee, Hebrew and a little Arabic, one or other of which languages he thought must be known to the oriental potentate then ruling.

The ambassadors penetrated twelve leagues into the interior when they came to a village of fifty houses and about one thousand inhabitants. Finding no traces of the city

and court they expected to see, they returned to their ships. On the way back they saw several of the natives going about with firebrands in their hands, and certain dried herbs which they rolled up in a leaf, and, lighting one end, put the other in their mouths and continued inhaling and puffing out the smoke. A roll of this kind they called a "Tobacos," which name, changed to tobacco, has since been transferred to the weed.

An almost endless variety of barks, twigs, leaves and the roots of plants having narcotic properties were smoked by the American red people. Red sumac leaves and willow bark were used to almost as great an extent as was tobacco. A mixture of either with tobacco was called Kinnikinnick. Others of the above mentioned herbs often mixed, were at times smoked in preference to tobacco as a prerequisite to the introduction of some ceremonial dance or function. However, when smoking for the purpose of becoming stupified or intoxicated they used only tobacco.

With our red people, even as at the present time, there was no habit so universal as that of smoking. The narcotic influences of this plant gave a certain amount of solace to the smoker when in his home of relaxation and rest. Nor was he without his favorite pastime even when away on the chase or at war. The Indian believed that tobacco was of Divine origin, coming as a direct gift for his especial benefit from the Great Spirit, who Himself was addicted to the habit of smoking.

"The pipe therefore came to be regarded as a sacred object, and smoking partook of the character of a moral if not of a religious act. The incense of tobacco was deemed pleasing to the Father of Life, and the ascending smoke was selected as the most suitable medium of communication with the world of spirits." Without the presence of the pipe, filled with lighted tobacco, was there no declaration of war, nor a treaty of peace made.

We are told by Col. C. C. Jones in his "Antiquities of the Southern Indians," page 384, that "Among the primitive inhabitants of at least some of the Southern regions pipes were elevated to the dignity of idols before whose elaborately carved forms of man and bird, and beast, the deluded fell down and worshipped."

Catlin savs, "There is no custom more uniformly in constant use among the poor Indians than that of smoking. Nor any other more highly valued. His pipe is his constant companion through life—his messenger of peace; he pledges his friends through its stem and its bowl, and when its care-drowning fumes ceases to flow, it takes a place with him in his solitary grave, with his tomahawk and war-club, companions to his long-fancied 'mild and beautiful hunting grounds.'"

A few more words in reference to the plant which gave so much exhilaration to our aboriginal people when using it will be interesting. It is known that they cultivated the plant. The question, however, arises, where was it first found in its wild state? Botanists declare that a very lengthy course of cultivation is required so to alter the form of a plant that it can no longer be identified with the wild species; and still more protracted must be the artificial propagation for it to lose its power of independent life, and to rely wholly on man to preserve it from extinction. Tobacco has been cultivated from an immemorial time by the Indians of America, and by no other race. It is no longer to be identified with any known wild species, and is certain to perish unless fostered by human care. What numberless ages does this suggest! How many centuries elapsed ere man thought of cultivating it! How many more passed away before it spread over the great extent of territory, nearly a hundred degrees of latitude, and lost all resemblance to its original form? Who can answer these questions? That the plant came originally from near the equator is proven

by the fact that it thrives best in hot regions. The Choctaw Indians, who once lived in the territory which is now the State of Mississippi, raised so much tobacco that at times they had a surplus to sell to traders.

The native northern tobacco, *nicotiana rustica,* is used in all sacred functions, and grows spontaneously when once introduced. It has a yellow flower, and is smaller that our commercial kinds. In the prosperous days of the Tionontatie, or Tobacco nation of Canada, it was a source of revenue to that ancient people. Loskiel tells us that "The species in common use with the Delawares and Iroquois is so strong that they never smoke it alone, but smoke it with the dried leaves of the sumac or other plants."

The Onandaga Indians of New York, still cultivate this species sparingly, calling it oyenkwa honne, real tobacco.

There is found no work of aboriginal art which so much commands the attention of the student of archaeology, and also of the general collector as do the smoking implements once used by the red American people, and which are unearthed from burial mounds, graves, earthworks and often picked up from the surface. Even more were they appreciated and held in esteem by those who used them. On them was exercised their highest taste and skill. For their construction the choicest material was selected. Often did the aborigine go far away from his home to procure the stone from which he made it; and in shaping and polishing it he spent days and often months. Experience taught him what sort of stone best withstood the action of almost continued heat, and as it was his almost constant companion one can well understand why, when possible, it was often so elaborately made.

To the Indian the smoking pipe possessed an importance which elevated it above the other implements made by them. No class of aboriginal art exhibits a greater diversity of form than do the pipes carved from stone or moulded in

clay. A volume would indeed be required for figuring and describing these utensils upon which so much work and time was spent. Limestone, slate, sandstone, soapstone, talc, syenite, catlinite and other varieties of stones were used in the making of them. Soapstone or talc, in its various colors found in almost every state in our Union, was the material generally used. As compact soapstone is not easily fractured and not injured by heat it was very suitable for the purpose. It can be worked without great labor, and some varieties can be given a surface nearly as brilliant as marble. The material from which they were made was often carried great distances. Pipes were exchanged for other commodities. We are told by Lawson that the Southern Indians manufactured pipes of clay to send to far away regions in exchange for skins and other merchandise. This practice prevailed throughout North America before the advent of the Europeans, and the fact that such a trade was carried on is proved, beyond any doubt, by the frequent occurrence of Indian artifacts, consisting of materials which were evidently obtained from distant localities. In many cases, however, these articles of manufacture may have been brought as booty, and not by trade, to the places where they are found in our days. It is well known that the modern Indians sometimes undertook expeditions of a thousand or twelve hundred miles in order to attack their enemies. The warlike Iroquois, for example, who inhabited the present State of New York, frequently followed the war-path as far as the Mississippi River. Thus, in the year 1680. six hundred warriors of the Seneca tribe invaded the territory of the Illinois, and more than a hundred years ago the traveler, Carver, learned from the Winnebagoes, who lived in the present State of Wisconsin, that they sometimes made war excursions to the southwestern parts inhabited by the Spaniards (New Mexico), and that it required months to arrive there.

The learned Jesuit Lafiteau, has given some account of Indian trade as it was in the beginning of the eighteenth century. He says, "The savage nations always trade among each other. Their commerce is, like that of the ancients, a simple exchange of wares against wares. They all have something particular which the others have not and the traffic makes these things circulate among them." Loskiel, who chiefly treats in his work of the Delaware and Iroquois refers to aboriginal trade. In describing the pipes of those Indians he says: "Some are manufactured from a kind of red stone, catlinite, which is sometimes brought for sale by Indians who live on the western side of the Mississippi, which they extracted from a mountain." This implies a direct trade connection of between twelve or thirteen hundred miles. Loskiel, however, never visited America. He writes about what other observers described to him.

Catlinite, a soft indurated clay, also called Red Pipestone, played an important part in the manufacture of the Indian's pipe. This material was named after George Catlin, a native of Wilkes-Barré, who first discovered its origin, and who lived many years among the Indians. Though the material was known for a long time the exact location of the quarries where it was mined has been known only about fifty years. It is situated near the town of Pipestone, in southwestern Minnesota. The color of Catlinite varies from dark red to light pink. Specimens of mottled pink and white can also be seen. It is slightly harder than soap-stone, is easily cut with a steel knife or scraped by means of sharp edged-tools of stone or shell.

Pipes of this material have been found over a wide area, even as far as twelve hundred miles from the quarry eastward, in graves and on the surface, and are of many and various forms. The Sioux Indians made many Catlinite pipes. They took a piece of the rock from the best portion of the vein, which is scarcely two inches thick, and the

Indian sculptor, with an old piece of hoop iron, or a broken knife blade, fashions the block roughly into the desired form. Then slowly with the same tools, he bores out the bowl and the hole in the stem before carving the exterior, so that if in the process of boring the stem should be split no labor would be lost. After this is accomplished he shapes the surface into any design which he may have in view. This work often occupies weeks before it is completed, after which the carving is polished by rubbing it with grease or oils in the palms of the hands.

Catlin tells us that the Indians shape out the bowls with nothing but a knife, and the hole in the bowl of the pipe by drilling into it a hard stick, shaped to the desired size, with a quantity of sharp sand and water kept constantly in the hole which requires great labor and much patience.

It may interest my readers to know that between the years 1865 and 1868, the Northwest Fur Company made nearly two thousand pipes and traded them to the Indians on the Upper Missouri. Many of these pipes no doubt may now be seen in collections and shown as true Indian artifacts. A knowledge of this will, in the future, certainly throw a suspicion on pipes coming from that region.

The almost endless variety of material from which pipes were made is shown in the case of the Micmac Indians of Nova Scotia, who sometimes used tobacco pipes made of birch bark, rolled in the form of a cone. These of course are perishable.

Prince Maximilian of Wied, in his "Travels in the Interior of North America," London, 1843, refers to some of the Indians of Indiana, who smoked sumac leaves in wooden pipes.

Mr. McGuire, the archæologist, says: "It has been commonly supposed that to make a stone pipe required weeks if not months of patient labor." I have, however, demonstrated that with primitive tools, picking, grinding and drill-

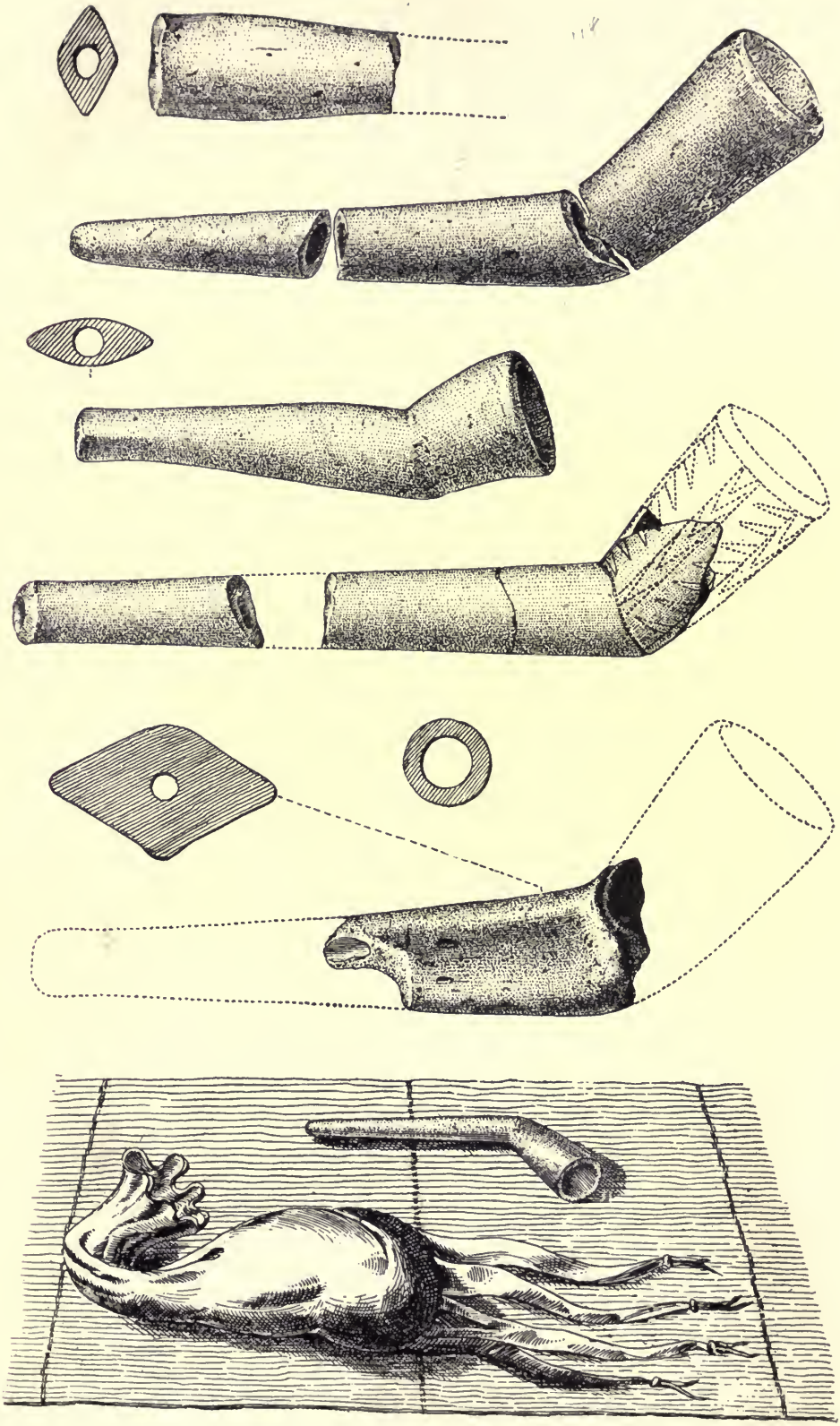
ing, almost any pipe, such as those which have been used by American Indians, could be completed in less than three days' work, and the more ordinary ones in a few hours.

The Esquimo pipe in type appears to have derived its form from the Japanese pipe, and to have been introduced from Japan. From these people the Esquimo may have learned the smoking habit.

Pipes were sometimes made of deer-horn, bone, walrus-ivory and wood. Specimens of these may be seen in the different museums in our large cities.

"The pipe of the Indians of New Sweden, otherwise Pennsylvania," says Holm, "appears to have had a stem equal in length to any on the Continent. They make tobacco pipes out of reeds about a man's length; the bowl is made of horn, and to contain a great quantity of tobacco; they generally present these pipes to their good friends when they come to visit them at their houses and wish them to stay sometime longer; then the friend cannot go away without having a smoke out of the pipe. They make them of red, yellow and blue clay, of which there is great quantity in the country; also of white, gray, green, brown and black and blue stone, which are so soft that they can be cut with a knife. The length of this pipe and the stem seems somewhat out of proportion when compared with other pipes known to us." The traveler Catlin represents a Chippewa Indian standing erect leaning on a pipe stem. Our knowledge of the handicraft of the American aboriginal people is very limited, owing to the very few records preserved by those who first came among them.

John Lawson, the historian, who knew of the terrible conditions existing in America about 1700, between the tribes on account of the avaricious commercial rivalry of the French, Spanish and English, which caused many bloody encounters, says in his "History of North Carolina:" "'Tis a great misfortune that most of our travelers, who go to this



POTOMAC VALLEY TOBACCO PIPES.

BY PERMISSION OF THE ETHNOLOGICAL BUREAU.—20TH ANNUAL REPORT.

vast Continent in America, are persons of the meaner sort, and generally, of a very slender education; who being hired by the merchants to trade amongst the Indians, in which voyages they often spend several years, are yet, at their return, incapable of giving any reasonable account of what they met withal in those remote parts; though the country abounds with curiosities worthy of a nice observation."

Of the manner of drilling the long stemmed stone pipes, a few of which have been found on the Atlantic Coast, he says: "These they roll continually on their thighs with their right hand, holding the bit of shell with their left, so in time they drill a hole quite through it which is very tedious work; but especially in making their Ronoak, four of which will scarce make one length of wampum, the work was performed with a nail stuck in a cane or reed." The women of the North Carolina Indians, when they find a vein of white clay fit for their purpose, make at spare hours tobacco pipes, which are transported to other Indians that perhaps have greater plenty of deer and game."

Lawson further says: "The women smoke tobacco; they have pipes whose heads are cut out of stone, and will hold an ounce of tobacco, and some much less."

SCARCITY OF PIPES ON THE ATLANTIC COAST.

The scarcity of pipes of every kind of material on the Atlantic coast, is much commented on by writers interested in the science of archæology. From the Florida shell mounds but few have been taken. On the shores of Chesapeake Bay, in Maryland and Virginia, where thousands of acres of ground are covered with shell deposits left by the Indians, but few of these smoking implements have been found. The burial customs of those who formed these deposits are at present not very well understood. It is possible, however, that a careful examination of graves when found may clear up this mystery.

Dr. C. C. Abbott, the archæological writer, comments on this rarity in this manner: "The comparative rarity of aboriginal smoking pipes is easily explained by the fact that they were not discarded as were weapons, when those by whom they were fashioned entered upon the iron age. The advances of the whites in no way lessened the demands for pipes, nor did the whites substitute a better made implement; therefore the pipes were retained and used until worn out or broken, excepting such as were buried with their deceased owners. If this practice was common we must believe that the graves were opened and robbed of this coveted article by members of the same or some other tribe. This may be objected to on account of recognition by friends of the owner of the stolen property, but we do not think the fear of detection deterred the ancient grave robber."

On account of this scarcity it is believed by others that while smoking was probably indulged in, it was but to a limited extent until the whites, by the cultivation of tobacco, popularized its use.

Although he stopped at many places Verazzano, in his voyage in 1524 along the Atlantic coast, from the thirty-fourth degree of latitude to Newfoundland, mentions neither tobacco nor the pipe as being used by the natives.

TUBULAR PIPES.

First to be noted is the tubular or funnel-shaped and hour glass form of pipe, which consists of the stem and bowl in the same plane. It may also be likened to our present cigar holders. These smoking implements measure in length from one and one-quarter inches to almost a foot. They were made from clay, stone, bone, copper and wood, and wood and stone in combination. It is believed that this was the primitive form of pipe. The most ancient and most reliable evidence of the use of this pipe in America is to be seen on the bas-relief of the Alta Casa or Adoratio at the entrance

of the Temple of the Cross, which is a prominent feature of the ancient, holy and mysterious city of Palenque in Yucatan, Mexico. This slab or altar, which is six feet long, and about three feet wide, is of artistic design and finish. It represents an old man in an upright position, dressed in the skin of a tiger, with a serpent coiled around his waist, whose tail curls up behind and coils in front. In the palm of both hands he holds a tubular, ornamented object through which he appears to be blowing something visible, which ascends and descends as it leaves the mouth of the tube.

The Moki Indian priest of New Mexico, to-day holds his pipe, which has the exact shape as that shown on the slab, in a similar manner, assumes the same posture, and through it at the ceremonial, blows the smoke to the four winds, North, East, South and West, as well as to the upper and lower world.

In the Manuscript Troano, Plate XXVI., is shown another smoking function with the tubular pipe. The individual in this case is in a sitting posture. Prof. Cyrus Thomas, who made an exhaustive study of this manuscript, calls the conical tube in the mouth of the figure a cigar. It is represented at the larger end nearest to the opening with a narrow black ring, and back of it a broader ring. Cigars would hardly be ornamented in this manner unless perhaps for use in a particular ceremony.

Sixteen of these nicely wrought implements of steatite or soapstone, the largest more than nine inches long, and others seven and eight inches in length, were taken a number of years ago from graves at Dos Pueblos and La Patera, California, on the coast of which state they appear somewhat plentiful. A number of them still contain the mouth-pieces made from the small hollow bone, either from the leg or wing of a bird, which were secured into the smaller end of the tube with asphaltum.

The holes in these interesting objects were drilled from

both ends, but only to a short distance from the smaller. Concentric circles in the perforations indicate that the tool with which the boring was done was of a flinty nature. The sharp point and edges of arrowheads may have served well for this purpose.

PIPES WITHOUT STEMS.

These are of great variety, varying from a simple cube to a most complex animal form, and next to that of the tubular pipe, are most widely distributed. They consist merely of a bowl, the hole for the insertion of the stem being driven into one of the walls of the bowl. The stems for insertion were made of reed, bone or wood, held in position by leather straps bound around bowl and stone while damp or wet, and which while drying contracted, holding both together as though made from a single piece. McGuire seems to think them an evolution of the tubular pipe, and accounts for this theory as follows, in his "Pipes and Smoking Customs of the American Indians." "There are many ways of accounting for the evolution of the tubular pipe into one of rectangular shape. The smoking of the tube would undoubtedly be extremely awkward and notwithstanding the pebble or pellet of pottery dropped into the bowl, the material smoked would escape from the smoker's mouth while being held perpendicularly as though drinking, while an accidental or intentional curve would suggest a valuable improvement in shape."

The bowl is about thrice the size of the perforation for the stem, which was drilled by means of a solid drill-point of stone or wood, with the aid of dry sand. These pipes at times are inlaid with metal or shell. This form of pipe is found in territory adjoining lakes Ontario and Erie, down through Ohio, Indiana and Kentucky, into Tennessee and North Carolina, and along the Atlantic coast up to British America. It is supposed that the territory through which they are found, and also their often graceful shape indicate French influence.

DOUBLE CONOIDAL PIPES.

This distinct type of pipe invites a most careful examination. They are found in Michigan, Ohio, Virginia, Kentucky, Tennessee, Missouri, South Carolina, Georgia, Alabama, Mississippi, Louisiana, and Arkansas. The characteristics which allow these pipes to be given the above title, are, that the bowl and stem holes consist of cone-shaped excavations perforated at right angles to each other, meeting at their apices where both cavities connect. This pipe varies in its exterior from probably more than any other American type known. Often the funnel-shaped perforations are so near alike that one is at a loss to know which one served for the bowl. We are told that of the whole number of pipes in the United States National Museum, there is not a single specimen which has upon it a mark indicative of the use of other than the stone tools of the primitive Indian, though many of them are of quite elaborate design, and show excellent treatment. They are made of pottery, hardened clay, steatite and sandstone. Material was at times used most unsuitable to resist heat.

The double conoidal pipes commonly found along the Lower Mississippi and in the southern United States generally have large bowls and stems bored at right angles one to the other, the openings of which are an inch or more in diameter. They are almost always of stone, and are bored by means of a solid drill, though pottery specimens occur. They vary greatly in exterior shape, all the way from the plain cube to the most elaborate animal form.

In his "Antiquities of Tennessee," General Thurston calls attention to this form if pipe, saying: "Large funnel shaped stem holes, sometimes even larger than the pipe bowls, appear to the author to have been one of the distinguishing characteristics of the Southern clay and stone pipes, and we suggest to antiquarians the importance of this feature in the proper classification of these objects."

MOUND PIPES.

Squire and Davis, while surveying the ancient earthworks in Ohio, found this particular type of pipe in considerable numbers. From one of the hearths of a number of mounds situated four miles north of Chillicothe, Ohio, these explorers took nearly two hundred stone pipes of this peculiar form, many of which were damaged by the action of fire. They are now contained in the Blackmore Museum, Salisbury, near London, England. They constitute the finest exhibit of American aboriginal pipes in the world, and it would require the combined collections of the three largest American museums to surpass them. Soft material, such as compact slate, argillaceous ironstone, ferruginous chloride and calcareous minerals was generally used in making them. They vary greatly in their finish. They are from two to five inches long, one to two inches high, and one and one-quarter to one and one-half inches broad. Some of the pipes of animal form found near Chillicothe, appear to have had artificial eyes, most of which were destroyed by fire. A pearl, however, which formed the eye of one still remains.

The bowls of these fine pipes were perforated by means of tubular metal drill points, and the small stem or base holes by solid points. Some archæological experts wish us to believe that these pipes owe their origin to early French influence, and, therefore, are not of great age. Pipes of this kind made from Catlinite have been found, and all archæologists agree that this material came into use about the time of the arrival of the Europeans. A close examination of many of them shows tool marks which suggests the metal file or rasp, a tool of the whites. The style also of the carving is more of a civilized than of a savage character, and does not correspond with the known products of the tools of the primitive Indian.

These pipes are found in Michigan, Wisconsin, Iowa, Illinois, Indiana, Ohio, West Virginia and Virginia. Much

of this territory was covered by the French in aboriginal times.

These pipes have been given this name because the greater number of them have been taken from mounds and earthworks which are so plentifully distributed in the valleys of the Mississippi and Ohio. These elevations and works of defence are found almost invariably along the lines of the great rivers of the interior, due presumably to the fact that these rivers were the lines of least resistance to the free communication from one point to the other, and consequently were the trade routes of the interior whether of Indian or white men. The base of these pipes is broad and curved. The upper side usually presents a convex surface from side to side. Sometimes this side is perfectly flat and very rarely it is found having a concave surface. The stem-holes are extremely small, usually measuring one-sixteenth of an inch in diameter, and perfectly straight, and there seems to be no doubt that the part of the base through which was drilled the perforation to the bowl formed the mouthpiece. The bowl rises from the center of its base, often plain and round, which is supposed to be its primitive form. The carved specimens are very often elaborately wrought from a great variety of stones, and represent the human head, snakes, frogs, turtles, lizards, raccoons, otters, beavers, bears, panthers, eagles and other birds. Others there are representing animals which cannot be identified.

MONITOR OR PLATFORM PIPES.

This generally plain but highly polished type differs somewhat from the mound form. It has an almost straight base, and is generally triangular in section. The round bowl in almost all cases rises from the center of its base. No other Indian pipe is so striking in its characteristics. The name "Monitor" was given it because of its similarity to that strange form of naval fighting machine which created so great a sensation in Southern waters during the Civil War.

It is widely distributed in the eastern part of the United States and is often found in mounds and other primitive burial places. In its finish and its outline no American aboriginal pipe surpasses it. Upon it appear no representations of animal life as upon the mound pipes, and rarely ornamentations of any sort. They were made from steatite or soapstone, rarely of serpentine, but at times of clay. They vary in color from white to black. The walls of their bowls are remarkably thin, and more care was expended in polishing and drilling them than upon any other form of pipe. They vary in length from three to eighteen inches. Their bases are one to four inches wide. The bowls are deep from one to eight inches, with a diameter of from three-quarters of an inch to one and three-quarters, usually cylindrical, though at times distinctly elliptical. They appear to have had no extra mouth-piece. The stem-holes seldom exceed one-eighth inch in diameter, and are accurately bored; the variation of the size of the stem-hole from end to end being scarcely appreciable. Mr. Joseph D. McGuire appears to think that: "This remarkable accuracy of boring in stone where the walls of the tubes and bowls are commonly not in excess of one-eighth of an inch thick is almost proof positive that the drilling was done with steel tools." The belief is gaining ground that many of the fine aboriginal pipes found in North America were made immediately after the advent of the whites with steel tools. There are many indications on them to show that the white man's file and rasp were factors in their production. Major J. W. Powell, the late director of the Bureau of Ethnology at Washington, D. C., several years ago in the magazine "Forum," Vol. 8, pp. 492-93, brought forth the ingenious idea that the white men who first came to this country, made with civilized appliances, many of the fine relics, such as pipes, axes, ceremonials, etc. An examination of many fine objects, made from the hardest kind of stone, almost compels one to conclude that this theory may in some instances be a correct one.

INDIAN PIPES IN THE COLLECTION OF THE WYOMING HISTORICAL AND GEOLOGICAL SOCIETY.

1. Serpentine, 5¾ in., Santa Barbara, Cal. 2 and 4. Steatite, 6 in., Crawford, Miss. (Berlin). 3. Clay, 4¼ in., Wyoming Valley. 5 and 6. 2½ in., Delaware Indians, South Street, Wilkes-Barre. 7. Serpentine, 3½ in., Wyoming Valley.

John Smith in Virginia, in 1608, asked permission of the Indian Chief Powhatan to go through his territory to obtain stone for making axes, and one is forced to believe that the trade and manufacture of stone implements has been greater than is generally supposed.

These pipes are found in Missouri, Kentucky, North Carolina, South Carolina, Tennessee, Ohio, Michigan, West Virginia, Virginia, Maryland, Pennsylvania, New York, Rhode Island, Massachusetts, New Hampshire, Vermont, Connecticut and Nova Scotia.

ELEPHANT PIPES.

Two notorious pipes, which it is claimed represent well the mammoth or elephant, are owned and displayed in the museum of the Academy of Science at Davenport, Iowa. They represent the elephantine-shaped animal standing one on a straight base, the other on a platform slightly curved. The bowl is cut down from the back of the head into the front legs, and the mouth-piece in both cases, that part of the base facing the trunk or head of the animal. They were brought to light by a German Lutheran minister named Gass in Iowa, who claims to have found them not very far from where he lived. This gentlemen also claims to have discovered curious stone tablets upon which are engraved figures suggesting in a rude manner the mastodon. Although ably defended by members of the Davenport Academy of Science, the authenticity of these pipes has been questioned by experienced archæologists. That doubt was felt in the minds of some as to the genuineness of his alleged discoveries was due to the fact that he had previously been detected in exchanging spurious archæological objects of his own make with another collector in return for genuine and true relics.

GREAT PIPES OR CALUMETS.

John Smith, as early as 1608, writes of pipes of sufficient weight and size to beat out a man's brains. They are usually

carved in imitation of the human figure, of birds or animals, and other forms, and are the largest and heaviest of all American smoking implements.

Dr. Joseph Jones, in his "Antiquities of Tennessee," tells his readers that he has seen some of these aboriginal pipes, made of hard green-stone and highly polished, which were over eighteen inches long.

In his description of the New England Indians in 1643, Roger Williams says: "Sometimes they make such great pipes, both of wood and stone, that they are two feet long, carved with men and beasts, and so big that a man may be hurt mortally by one of them. They commonly come from the Mauguawogs, or the men eaters three or four hundred miles from us." He means the Mohawks, a tribe of the Iroquois nation.

The Rev. C. C. Pyrlaeus, a pupil of Conrad Weiser, of whom he learned the Mohawk language, and who was afterward stationed on the Mohawk River as a missionary, has in a manuscript book, written between the years 1742 and 1748, page 225, the following note which he received from a principal chief of that nation. "The Five Nations formerly did eat human flesh. They at one time ate up a whole body of the French King's soldiers. Aged French Canadians told the Moravian missionary Heckewelder, while he was at Detroit, that they had frequently seen the Iniquois eat the flesh of those who had been slain in battle, and that this was the case in the war between the French and English in 1756."

"Made with astonishing skill these great pipes are supposed to be of doubtful antiquity. Used as pipes of peace and for other ceremonies, they are objects of tribal veneration which lends special interest to their history.

"Steatite, or soapstone, seems to have been the most common material used in making them. Catlinite, chlorite, sandstone and serpentine were materials sometimes also used.

"The stem holes in this form of pipes are in a majority of

cases so placed that the bird or beast faces from the one smoking it. They are nicely finished, the tool marks on the outside usually entirely obliterated, though the drill marks and evidences of enlargement of the bowls and stems are often plainly seen. Some of them are pre-historic and of great age. Others no doubt were made while the whites were already occupying this country. The early discoverers report that most of the tribes of historic Indians made and used them. Father Hennepin tells us that the Calumet is the most mysterious thing in the world among the North American Indians. That it is used in all their important transactions, and that it is a pass and safe conduct amongst all the allies of the nation which has given it. In all embassies the ambassador carries the calmut as the symbol of peace, which is always respected; for should it not be, misfortune would befall those who violated the public faith of the calmut. All their ceremonies, be they a declaration of war or a conclusion of peace, as well as any other enterprise, were sealed with it. They fill it with their best tobacco and then present it to those with whom they have concluded any great affair, and smoke out of it after them. This early voyager would certainly have perished had he been without a pipe of this kind. With the calumet in one's possession, and showing it when ordered so to do, one could march fearlessly amid enemies who, even in the heat of battle, laid down their arms when it was produced."

We are informed by Loskiel that if two Indian nations entered into a treaty of alliance, a pipe of peace was exchanged between them, which was then called the Pipe of Covenant. It was carefully preserved and generally lighted in council whenever anything occurred appertaining to the alliance. Then each member smoked a little out of it. This reminded them in the most impressive manner of the covenant and the time of its establishment.

When M. D'Iberville sought his first interview with the

Florida Indians, he was received by their chiefs smoking the calumet and singing the song of peace. The pipe used on this occasion is thus described: "The Calumet is a stick about a yard long, or a hollow cane, ornamented with the feathers of the paroquet, birds of prey, and of the eagle. These feathers, arranged around the stick, resemble somewhat the fans used by French ladies. At the end of this stick is a pipe, to the whole of which the name of Calumet is given."

Father Charlevoix says: "The Calumet, if you believe the Indians, is derived from heaven, for they say it is a present which was given them by the Sun. There is scarce any room to doubt but that the savages in making those smoke the calumet with whom they would trade or treat intended to take the Sun for withness and in some measure for a guarantee of their treaties; for they never fail to blow the smoke toward that luminary."

Calmut is a Norman word signifying a reed, and the calumet of the savages is properly the tube of the pipe.

Robert Beverly, in 1722, enumerates five things which were always observed in receiving strangers, in order to determine whether they came on a peaceful or on a warlike mission.

First. They take a pipe much larger and bigger than the common tobacco pipe, made expressly for the purpose, with which all towns are provided.

Second. This pipe they always fill before the face of the strangers, and light it.

Third. The chief man of the Indians takes two or three whiffs and hands it to the chief of the strangers.

Fourth. If the stranger refuses it, it is a sign of war.

Fifth. If it be peace, the stranger takes a whiff or two and hands it to the next great man of the town they come to visit; he, after taking two or three whiffs, gives it back to the next of the strangers, and so on alternately until they

have passed it to all persons of note on each side, and then the ceremony ended.

The sanctity of the calmut of peace was not at all times recognized by the Indians. Charles the Canadian, in January, 1703, had his arm broke by a party of Indians who had presented the calumet, and the same night assassinated his companions. There are cited other instances where the sanctity of the peace pipe was not always respected, and of a refusal to even communicate with those carrying it.

Lafiteau writes that if in council between ambassadors and the Indians concerning the making of peace the council decides upon war, it is a great misfortune for the ambassadors, for the law in that case only protects them as long as the matter is in abeyance, but being negatived they knock them in the head where they are, though they often take honorable leave of them and then send and have them assassinated a few days' march from the village.

A general examination of authors who have written on the pipe of peace warrants the conclusion that this habit obtained from southern Florida to the country of the Iroquois, throughout the valley of the Mississippi and as far west as New Mexico, which indicates for it a great antiquity.

CLAY OR TERRA COTTA PIPES.

Smoking implements of this material from the size of a thimble to those having a capacity of one and even two ounces, and of various and diversified designs have been found in every section. In a perfect condition they are however, not numerous. Fragile ware of this kind would certainly not last very long unless carefully handled.

In the manufacture of these pipes a mixture of sand, clay and broken or pounded shells was used. The pipe of this material was no doubt mostly used by the aborigine for his personal use in smoking. The human form was copied, often in a grotesque and obscene manner, and Col. C. C.

Jones, in his "Antiquities of the Southern Indians," on page 412, writes: "The nude human figure in kneeling, bending or sitting posture, frequently forms the subject of imitation, and we have seen several pipes of this description which, in the language of Adair, "could not much be commended for their modesty.'"

Quadrupeds, birds and reptiles, too, were imitated, and some remarkable specimens have been found, which proves that the Indian molded as artistically in clay, as he sculptured in other and harder material.

Kalm, who traveled in America and who was in New Sweden, now Pennsylvania, in 1749, at a place on the Delaware River below Philadelphia, called Raccoon, says: "The natives had tobacco pipes of clay, manufactured by themselves, at the time the Swedes arrived here." Some of the purest clay pipes found are from the Lower Mississippi.

The Virginian Indians, according to Strachey, made their tobacco pipes of a clay more fine and smooth than he had seen anywhere else. The Maryland aborigines, and those of the coast countries north and south of Maryland possessed a fine clay from which were made pipes of a bright red color.

BIRD AND ANIMAL PIPES.

Pipes of this type are not plentiful, but curious and of a pronounced type. They represent of the birds, the owl, eagle, raven and other feathered forms. In all cases so far as the writer knows the bird is represented sitting upon a perch or limb. This form of pipe without any objection may be classed with those smoking utensils representing the human form, the bear, panther and wolf. Of the bird form this state seems to have furnished a number of them. It has been suggested that they were made with metallic tools at about the time of the arrival of the white man. While the bowl in most specimens is placed at the back there are found others which have the bowl in front. It is supposed

that they originated in territory occupied by Iroquois Indians, and are probably the result of individual design, and have not any particular relationship to totems. Pipes of this form are sometimes distinguished as a "jumping-jack" variety.

McQuire seems to think that the small perforations for suspension which is seen upon many of them indicates their origin in a country where deep snows occur.

MICMAC PIPES.

In archæological cabinets may be seen primitive looking, curiously formed types of pipes which are still smoked by aboriginal people in the northern part of this Continent. They are called the Micmac or Bottle Stopper Pipe. It has a bowl, in shape similar to an inverted acorn, which rests upon a keel-like base, broadest where it touches the bowl, and extending beyond the bowl at times an inch or more on each side. Through the top of this base or keel there is drilled a stem-hole one-half its length until it intersects at right angles with the base of the bowl. The tops of these terraced bases are seldom more than half an inch wide, though from front to back they are often three inches or more long, and from top to bottom they are as deep as long. The sides of the bases are parallel to each other and are in two or three terraces, decreasing often until the lower part of the base is scarcely more than one-eighth of an inch thick. Through this base there are almost invariably one or more perforations.

This type is found from the Atlantic to the Pacific Ocean, through the territories over which roam aborigines of Athabascan, Iroquoian and Algonkin linguistic stocks. Its high polish and display of file marks suggests the presence of the European. The high polish of implements is almost unknown through the center of the American Continent, until the possession by the Indian of the tools of the whites. The

type is undoubtedly an old one, and some of the specimens bear evidence of being made with primitive tools.

The territory through which they are distributed is that of the Hudson Bay Fur Trading Company, and very likely is of a type sold to the Indians by them.

Dr. Beauchamp, in his Bulletins of the New York State Museum, shows several of these pipes and claims they are recent forms.

One of the smallest pipes of this kind known is to be seen in the Archæological Museum at Toranto, Canada. Its whole length is one and one-quarter inches. Its greatest width at bowl is five-eighths of an inch.

CHEROKEE PIPES.

Col. C. C. Jones, in his "Antiquities of the Southern Indians," page 400, says: "It has been more than hinted by at least one person whose statement is entitled to every belief, that among the Cherokees dwelling in the mountains of the Southern States, there existed certain artists whose professional occupation was the manufacture of stone pipes, which were by them transported to the coast, and there bartered away for articles of use and ornament foreign to and highly esteemed among members of their own tribes."

These pipes differ in certain respects from those found in other parts, and may be called a distinct type. They are usually nicely polished, quite symmetrical, and are for a certainty the most modern or aboriginal smoking implements. The round bowl often has a slight lip in front, and the stem is usually square, the animal on it being either a turtle, squirrel, bear, raccoon or bird, always facing the smoker. Seppentine and chlorite were used in making them. Whether a totemic significance was attached to them remains to be discovered.

The Cherokee Indians of the Southern States also used wooden pipes, carved in the form of bears, the bowl being in the back and the tube orifice near the tail.

8. Serpentine, 3¾ in., Wilkes-Barre. 9. Banded Slate, 3 in., Pequa, Ohio. (Berlin). 10. Steatite, 2¾ in., Wyoming Valley. 11. Stone, 3 in., Tunkhannock, Pa. 12. 5 in. 13. 3¼ in., Wyoming Valley (Wren). 14 and 15. 2¾ in., Wyoming Valley.

A number of years ago were living in North Carolina several full-blooded Cherokee Indians, who carved with a steel blade artistic animal pipes. The name of the principal maker was Chic-a-le-lah. They weigh but a few ounces, and grace every collection containing them.

IDOL PIPES.

Of great interest are the very rare pipes representing the human form in a sitting position. They are called Idol Pipes.

Of this remarkable type of smoking implement, Col. C. C. Jones, in his "Antiquities of the Southern Indians," page 401, makes the following interesting statement: "First in interest and in art is the Idol Pipe. This is rarely seen, and only in localities where, in the distant parts, dwelt people to all appearances more permanent in their seats and tribal organizations; more argicultural in their pursuits; more addicted to the construction of large tumuli; and superior in their degree of semi-civilization to the nomads who occupied the soil at the date of European civilization. Specimens of such pipes are as infrequent as stone images, and it is probable that they should both be referred, in their origin, to the handiwork and superstition of the primitive men who threw up those large mounds which tower along the banks of the Etowah, and lift their imposing forms from out the level of several other valleys in Georgia. They are always associated, so far as our knowledge extends, with the large pentagonal and quadrangular mounds, and with those older monuments—be they watch towers, sepulchral tumuli, temples, consecrated spaces, enclosed areas, defensive works or playgrounds—of whose age and objects the latter Indian tribes cherished not even a tradition." These pipes are obviously very old, and in all likelihood antedated, by an indefinite period of time, the occupation of this valley by the Cherokees. So far as recorded observation extends, noth-

ing like them was noted in the use or possession of the modern Indians.

There are at least plausible grounds for believing that the ancient peoples who piled up these august tumuli along the banks of the Etowah, and departing, left behind them enduring monuments of their combined labor for a wonder and enigma to later tribes, may have borrowed some of their ideas of sun-worship, idolatry, agriculture and art directly or indirectly from the southern cradle of American civilization." The great structures referred to above are located near Cartersville, Georgia, and cover an area of some fifty acres.

The three figures, front, profile and back shown here represent an idol pipe plowed up from a low flat mound in a field ten miles from Sartartia, Mississippi. It was made from a fine grained sandstone of brownish hue. It is nine inches high, four inches across the shoulders, and weighs six pounds. It represents a female devoid of dress, in a sitting posture, one leg overlapping the other with the hands clasping or resting on the knees. With a retreating forehead the face appears idiotic. The eyes seem closed. The mouth is partly open, with heavy lips, which indicate more the negro than the Indian. The hair seems to have been done up in rolls, with a knot or coil at the back. The ears are covered with a circular disk-like ornament which may have been fastened to the hair, covering the side of the head. The opening for the bowl of the pipe enters immediately below the neck, with the aperture for the stem some distance below. It is a most elaborate piece of workmanship, and one is at a loss to know what idea was dominant in the mind of its maker. Near Seltzertown, Mississippi, is situated a mound so large that one is almost forced to believe that it is of natural origin. It is a truncated pyramid nearly six hundred feet long, four hundred feet at its base, and covers nearly six acres of ground. It is forty feet high, its summit of four acres being reached by a graded way.

One marvels at the immensity of these stupendous works, which must have been erected by an agricultural and stationary people who were under some kind of paternal government similar to that of Mexico in Montezuma's time, and where many great and similar works are found.

DISC PIPES.

This interesting and very rare form of pipe is well known to archæologists. It is so-called from the discodial stem, which one at first glance would be apt to take for its bowl. They were made from red pipe-stone or Catlinite, and other stones, and appear to have been widely scattered. Six very fine specimens in the collection of Mr. A. E. Douglas, New York city, who owns three hundred and seventy-five pipes, came from Boone, Saline and Chariton, which are three of the central counties of Missouri. This appears to indicate that in that section they were first manufactured and also used. It is supposed that this was the fashionable smoking pipe of its day in certain sections, and that the disc was doubtless a mere conceit, used as an ornamental handle by the Indian dandies of the time. The bowls and stems of these smoking implements, especially so those made from Catlinite, are usually carefully drilled, and their surfaces nicely polished.

IROQUOIS PIPES.

The Rev. Mr. Beauchamp, a learned archæologist from the State of New York, tells us in one of his interesting archæological productions that: "A very large proportion of the aboriginal clay pipes of this state were made by the Iroquois. Many of them are very neatly finished, the work on them being much better than that on earthen vessels. Some are so smooth as to suggest a dull glaze. This appearance, however, comes from the careful finish of the surface. They vary much in color, as do their clay vessels. Some Seneca pipes have almost the appearance of black marble. Those

found further east are much lighter in hue. The ornamental work varies still more, and is often quite artistic. Early clay pipes had the finest features within the smokers' sight, the face on the bowl whether human, animal, bird or reptile being usually turned toward him. Later examples often reversed this feature, both in clay and stone. Quite commonly it will be found that the figure on the bowl was molded separately, and then attached."

"Symmetrical designs appear, as when two or more heads of any kind are grouped in various ways. Very often the form is both simple and elegant, as in the trumpet pipes with their graceful curves. The so-called trumpet pipes are frequent, but many others have a similar curve between the bowl and stem."

The Iroquoian type of pipe, sometimes made of stone, is common throughout an extensive territory surrounding the Great Lakes, and on both sides of the Upper St. Lawrence River. It is found on the shores of lakes Ontario and Erie, in a greater part of New York State and in northern Pennsylvania. McGuire seems to think that these nicely ornamented smoking implements are of no great age, none of them antedating French influence. The Rev. Mr. Beaushamp holds the same opinion. Mr. David Boyle, the archæologist and curator of the Archæological Museum at Toronto, Canada, in which are contained many fine specimens of ornamented Iroquois pipes, consisting of human heads and faces and animal forms, appears also to think that these pipes are not of great age, but were brought about by European influence. He believes that a careful study of them will bring about proof of the fact that this type of pipe with elaborate forms modeled upon it dated from late in the seventeenth if not the eighteenth century.

The curved clay pipes are generally of hard burnt terra cotta to which has been added a fine tempering material. At times these were curved before burning. The shapes of

16. Clay, 5 in., Lebanon, Pa. 17. Clay, 2½ in., Wyoming (Wren). 18. Serpentine, 2 in., Tennessee. 19. Stone, 2 in., Indiana. 20. Clay, 3 in., Wyoming (Wren). 21. Serpentine, 4 in., Indiana. 22. Clay, 2½ in., Wyoming (Wren). 23. Stone, 2 in., Canada (Wren). 24. Raccoon Pipe, N. C., 2½ in. 25. Stone, 3

the Iroquois pipes suggests the hunting horn, the grenadier's hat, sacred pictures, etc. In all three forms are peculiar depressions upon the surfaces of specimens suggesting the possibility of their being intended for inlaying.

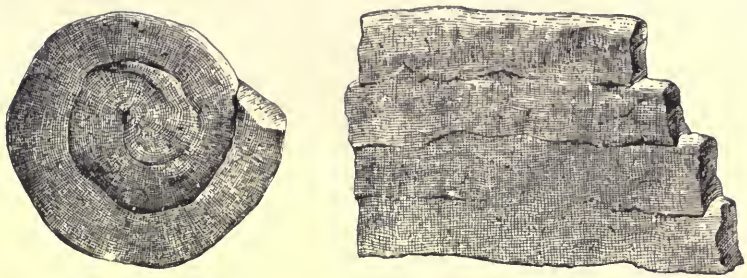
There are so many European characteristics in Iroquoian pipes as to leave scarcely a doubt of their deriving their forms entirely from the French. The art concepts present both the serious and grotesque in a manner more suggestive of the French than of native American ideas.

EARTH PIPES.

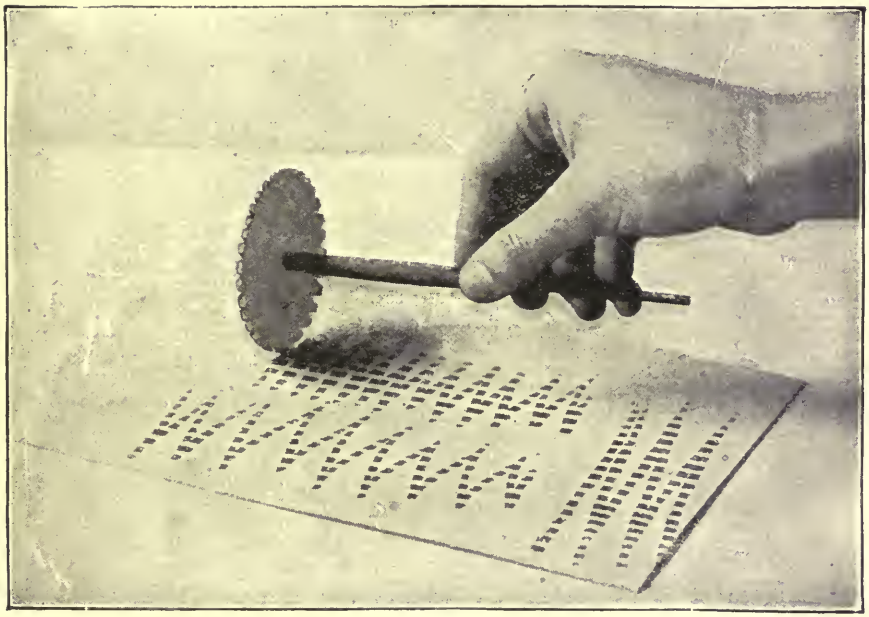
In conclusion it may be interesting to note here two unique primitive pipes, which, however, were smoked a great distance apart, and by men of different races. The writer Hind, in his "The Canadian Red River," mentions this unique pipe as used on a certain occasion by a Cree Indian. "I asked what he would do for a smoke until he had finished a pipe that he was then making. He arose and walking to the edge of the swamp cut four reeds and joined some pieces together. After he had made a hole through the joints, he generally pushed one extremity in a slanting direction into the earth, which he had previously made firm by pressure with his foot. He then cut out a small hole in the clay, above the extremity of the reed, and molding it with his fingers, laughingly said, 'Now give me tobacco, and I will show you how to smoke it.' He then filled the hole with a mixture of tobacco and the bearberry, placed a live coal on the top, and stretching himself at full length on the ground, with is chin supported by both hands, he took the reed between his lips and enjoyed a long smoke."

The other still more primitive, taken from a newspaper clipping, and quoted by McGuire, tells of a pipe smoked by a Kaffir to produce stupification, as many American Indians have done and still do. The Kaffir first pours a little water on the ground and makes a sort of mud pie; he then takes

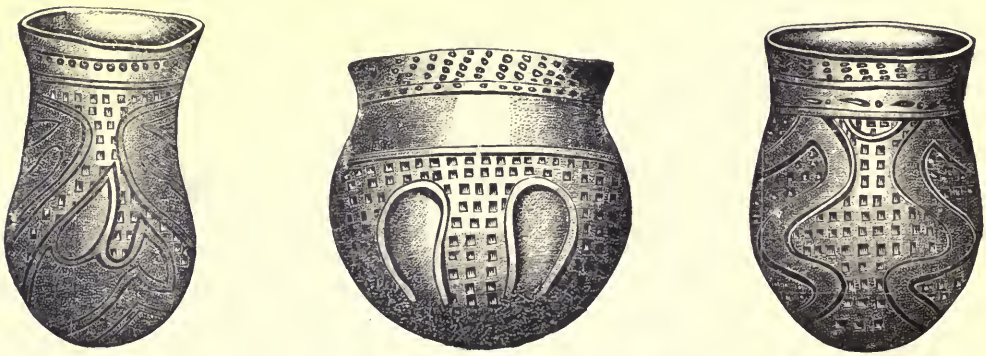
a limber twig and bends it into the shape of the bow; this he buries in the mud in such a way that both ends protrude a little at the surface. He then waits a little for the mud to harden. When he considers the pie is done to a turn, he pulls out the twig, which of course leaves a curved hole through the clay. At one end he scoops out a sort of bowl, in which he places his tobacco; at the other end he fashions a little mound to serve as a mouth-piece. He drops a live coal on the tobacco in the bowl, lies flat on the ground, applies his thick lips through the orifice and sucks away. He mixes with it a liberal quantity of dagha, a kind of hemp with intoxicating qualities similar to those of hasheesh. By the time the pipe is finished the smoker turns over in a fit."



Coil method of building up a vessel.



Roulette used for Decorating—After Prof. Wm. H. Holmes.



Intaglio Decoration—from Mound, Laporte, Ind. J. W. Foster.

Plate 4.

From Aboriginal Pottery of the Eastern United States. Prof. Wm. H. Holmes. 20th Annual Report of the Bureau of American Ethnology, Washington, D. C.

ABORIGINAL POTTERY OF THE WYOMING VALLEY—SUSQUEHANNA RIVER REGION, PENNSYLVANIA.

BY

CHRISTOPHER WREN,
Curator of Archaeology, etc.

READ BEFORE THE WYOMING HISTORICAL AND GEOLOGICAL SOCIETY, JAN. 13, 1905.

In discussing the subject of local aboriginal pottery, it is hardly to be expected that anything new can be said on the general subject of early American pottery, or which has not been said by the very able writers who have already treated the subject. The most that can be hoped by the writer is to collect some data which may be of assistance in connecting the peoples who occupied the territory under discussion with those of other localities, by careful descriptions and illustrations of specimens of their wares.

He had hoped to find such differences and resemblances between the plastic wares along the Susquehanna River, and those of other regions, as would go to decide the open question whether the Iroquois of the north or the Algonquins of the east occupied and dominated this territory.[1] He has however abandoned the idea of drawing conclusions or expressing any very decided opinions on this point, appreciating that his knowledge of the general subject of aboriginal pottery is not, at this time, broad enough to warrant him in passing judgment; and also that specimens of pottery have undoubtedly been brought into the field and left on temporary camp-sites along the river, by parties who were using the

1. In the year 1903 the writer spent several days with Mr. H. K. Deisher, at Kutztown, Berks county, Pa., and was told by him that during thirty years, in which he had been collecting relics in that locality, he had never found a single specimen of baked clay pottery. In a day's excursion, however, the writer found one piece about one inch square. While this proves that pottery was used in the locality, it may indicate that the art of making pottery was but little practiced by the Algonquins who occupied the territory. Mr. A. F. Berlin, of Allentown, Pa., on being asked for specimens of pottery, also spoke of its great rarity in the lower end of the Lehigh Valley.

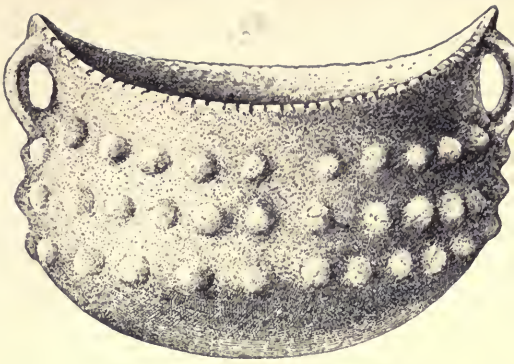
river as a highway in their journeys through the region to points north or south. Such intrusive specimens introduce an additional difficulty to the student in studying the subject and arriving at satisfactory conclusions.[2]

The writer feels that in this article he is speaking to two distinct and different audiences, whose points of view of the subject of ethnology are widely different; one of them consists of the educated and intelligent members of the Wyoming Historical and Geological Society, with most of whom the interest is merely casual and general in one of the subjects coming within range of the Society. That the article may be of interest to such members he has endeavored to give it some connection with the surroundings in which we live, and that it may be understood he has avoided the use of special or technical terms in treating the subject. The other audience consists of such persons and societies, in whose way the article may fall, as are giving systematic study to man, his degree of culture in the different stages of advancement of the race, his inherent or natural ability to grow forward, etc., and whose interest may be said to be scientific or abstract rather than personal.

If to the former class he has succeeded in making the sub-

2. Prof. William H. Holmes, on page 21 of the Twentieth Annual Report of the Bureau of American Ethnology, in dividing the territory east of the Mississippi River into distinctive districts as to pottery, makes these very pertinent remarks: "Many of these groups are so clearly differentiated as to make their separate study easy. Within the limits, however, of their areas are numerous sub-groups which do not possess such strong individuality and such clear geographic definition as the larger ones, but which may well be studied separately and may in time be found to have an ethnic importance quite equal to that of the better defined groups of ware. Although they are confined to such definite geographic areas we are not sure, as has been pointed out, that these groups of ware will be found to have any intelligible correspondence with the stocks of people that have at any one time or another occupied the region, for varieties of art phenomena are often regional rather than ethnic. Besides, many important groups of people have not left great accumulations of art products, and great groups of products may have been left by comparatively insignificant communities. Separate groups of people may have practiced nearly identical arts, and portions of a single people may have practiced very different arts. In view of these and other uncertainties hampering the correlation of archaeologic data with peoples, we cannot do better than at first study the ancient ware by itself, and afterwards proceed in such special case as may offer encouragement in that direction to connect the art to the peoples, adding such evidence as may be thus secured to our knowledge of the history of families and tribes."

Cherokee Cord-Wrapped Paddle for Decorating. 20th Annual Report of the Bureau of American Ethnology.



Two-handled Beaded Vessel. Tenn.
20th Annual Report of the Bureau of American Ethnology.

Iroquoian Bark Vessel; after Frank H. Cushing.
20th Annual Report of the Bureau of American Ethnology.

Early Celtic Pot; about 200 A. D., Oxfordshire, Eng. T. H. Powell Collection, London, Eng.

PLATE 5.

ject interesting and informing, and to the latter at all helpful in their studies, he will be pleased and satisfied; but falling short of these results his work will have been in vain.

From a careful examination and comparison of specimens of Susquehanna River wares with those of that section of New York State lying near the eastern shores of Lake Ontario, samples of which were kindly furnished the writer by Rev. Wm. M. Beauchamp, the evidence strongly indicates that a large percentage of our local wares was made by these northern people, and also that considerable of it is made of the same materials. The close similarity of the designs used in decoration seems to confirm this conclusion.[3] Another large percentage of the Susquehanna River ware bears just as close a resemblance to the wares of the "Middle Atlantic Province," as described and illustrated by Prof. Wm. H. Holmes.[4]

Specimens of pottery ware owned by Mr. J. M. M. Gernerd, found near Muncy, Pa., on the West Branch of the Susquehanna River, bear quite a close resemblance to Wyoming Valley wares.[5]

Mr. T. H. Powell of London, England, with whom the writer exchanged specimens of pot sherds, makes the following comment, after a comparison of specimens of early unbaked British pottery with the Indian pottery found along the Susquehanna River: "The ornamentation on the pottery (American) is not at all unlike that on British wares—lines and dots made with a pointed stick—but the Indian work is finer and truer, the British being often as crude as possible. The Indian was certainly a better artist and had a truer hand and eye; he could draw parallel lines better and make his dots at more accurate intervals." (See Plate No. 5.)

A very few specimens found along the North Branch of

3. Rev. William M. Beauchamp. Earthenware of the New York Aborigines.

4. Prof. William H. Holmes. Twentieth Annual Report of the Bureau of American Ethnology. Plates CXXXI to CXXXV and CXXXVIII.

5. Mr. J. M. M. Gernerd. Now and Then. Volume 3, No. 11. (See Plate 12.)

the Susquehanna River, give evidence of the use of a regular stamp design in the decoration. (See description of plate No. 8.)

It may be that something in this article will be of assistance to those learned in the subject in identifying the Susquehanna River tribes more definitely.

In the study of the aboriginal remains of the United States but small attention has been given to the implements found along the Susquehanna River, which, like the Hudson and Delaware Rivers, was a principal highway between the Great Lakes and St. Lawrence River regions on the north and the Chesapeake Bay and Potomac River regions on the south. Time will doubtless remedy such apparent neglect and give this section the place to which it is entitled as one rich in archæological remains. Our country is so large and the study of the American Indian through his weapons, implements, etc., of such comparatively recent beginnings, that time is necessary to cover the entire field.

With the exception of some data collected by Sheldon Reynolds, Esq., Harrison Wright, Esq., and the Rev. Horace E. Hayden, all members of your Society, and published in Vol. I. of your Annual Reports, very little data is to be found bearing on local aboriginal pottery; therefore, the information herein given is almost entirely gathered from original observations made by the writer of specimens of pottery found in the collections of A. J. Griffith, Capt. L. Denison Stearns, Christopher Wren, the "Zebulon Butler Collection" and others all owned by your Society.

It is difficult to procure a whole specimen of pottery, at this time, most of the samples found consisting of small fragments or pot-sherds, which were either broken by those who used them or have since been broken by the farmer's plow or the frequent freshets of high water along the river. When we remember that this fragile ware has been exposed to all the vicissitudes of weather and time for a period which

may safely be given as several hundred years, it will be seen that such specimens as are found have lost much of their beauty and do not bear a very close resemblance to what they were when newly made.

It is doubtful whether more than fifty whole specimens of the local pottery are in existence at this time, and your Society is the possessor of a goodly number of them. The likelihood of adding largely to the list is not very great, although an occasional whole pot may be found from time to time. In the year 1903 your Society secured a fine pot or urn, which was found under a ledge of rocks on Babb's Creek, Tioga County, Pa., in the year 1876, by a party of hunters. It is undamaged with the exception of a small hole in the bottom and a small piece broken out of the rim.

Because only broken fragments of pottery are now to be found, very many collectors think them of no value and not worth picking up, which is a great mistake. Collectors quite frequently confine their efforts to gathering only such specimens of implements as have some of the qualities of what they consider beauty about them, either in material or workmanship, while the coarser implements may have been quite as useful in serving the needs of the people who made them, and be quite as instructive to the student in his study of these dead and gone people.

The specimens of pottery in the writer's collection were almost all found by himself, so there can be no question about the locality from which they came.

Occasion is here taken to give credit to the writings of George Catlin,[6] Col. Charles C. Jones,[7] Prof. Wm. H. Holmes,[8] Rev. Wm. M. Beauchamp,[9] Mr. J. M. M. Gernerd,[10]

6. The George Catlin Indian Gallery. Smithsonian Report, 1885, part 2.

7. Col. Charles C. Jones. Antiquities of the Southern Indians.

8. Prof. William H. Holmes. Twentieth Annual Report of the Bureau of American Ethnology, 1898–1899.

9. Rev. William M. Beauchamp. Earthenware of the New York Aborigines. Bulletin, October, 1898.

10. J. M. M. Gernerd. Now and Then. Volume 3, No. 11.

Mr. Clarence B. Moore[11] and Mr. J. W. Foster[12] for valuable assistance received from them in studying the general subject of aboriginal pottery. Special credit is given to the report of Prof. Holmes on "Aboriginal Pottery of the Eastern United States," above referred to, which contains the most complete discussion of the subject up to this time, and which places within reach of the student much data not previously accessible. The work is exhaustive and will doubtless be the highest authority for many years to come on the subject and will always hold a high place as an authority.

Thanks are also given to the Bureau of American Ethnology, Washington, D. C., for illustrations used from their 20th Annual Report, and to Mr. John W. Thomas of Beach Haven, Pa., for accurate pen drawings of rims and outlines of local pottery shown in Plate 6.

While the aborigines were experts in selecting stones suitable to their uses and flaking them into arrow and spearheads, the operation of making flaked or chipped stone implements, which merely changed the shape of the material used without altering its general character, was a comparatively simple one. In a few instances, however, they were acquainted with more complicated operations, somewhat resembling and related to our modern modes of manufacture. Among these may be mentioned the preparation of hides, without the use of the astringent properties of barks, fitting them for wearing apparel, tent coverings, etc.; but perhaps the making of clay pottery was the most complex art with which they were acquainted. The practice of pottery making implies the selection of proper kinds of clay, tempering it, at times, with one or more other substances to fit it for use, mixing these materials thoroughly to form a homogeneous mass, allowing the compound to season for a time be-

11. Prof. William H. Holmes. Earthenware of Florida. Clarence B. Moore collection.

12. J. W. Foster. (See Plate 4.)

fore using, molding it into different forms which had been preconceived in the mind, and finally subjecting the finished product to the action of heat by burning, and by this means causing it to become hard and impervious to water.

Thus in this crude pottery we see a beginning of manufactures, an "infant industry," if there ever was one. To the seeing eye and comprehending mind of to-day a common wooden-handled shovel suggests the penetration of the earth's crust in mining operations for iron, coal and limestone, the use of high explosives in blasting these materials from their bed in the earth, the hoisting of them to the surface by the use of steam power and improved machinery, the transportation of all these materials to a central plant where by the application of intense heat they are made to produce a commercial metal, the reduction of the first crude metal or "pig iron" to thin sheets of steel, the shearing, punching and polishing of these sheets into suitable form and shape, fitting them for the blade of the shovel; the cutting of the timber in the forest for the shovel handle, and the seasoning, sawing, turning and bending of it into the desired shape. So the making of a simple shovel comprehends and suggests the carrying on of all the complicated and diversified operations enumerated by the use of the most modern and improved methods.

If we had as full a knowledge of the ways and means by which the early man worked out his results, we could not help knowing, to some extent at least, what manner of man he was and also somewhat of his mode of living and degree of general culture. Right here is the kernel of the whole question. A study therefore of the pottery itself, into which was put more of themselves, perhaps, in thought and ingenuity, than into anything else which they made, ought to assist us to knowledge in this direction.

Early man generally worked toward his simple ends by uncomplicated and direct methods, while in our day, for pur-

poses of quick, large and cheap production, the beginnings of things very often consist in the making of tools and machinery, many steps removed from the result aimed at and which offer no suggestion as to what the final product is to be. The making of tools is very often more complicated and difficult than is the making of the thing for which the tool is intended. The machinery for making pins or railroad iron well illustrate this point.

Of all living creatures upon the earth it is given to *man* alone to make or create things to serve his wants and pleasures; he alone has the faculty of conceiving a picture of something new in his mind and of giving this mental creation definite and tangible form, by the use of his hands and such tools as he may find necessary to assist him. By the exercise of their reasoning and creative faculties mankind has advanced from a condition of savagery and barbarism, in which the getting of a bare subsistence was the most serious problem in life, to our present enlightened and happy state in which, besides the necessities, we have very many of the luxuries and superfluities of life. All other living things, except man, are now in the same condition as they have been in the past, they build their homes, take their prey, eat of the grasses of the field and drink water from the brook just as they have always done, taking all things as they find them in a state of nature.

When we think of the improved conditions in which we live, compared with our ancestors of even one hundred years ago, we should be pleased and thankful that we live in this happy age, and instead of finding fault and complaining we should fully enjoy and appreciate the many good things which we have. And if, at times, everything does not go smoothly we should take up our load and carry it and not try to throw it upon some one else who has burdens of his own to bear up under. It seems at times that the inclination to make complaints and find fault with things about us is

inversely to the advantages and good things which we possess, that the more we have the more it takes to please and satisfy us.

Most of the discoveries of early man, by which he gained an insight into the secrets of nature, were doubtless made accidentally and without intelligently directed effort on his part. In localities where there were no volcanoes, in rare instances fire would be produced by lightning striking some inflammable material in the forest, and the fire so started would be carefully preserved to prevent it from becoming extinguished. History tells of cases in which fires have been kept continuously lighted for centuries in places of religious worship, and that it was the duty of certain officers of the temple to see that they never became extinguished. In some cases at least all of the fires in the homes of the people were traceable to these religious fires, from which they had been started directly or indirectly.

This custom of keeping a fire continuously burning may have had its origin in the difficulty, in early times, of starting a new fire, and by long use have become changed into a religious or ceremonial practice. Many people living to-day remember the time when a common way of starting a *new* fire was to go to a neighbor's house and get live coals from their fire and carry them home. This was before the days of friction matches, to which we are so accustomed that we rarely think of the very great convenience they are to us or the inconvenience it would be not to have them.

The discovery of glass-making is supposed to have been made accidentally by the building of a fire on the sand, and by the mixture of the potash from the fuel with the sand, under a high degree of heat, the proper conditions were brought about to produce a crude glass.

The writer found a rounded pebble near an Indian campfire which had been heated, and the entire outer surface melted into glass. The stone contains all of the elements

necessary to making glass, and if the man who built the fire could have reasoned from cause to effect, on finding this stone, he would have been possessed of a first knowledge of glass-making.

The fact that clay subjected to heat becomes hard and changes its character, fitting it for many uses, may have been originally discovered in a quite similar manner to glass-making. From such crude and small beginnings man, slowly and with difficulty, found means to satisfy his needs and to improve his condition.

In the present day man does not depend on accident to accomplish his purposes, but, knowing the end he wishes to attain, he attacks the entire realm of natural things about him and by original research works patiently and intelligently toward the object he has in view. A good example of such research is the incandescent electric light, to make the thread for which, it is said Thomas A. Edison experimented with ten thousand different materials from all parts of the world before he found just what he was looking for. Chemical analysis and all the accumulated knowledge stored up in books are at his command to give him control of the properties of matter and assist him in his work.

All authorities agree that the time at which the plastic and fictile arts had their beginnings is unknown and that in Europe, Asia and Africa it was in the remote past before man kept any written records of his doings. In the Southwestern United States, Mexico, Central America and parts of South America, where the art of pottery making was carried on to great perfection, the indications are that it had been practiced for a very long time. In the eastern part of the North American continent, which includes our local field, students of the subject quite generally express the opinion that the making of baked clay pottery was probably not so old. The making of stone implements antedated the complicated industry of pottery making and it would seem that the aborigines

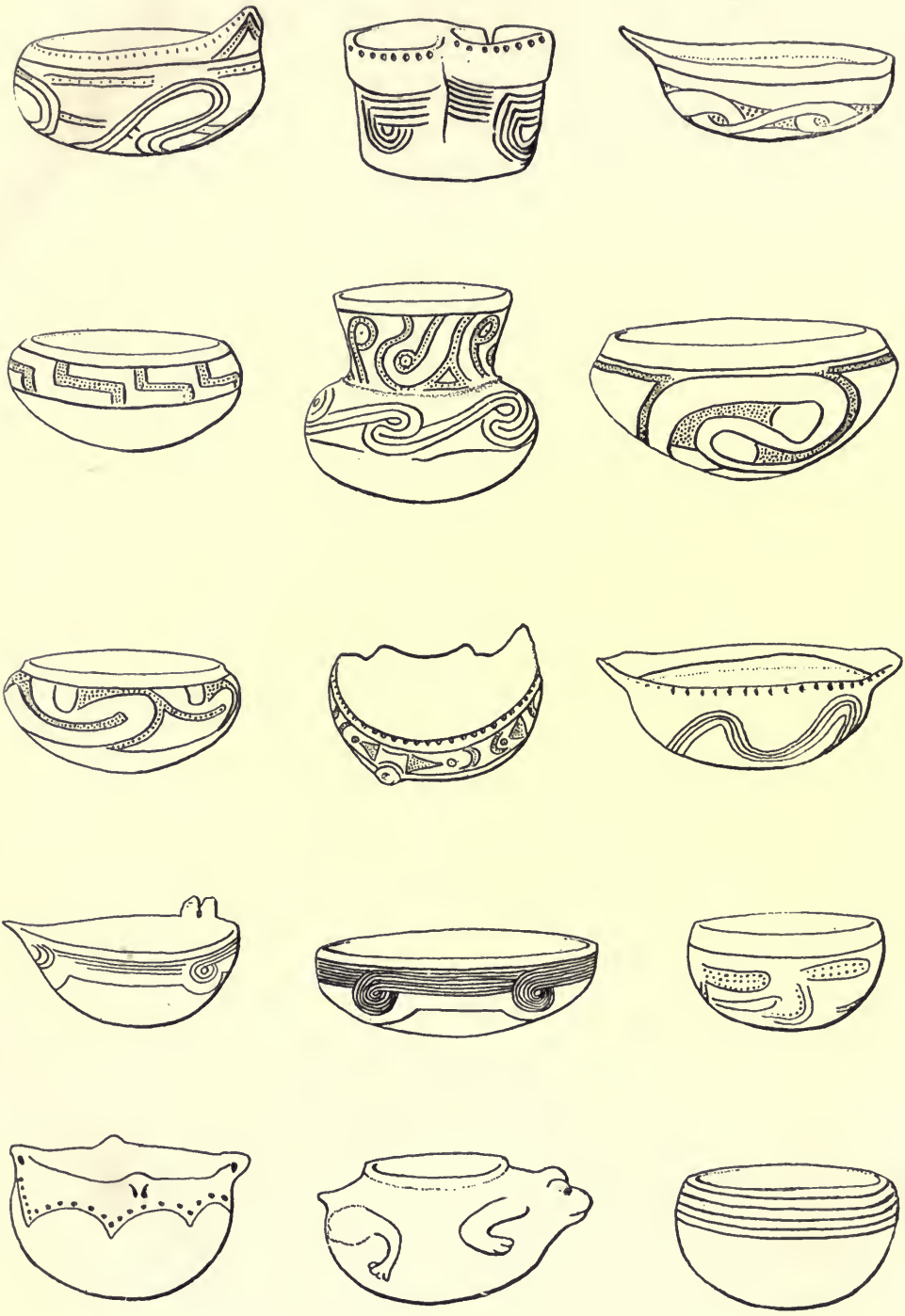


PLATE 10.

Designs and Decorations—Florida Gulf Coast. Clarence B. Moore Collection.
20th Annual Report of the Bureau of American Ethnology.

of this locality had not been practicing the latter art for a very great length of time. The making of pottery indicates a distinct advance over the simple striking of one stone with another in making stone implements, and if the white race from Europe had not come to this continent at the time they did, the aborigines would doubtless have gone on learning more and more of the secrets of nature and material things and improved their condition and mode of living.

A very serious limitation under which the aborigines labored also was in having very primitive modes of travel and transportation, in consequence of which they depended very largely on such materials as were found close at hand, and, for the same reason, ideas were slow in being transmitted between peoples who were separated by distance, as they did not often come in contact with each other, especially in a peaceful and friendly way.

EARTHENWARES.

In most parts of the world remains of pottery and earthenware are found among ancient ruins, and it is interesting to note that quite recently Dr. Hilprecht, of the University of Pennsylvania, claims to have unearthed from the ruins of the prehistoric city of Nippur, in Asia, an old library containing commercial accounts, deeds for lands, giving measurements by metes and bounds, contracts, receipts for payment of debts, etc., etc., all written on plaques or tiles of baked clay, and to which he ascribes an age of between five and six thousand years.

It is remarkable with what persistence baked clay retains its shape and other properties; it is not subject to the decay which affects all kinds of woods, nor to the oxidizing or rusting which eats up or destroys most metals, and it is difficult to imagine any of the ordinary processes of nature, except intense heat, which will much alter or destroy it. Because of this indestructibility objects of china, clay and glass dug

up from ancient ruins have been among the most useful in helping us to a knowledge of the habits, customs and modes of living of peoples about whom we have no other history.

It is a far cry from the simplest forms of baked and burned clay to the highest development of the art, and yet in all of its degrees of crudity and perfection the art is related. Beginning with the common building brick, which is perhaps the simplest form in which baked clay is used, and passing through all the variations of unglazed and glazed crockery, tiling, terra cotta ware, Majolica ware, iron stone and common china wares, up to the finest specimens of Sevres, Crown Derby, Royal Worcester and Limoges chinas and porcelains of Europe, and the very fine wares of China and Japan, we find a greater or less similarity in their manufacture. In the finer wares the chief differences consisting in the greater care taken in selecting, mixing and curing the materials and their more careful and exact manipulation in all the stages of manufacture. The making of the finest wares became possible only by the application of an intensity of heat, which produced vitrification, and with which the man of the Stone Age was entirely unacquainted.

The Indian squaw, seated on the ground, wrought out her crude pottery ware with her bare hands, aided only by a few simple tools, and solely for its utility; while the finely molded and decorated china wares of to-day are made in elaborately equipped factories, and serve largely to gratify our sense of the aesthetic and beautiful and go to adorn the homes of refinement, wealth and beauty. As royalty has been pleased in our time to become the patron of the modern china factory, so, doubtless, the chief of his tribe had the finest pottery made for him which the skill of his people could produce, and each in its time and place represented the highest degree of man's creative faculty and handiwork.

It may be said in beginning a description of the earthenwares found in Wyoming Valley and along the Susquehanna

River, that in many respects they were not nearly so finely made nor as artistically decorated as were those of some other regions.

In considering this point it should be born in mind that the better qualities of clays, suitable for producing the finer wares, are not found in the region under discussion, and unless brought into it would not be available. Again, the local tribes, getting a large part of their subsistence from hunting and fishing, were migratory and in all probability did not occupy village sites permanently nor for any great length of time; therefore they might not have devoted as much time and care to the making of their pottery, unsuitable for carrying from place to place, as would the dwellers in permanent villages in localities better adapted to the practice of agriculture or in more favorable climates.

It may also be remarked that in a warm climate where the principal diet consisted of fruits and vegetables, there would be more necessity for vessels in which to boil them, than in a locality where meat and fish were much used, as the latter could easily be roasted on the end of a stick or on a flat stone over the fire.

Many writers on the subject draw the conclusion, from the quality of the pottery, that the peoples inhabiting this region were of a lower degree of general culture than those of other localities. Without contradicting this, it would nevertheless seem that a consideration of pottery alone does not furnish enough data on which to decide the point, but that the whole range of implements made and used should be taken into account before we can have the question fully before us and form a final judgment. It may be said, in passing, that the local flaked, polished and pecked implements, quality of materials available being taken into account, are as well made as those of other regions.

The pottery of the Susquehanna River region was always made in simple and utilitarian forms, so far as the writer has

observed, and there was no effort whatever shown to get beyond such forms. With the exception of smoking pipes, which were frequently made of the same materials and in practically the same way as the pottery, no evidence has been found of baked clay being used for making any other things than pottery by the local tribes.

GENERAL FEATURES.

For easy description of the pottery, the vessel in this article has been divided into three parts, the bowl, the neck and the collar or rim.

1. The bowl, so far as the writer has observed, is always spherical or spheroidal in shape, with a round or slightly conical rounded bottom.

2. The neck generally occurs nearly one-quarter of the length down from the top and is nearly as large in diameter as the bowl itself, resulting in a wide mouthed vessel.

3. The collar or rim occurs at the top of the vessel and forms its mouth. In rare instances there is no distinct outward flare to the rim, and therefore no neck or collar, the shape being a simple truncated speriod, the top finishing with a simple inward curve as the wall of the vessel arches inward from the largest diameter.

Most of the vessels are finished at the top by a simple curve outward from the contraction of the neck, forming a very wide mouth, or in addition to such an outward curve by an inward or perpendicular bend forming an overhanging or cornice-like finish.[13]

In many instances in which the cornice finish is used the inner conformation does not follow the lines of the outside very closely, resulting in a thickening of the wall to give the overhanging effect.

In a number of cases the rim is given a different shape on the outside from the body of the bowl by being carried out

13. See outline of potrims, Plate 6.

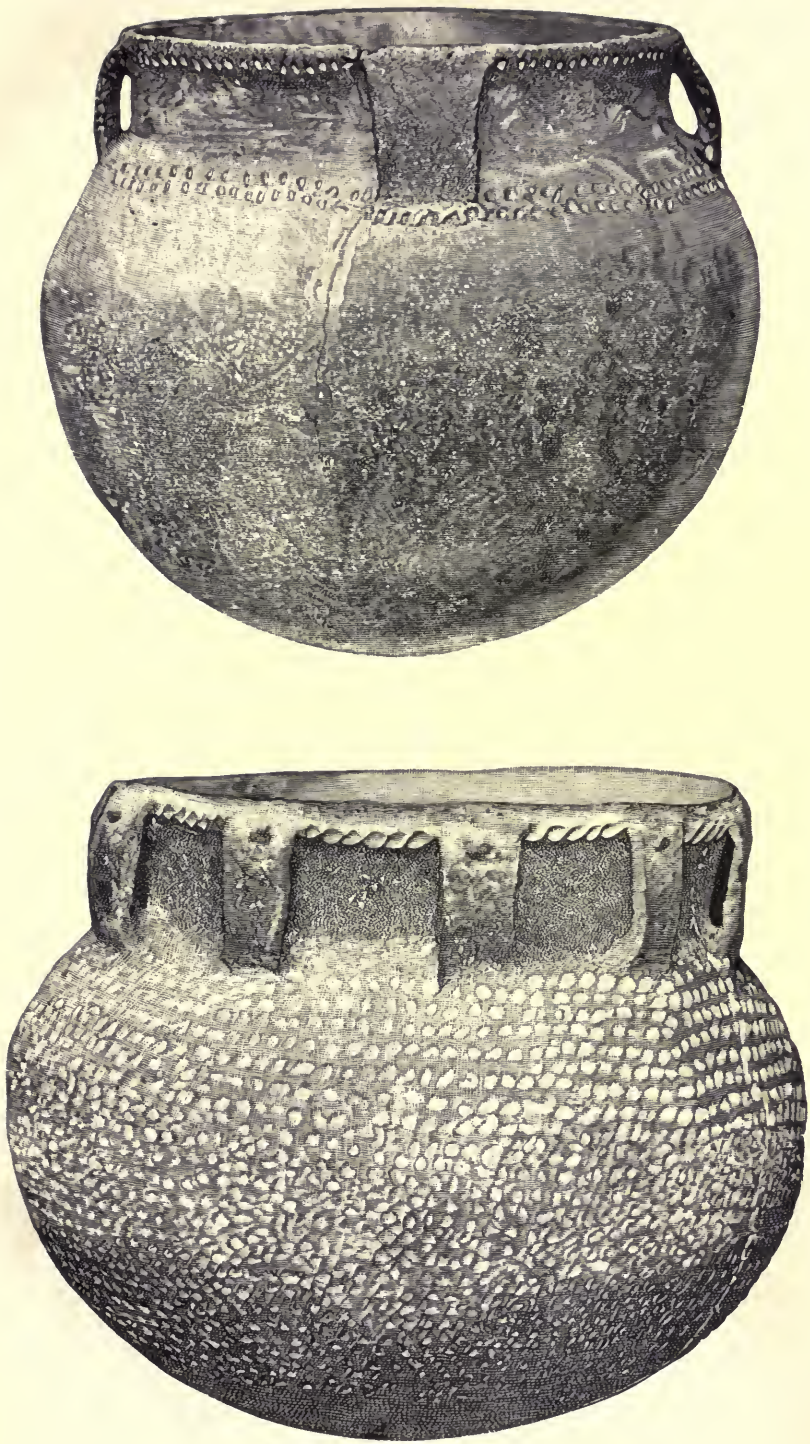


PLATE 11. (ONE-THIRD ACTUAL SIZE).

Davenport Academy Collection, Ark. Middle Mississippi Group.
20th Annual Report of the Bureau of American Ethnology.

and thickened, generally at two (or more) points, making an angular or square outside finish, while the inside retained a circular or oval shape. Mr. Frank H. Cushing, an eminent authority on the subject, now dead, attributed this feature to the shape which vessels made of bark assumed at the corners where the bark was joined together, and which the aborigines retained when dealing with an entirely different material.[14] In the Griffith collection is a large fragment of a soap-stone pot, in making which the coil method, used in making clay pottery, has been copied.

In these features we see a want of inventiveness among these people and the seeing of relations between things which were not at all related. There are some evidences of this same characteristic among the mechanics of to-day. The English artisan has been satisfied, until quite recently at least, to do things as his father before him did them, and has often been hampered by this short coming. The American method is to set aside all traditions and former practices and to try and adopt the simplest, cheapest and best method of reaching the desired end.

The top outline of the rim, which most often consisted of a simple straight line, was not unfrequently raised at regular intervals into obtuse points, giving the edge of the rim the reverse of a rounded scalloped effect. This feature is shown on some of the illustrations.

All of the features above enumerated were a part of the original design of the vessel which the potter had in mind, and were finished in the modeling, before the decorating was commenced.

We find that in a number of the early purchases of land by the white man from the Indians, a part of the purchase price consisted of metal pots and other utensils, which indicates that the aborigines fully appreciated the short comings of their own earthenwares and were glad to get the metal

14. Frank H. Cushing. Fourth Annual Report Bureau of Ethnology, page 520. (See Plate 5.)

hollowware made by the whites. In a treaty between Thomas Holme, president of the Provincial Council, and certain Indian chiefs, made the 30th of the 5th month (called July 30th), 1685, for the site of the present city of Philadelphia and adjacent country out to the Susquehanna—the consideration paid was "200 fathom of wampum, 30 fathom of duffels, 30 guns, 60 fathom of strawd waters, *30 kettles,* 30 shirts, 20 gun belts, 12 pair of shoes, 30 pair of stockings, 30 pair scissors, 30 combs, 30 axes, 30 knives, 20 tobacco tongs, 30 bars of lead, 30 pounds of powder, 30 awls, 30 glasses, 30 tobacco boxes, 3 papers of leads, 44 pounds of lead, 3 pairs of hawk belts, 6 drawing knives, 6 caps and 12 hoes."[15]

Governor Markham, on July 15, 1682, paid the Indians for certain lands in Bucks County, Pa., "300 Guilders in money and a long list of articles prized—350 fathoms of Wampum, 20 white blankets, 20 fathoms of stroud waters, 60 fathoms of duffields and scores of *kettles,* guns, coats, shirts, hoes, axes, saws, drawing knives, barrels of powder, barrels of lead, knives, glasses, pairs of shoes, copper boxes, tobacco tongs, pipes, scissors, combs, awls, fish hooks, needles, ankers of tobacco, rum, cider and beer."[16]

In July, 1742, 200 Indians, among them deputies from all the Six Nations, except the Senecas, Canastoga the Onondago being speaker, came to Philadelphia to receive the goods in exchange for the land west of the Susquehanna, purchased in 1736. "When the 45 guns, *60 kettles,* 160 coats, 100 blankets, etc., had been counted, Canastoga acknowledged compliance with the agreement, but said he thought that if the Proprietary himself had been present he would have given the Indians more, in consideration of their numbers and poverty. They knew the value of the lands,

15. Memoirs of the Historical Society of Pennsylvania. Volume III, part II, pages 132 and 133.

16 Howard M. Jenkins. Pennsylvania Colonial and Federal History, 1903. Volume I, pages 242, etc.

they knew too the land was everlasting and the few goods were soon worn out and gone."[17]

It is difficult to arrive with any exactness at the age of the pottery which is found along the Susquehanna River in this locality. The last of the Indians left this territory about one hundred and fifty years ago, so none of the pottery can be of less age than that period, and most of it is doubtless much older. Rev. Wm. M. Beauchamp, in speaking of the adjoining territory on the north, occupied by the Iroquois, expresses the opinion that probably none of the earthenware is over five hundred years old and most of it not nearly so old.[18] Another writer in speaking of the same locality says, "The art as practiced here (among the Iroquois) must have been still very near its origin—young as compared with the potter's art in the South. The only form prototypes that appear, and these are strongly suggested by the shapes of vases, are the bark vessels and baskets in common use in the region." * * * "The narrow limitations of form are indicated by the absence or rarity of bottles, bowls, plates, animal figures, compound shapes, flat bottoms, handles, feet and pedestal-like additions."[19]

MATERIALS.

In making all kinds of baked and burned earthenwares the most essential thing needed is the proper kinds of materials with which to work. The clays of the Wyoming Valley—Susquehanna River Region—are poorly adapted for making fine ware, being generally of inferior quality. While the local clays were doubtless considerably used by the tribes inhabiting the territory, the writer's investigations lead him to believe that a considerable part of the specimens found was made from clays procured in what is now the State of

17. Ibid, pages 395, etc.

18. Rev. William M. Beauchamp. Earthenware of New York Aborigines. Volume V, No. 22, pages 86 and 87.

19. Prof. William H. Holmes. Twentieth Annual Report Bureau of American Ethnology, page 162.

New York, as is mentioned in another part of this article. Up to this time the writer has been unable to discover any indications which would locate clay-pits from which materials were procured for pottery making, and knows of but a single mention of any such pits in the Eastern United States.[20]

Among potters, the world over, the discovery has been made that clay in its natural and pure state is seldom adapted for their use, but has to be tempered by the addition of one or more ingredients. The natural clay may be well adapted for modeling and decoration, but the application of heat causes it to expand and contract unequally and therefore to break easily when finished, and at times to crack or become distorted in the operation of firing.

The reason why some of the china wares of to-day break so easily is because of an improper mixture of the materials used or of an unequal distribution of the clay, making it thicker in some places than others, resulting in an unequal shrinkage in the finished piece when cooling and a strain upon it which causes it to break very easily. Housewives know that some of their dishes break at times from causes which they do not understand. Clays which in the pure state do not stand firing well, in the language of the potter, are said to be "too fat," and he corrects the fault by mixing tempering materials with them.

The aborigines had discovered this quality in clays and they corrected it in exactly the same way as the modern potter does, except that while in our day we have machinery which grinds all of the ingredients to an impalpable powder, the stone age man had to use his materials in a much coarser state, as he lacked the means for pulverizing them. The Susquehanna River pottery shows the use of such tempering

20. Mr. S. L. Frey, writing in 1885 of an early Mohawk Fort in Fulton county, N. Y., says: "The pits from which the clay was taken are at the foot of the hill on which the village stood; they are abundant all along a little stream that trickles over the huge boulders and logs, and through a tangle of ferns and wild growths of all kinds. The holes were sunk through the upper soil to a bed of stiff, tenacious clay, which overlies the Utica slate at that point." Rev. W. M. Beauchamp. Earthenware of New York Aborigines, page 77.

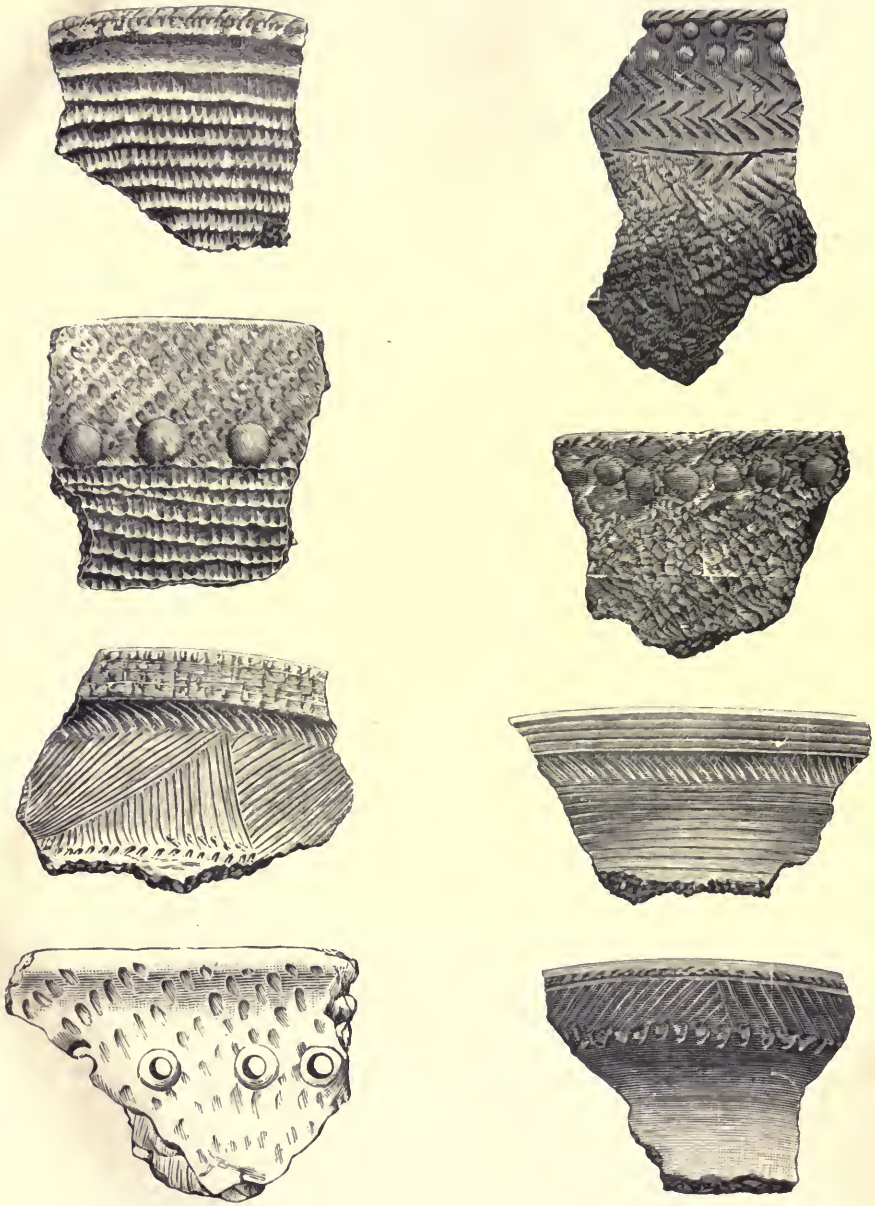


PLATE 12.

Pottery of West Branch of the Susquehanna River, Pennsylvania.
J. M. M. Gernerd Collection, Muncy, Pa.

materials, which generally consisted of pounded quartz, sharp sand, mica, soap-stone and shells, most of which produced a very coarse "dough."

The writer thinks that the very best wares found along the Susquehanna River were made of clay in which soap-stone and mica reduced to a fine powder were used for tempering. Soap-stone and mica are both materials which are not injured by heat, may be pulverized very fine as they are soft, and they are also well adapted, when mixed with the clay, to taking the incised decorations so much used.

It is generally accepted that water was used in giving the "dough" the proper consistency for pottery making. It is here suggested that melted fat may have been used instead of water, which being well distributed through the entire mass, would facilitate the operation of burning and cause it to be more general and uniform throughout the vessel. Any surplusage of fat or oil would also tend to make the utensil water proof. Experiments along this line would be interesting and might be productive of new knowledge on the subject.

Most of the tempering materials mentioned above have been used by potters in other parts of America and in Europe.[21]

It may be remarked that vessels in which powdered shells were used as a tempering material, must have been used for purposes in which they would not come in contact with water, because in the burning the shell became changed into lime and the property which burned lime has of slacking when it comes in contact with water is well known.

MODELING.

The exact manner of modeling pottery in all its phases by the aborigines has been the subject of much discussion, but up to this time it does not yet seem to be fully understood. There is, however, an entire absence in the finished work of

21. Prof. William H. Holmes. Twentieth Annual Report Bureau of American Ethnology.

anything which would indicate the use of the potter's wheel or of any similar mechanical device.

The art of pottery making was practiced along the entire length of the Susquehanna River, but the examples described and shown in this article, except such as are inserted for comparisons and locations given, are confined to the North Branch of the Susquehanna River from the New York State line to its junction with the West Branch at Northumberland, Pa.

Roger Williams, George Catlin, Du Pratz and Butel Dumont, James Mooney and most other writers on the subject say that the pottery was made by the women, while a few writers say that they saw the men making it. The authorities generally agree that the clay pipes, made of the same materials and those made of stone also, were the work of the men.

At the Louisiana Purchase Exposition, in St. Louis, Mo., in the year 1904, the writer saw a Cocopa Indian woman from Arizona making pottery, which she did in about the following manner: The clay used seemed to be of inferior quality, tempered with ordinary sharp sand, such as plasterers use in mixing their mortar. Having no sieve with which to separate the large and small particles of sand, she placed it on the lid of an old tin can, and by tilting the lid and giving it a rocking motion from side to side she caused the larger grains to run to the bottom, and by this means was enabled to secure the finer particles which she wanted for use. The tools she used for molding a clay pot consisted of a baked clay implement somewhat larger than and resembling an ordinary door knob, with a stem or handle about four inches long, projecting from one of the flat sides, and a small wooden paddle made from a piece of a dry goods box.

Seating herself on the bare ground with her limbs extended at full length before her, she held the clay implement in her left hand on which she placed a flattened ball or "pat"

of clay, containing as much of the moderately moistened clay as would make the vessel she was working upon. With the wooden paddle in her right hand, being right handed, she beat the clay down, causing it to spread over the "door knob" implement and to hang down over the edges. From time to time, as the work progressed, she moved the tool held in her left hand about on the inside of the vessel as the necessities of the case required. After the vessel had been largely molded with the help of the two simple tools, she discarded them entirely and, turning it over on its bottom, she completed the rim and finished it with her bare hands. The pot, which was of small size and simple shape, was made in from fifteen to twenty minutes. It was then allowed to dry for some time in the air, and in a day or two was decorated with a brown pigment in a simple design and finally burned in a fire built in an old tin wash boiler. On examining a number of specimens of the ware made by this woman, I found most of them cracked, and asked the reason. She replied that the clay was different from what she was in the habit of using at home and did not work well. I asked the interpreter why the woman did not experiment with different ways of tempering the clay, and was told that it would do no good to suggest this to her because she would continue to put the same amount of sand with the clay as she was accustomed to doing at home.

Upon asking the interpreter why the Indian woman seemed unwilling to talk about her work, I received the reply that under their code of manners it is considered immodest for a woman to speak much to strange men, and I noticed afterwards that this woman was quite friendly and communicative to the ladies who were watching her working.

While it is difficult to tell how some of the local pottery was modeled, other specimens show plainly how this was accomplished. The plan of coiling a narrow strip or a wide band of clay, beginning from a centre at the bottom,

was used to some extent as is indicated in a number of instances.[22] Another method was to build the vessel up in sheets or layers, one upon the other, pains being taken to weld the different layers to each other. Both of these methods are shown by specimens breaking at the joints in cases in which the welding was imperfectly accomplished. In the case of the Tioga County pot, which is little more than one eighth of an inch thick and perfectly made, it would seem that some other method must have been used, perhaps the one used by the Indian woman at St. Louis, to reduce the thickness of the walls with exactness and to make them so thin.

Always when the coil system was used in this locality the surface was carefully rubbed over and made smooth so as to make the joints as solid and perfect as possible. In many cases the outer surface of the vessel was rubbed down to give it a smooth finish. In some cases a clay mixed to a finer consistency was used for a surface finish, which was also at times of a different color from the material used in the body of the vessel.

There is no indication of the use of glazing on any of the Susquehanna River wares, and even if the material used on the surface was suitable to forming a glaze, the heat applied was never strong enough to produce a glaze by vitrification.

After the modeling was finished, different writers on the subject, speaking of other localities, say that the vessel was dried in the air, sometimes in the sun, sometimes in the shade, before being subjected to the baking process. The manner of burning or baking the ware does not up to this time seem to be fully understood and is still a question for research and investigation.[23]

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22. Twentieth Annual Report Bureau of American Ethnology, page 51. (See also Plate 4.)

23. Rev. William M. Beauchamp, page 84, Earthenware of New York Aborigines, says: "In his Reminiscenses of Saratoga, 1880, Mr. W. L. Stone spoke of the remains

There is no data as to the manner of curing and burning the ware in the Susquehanna River region, but it was probably similar to the practice in other localities.

While there are greater or less marked differences in the pottery wares of different parts of the country, so far as the writer has observed, they all give evidence of having been produced by substantially the same processes, the best wares showing a greater degree of expertness in modeling, and greater care in selecting and preparing the materials, and all showing the use of a low degree of heat in the burning. The very finest local ware observed by the writer is made of a "dough" containing considerable mica, which sparkles on the surface, the tempering material being of almost as fine grain as the clay itself, possibly powdered soap-stone. It is not necessarily much decorated, quite often having an almost entirely smooth finish. It has been well burned and is exceptionally strong and tough, the chief object apparently having been to produce a strong and symmetrical vessel rather than an ornamental one.

The size of local pottery, in specimens seen by the writer, varies from a capacity of one quart to as much as ten or twelve gallons, and as a rule corresponding in thickness to the size of the vessel. In some cases, however, the thickness was not increased in proportion to size, the larger vessel therefore being rather fragile and weak because of the thinness of the walls.

Professor Wm. H. Holmes, an eminent authority on the subject, expresses the opinion that the art of pottery making, as practiced by the aborigines, was fully developed prior to

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of an old Indian pottery kiln 'within the cavities of which are yet found sun dried and fire baked vases covered with quaint ornamentation.' This was on the south side of Fish Creek, but may have been one of the refuse heaps often mistaken for kilns." Also Prof. William H. Holmes, Twentieth Annual Report Bureau of American Ethnology, page 161, says: "The baking (among the Iroquois) was conducted in shallow pits or on the surface of the earth, and in usual ways, no doubt, for the ordinary fire mottling is observed. No great degree of heat was applied."

the coming of the whites to America, and was therefore an original art with them and not one borrowed from Europe.[24]

Pottery making in its primitive simplicity is still practiced by some Indian tribes in the western United States, but in the nature of things it will be but a few years until it will have disappeared forever from the American continent.

DECORATION.

At the very inception of pottery making accidental lines or marks on the plastic clay would suggest its susceptibility to and a method of decoration. The first markings made intentionally may have been crude and irregular, rather to distinguish the property of different individuals from each other, than for purposes of ornamentation. It is to be presumed that long before any people reached the pottery making stage, man claimed ownership over that which his own (or his woman's) hand had made, that he took means to prove such ownership by identification, and that the whole community recognized such ownership. A beginning in decoration being made it would be but a step to more complex things and by simple evolution to the carrying out of systematic and definine designs.

24. Prof. William H. Holmes, Twentieth Annual Report Bureau of American Ethnology, page 24: "Anthropologists are well agreed that pottery making is not one of the earliest arts practiced by primitive man. Its beginnings probably mark, in a general way, the step from savagery to the lower stages of barbarism, as defined by Morgan. If the Aborigines of the eastern half of the United States be regarded as occupying, at the time of European colonization, the middle status of barbarism, it would seem that the practice of the art was not new, having probably extended through all of the first stage of barbarism. It is not possible, however, to arrive at any idea of the equivalent of this range of progress in years. * * * But that it was still comparatively young in some of the eastern and northern sections of the United States is strongly suggested, first, by the scarcity of sherds, and second, by a comparison of its functional scope with that of the ceramic art of the more advanced nations of Mexico and Central America, among whom it filled a multitude of important offices. With many of our nomadic and semi-sedentary tribes it had not passed beyond the simplest stage of mere vessel making, the only form employed being a wide mouthed pot. It may be questioned, however, whether degree of simplicity is a valuable index of age. It is possible that in a region where conditions are unfavorable the art could be practiced a thousand years without material change, while in a more favored environment it might, in the same period and with a people of no greater native ability, rise through a succession of stages to a high degree of perfection."

In describing and illustrating the decorations of the local pottery it would seem that some credit should be given to the artisan for things which he refrained from doing as well as for ideas which were carried out. The decorations of the local ware give evidence of a distinct scheme or plan in mind, with self-control enough to stop when it had been worked out. Those who have come most in contact with the living Indian of to-day, describe him as childlike and undeveloped in his mind. His pottery decoration as practiced many years ago proves, however, that he had a certain kind of mental maturity. If a child be given a piece of white paper and a lead pencil, as soon as it learns that the pencil will make lines on the paper it proceeds to draw such lines, and it will continue to draw lines until the paper presents a confused mass of irregular and confused marks without system or method. Its mind has not entertained the thought of regularity and system and it has no definite conception of beauty, it is immature.

In the Susquehanna River pottery the decoration was principally confined to the rim and neck of the vessel, although at times the upper edge and the inside at the top were decorated. The entire body was also covered at times with irregular markings of a somewhat uniform character. The writer has not been able to satisfy himself whether all of these body markings were intended for decoration, or some of them were merely incidental to the method of modeling the vessel and malleating or kneading the clay into a homogeneous mass, especially when the vessel was built up by the coiling method.

The decorations, which were produced by indentations and markings on the clay when in a "green" or plastic state, carried out a single definite idea which was adhered to in the entire decoration of a vessel.

The most common method of decoration used by the Susquehanna River tribes was with simple straight or curved

parallel lines, in rare instances "cross hatched," by free hand drawing on the damp clay. Specimens of the ware show evidences of the use of the *Roulette* or notched wheel, and also that a toothed implement similar to the edge of a serrated flint arrow point was used for decorating. One method of decoration, frequently met with, was produced by pressing the blunted end of a stick partly through the rim of the vessel at regular intervals, resulting in the formation of a series of bead-like protuberances, formed by the clay which was pressed forward by the end of the stick. The beading was sometimes formed on the outside, sometimes on the inside, and at times on both sides of the rim. Some of the specimens having this bead-like decoration lead the writer to think that they were made to serve another purpose than mere decoration and may have been used to permit the air or heat to expand the vessel at this point equally with other parts when over the fire. On much of the ware the irregular markings seem to be merely incidental or accidental tool-marks made in the modeling of the vessel. There are indications that some of the ware was colored over a large part of the outer surface by the use of a different colored clay, applied as a thin coating, and also that in a few instances a mere wash of pigment, similar to a coat of paint, was applied to the surface. From the long time the specimens have been exposed to the elements it is difficult to speak with positiveness on these points.

Instead of attempting a description of all the decorative designs used, the accompanying illustrations are given for the better understanding of this part of the subject, because an engraving shows them better than any word description can.

As a means of showing some of the differences between the pottery along the Susquehanna River and that of other localities, it may be remarked that our local pottery shows no use of any human, animal or vegetable design in the decorations,

nor of the use of any conventional figure or image. Neither were meander, zig zag nor scrolled lines nor stamps used, or, if used at all, very rarely.[25] It never was flat-bottomed nor stood on feet or a bottom ring of any kind, nor had it handles or a spout. It never had the small neck or bottle shape, nor was it made in the general form of the human figure nor of any animal or bird. All of the foregoing peculiarities are to be found in the pottery of other localities and are to some extent shown by accompanying illustrations.

STEATITE OR SOAP-STONE POTTERY.

The principal object of the present article has been to discuss and describe the pottery made of baked clay, but as the subject would hardly be complete without some mention of the soap-stone pottery used by the local tribes, a little space is here given to that part of the subject. Soap-stone pottery was used by the tribes living all along the North Branch of the Susquehanna River. This class of ware was cut out of the solid mass in one piece and plainly shows the marks of the tools used in cutting it. It was frequently flat bottomed and had rude handles or "lugs" by which to hang it over the fire. It is doubtful whether the clay pottery was ever placed directly on the fire, because of its fragility and round bottom, the usual manner of use being to heat stones and place them in the pot for boiling or cooking things. The soap-stone pottery, however, was placed directly on the fire, just as our own people do with their metal cooking utensils, soap-stone being strong and having the property of standing fire without injury. Vessels made of baked clay were much more numerous in the region than those made of soap-stone, but because of the greater strength and durability of the latter material, utensils made of it may have been quite as much

25. In a few instances the writer has found, on Shawnee Flats, small pot sherds with a stamped decoration; in one case the outer surface scaled off on being touched as though it had been prepared with a special coating suitable for receiving the impressions of the stamp. These were doubtless intrusive specimens which had been brought into the territory by visiting people from a distance.

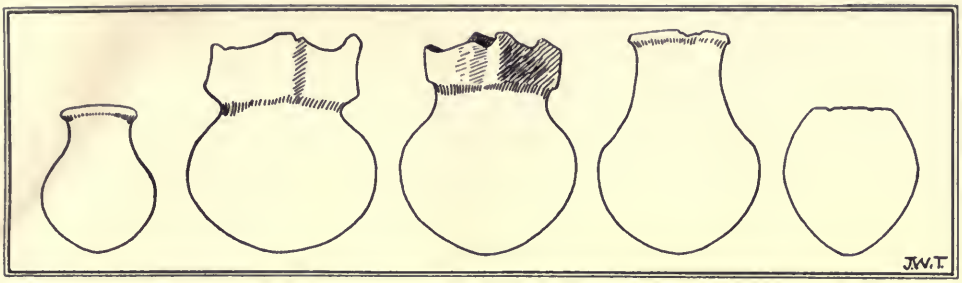
used, as one soap-stone vessel would stand as much wear as many made of baked clay. The body of the soap-stone vessel was frequently drilled through in a number of places and the writer has seen one example in which the perforations were so numerous as to give it the appearance of a colander. As soap-stone is not found in the Susquehanna River region the material must have been brought from a distance.

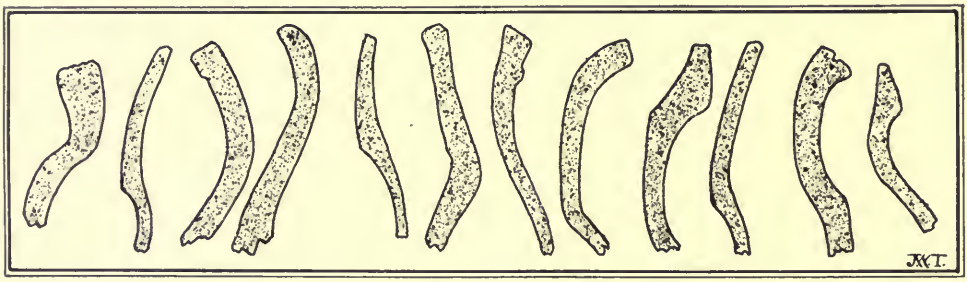
A peculiar circumstance which the writer has observed is that while clay pottery was quite common on the east or south side of the river at Nanticoke, he has found no indications of its use on the north or west side of the river at West Nanticoke. Numerous indications of the use of soap-stone have been found at West Nanticoke, at which place the most extensive camp site uncovered in Wyoming Valley was located. On the two banks of the river at Hunlocks Creek the same conditions as to pottery exist as at Nanticoke, there being much crude pottery at Retreat, with very little soap-stone, while near the mouth of the creek at Hunlocks Creek on the north bank of the river, soap-stone was considerably used, but baked clay apparently very rarely.

In conclusion it may be said that we do not have as much interest in the works of the American aborigines as we have in those of early man in Europe, Asia and Africa. This is very natural, perhaps, because in studying about them we have no suspicion that we are learning about our remote ancestors, as is the case when we study about the peoples who early inhabited the eastern hemisphere.

It is of interest, nevertheless, in the general study of mankind, that we include these people, because the stage of progress and conditions of life under which they lived can be better studied among those of them who survive than anywhere else in the world. Those living to-day are but slightly removed from the Stone Age.

Their stone implements are becoming more scarce as the years pass and many of them, which are even now in the





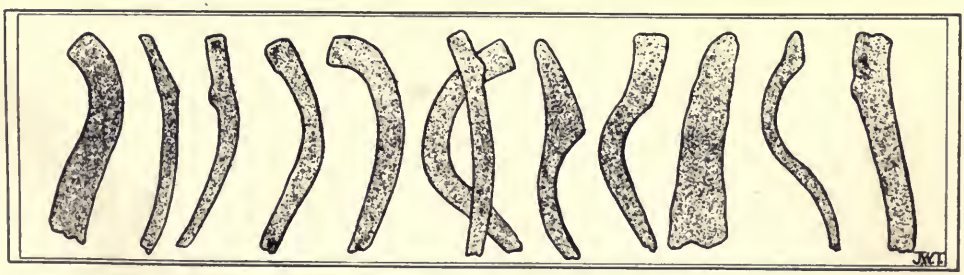


PLATE 6.

Outlines of Pots and Pot Rims, Susquehanna River Pottery.
In Collection of Wyoming Historical and Geological Society, Wilkes-Barré, Pa.

hands of our own people, have become lost *again* by being disconnected from the localities and conditions under which they were found, either through the carelessness or ignorance of those who found them. An implement which has become disconnected from the place where it was found is more surely lost in certain respects than if it were still buried in the earth.

The Indian, with all the distinctive characteristics which he possessed when the white man found him, is fast passing from the scene. Measured by the lives of nations and peoples, it will be but a short time until the sun shall go down on the western confines of our country upon the last remnant of this interesting people, and, when he shall rise again, there will be no single specimen of the aboriginal American living to enjoy the light and warmth of his rays. The Indian will then be numbered among the races which have had their day and passed away.

"Once in the flight of ages past,
There lived a man; and who was he?
Mortal, howe'er your lot be cast,
That man resembled thee."

James Montgomery—"The Common Lot."

NOTE.

The written and the spoken word both have their limitations, and it is impossible to set down in print all that was said when, in the reading of a paper, the opportunity was taken to make impromptu comment on some feature of the subject which presented itself in the paper.

During the reading of this paper the reader digressed from time to time to make some point more clear, or the better to illustrate an idea. The pebble, found near a campfire, the outer surface of which had been melted into a crude glass, referred to on page 145, was shown. The coiling method of building up a vessel was also illustrated by one of the candy baskets which are sold by confectioners during the Christmas holidays, and this feature seemed to be much appreciated by the boy in the audience to whom it was given after it had served its purpose.

The reader also showed specimens of various kinds of decorated chinawares and of the Rookwood pottery ware, made at Cincinnati, Ohio, perhaps the most distinctive kind of plastic ware made in America at this time, when discussing the similarity in the manufacture of all these wares.

The designs and shapes of Susquehanna River vessels were also illustrated by reference to the actual specimens, and it may be here remarked, that the accurate outlines of pots and pot-rims, shown in Plate 6, are drawn from specimens in the collections of The Wyoming Historical and Geological Society.

PLATE 7. (TWO-THIRDS ACTUAL SIZE.)

Decorations of Susquehanna River Pottery. Christopher Wren Collection, Wyoming Historical and Geological Society, Wilkes-Barré, Pa. See description, page 167.

Description—Plate No. 7.

This plate shows specimens all of which were found along the Susquehanna River. In referring to all plates the specimens are counted from left to right crosswise, beginning at the upper left-hand corner.

No. 1 shows the use of the "roulette," as described by Prof. Wm. H. Holmes, a common decoration in this locality. It is also decorated on the edge and inside of the rim. No. 2 shows the "repoussé" design, the nodes of beading being on the inside. Nos. 2, 8, 12 and 15 have markings on the surface, which seem to be incidental markings of the tools used in manufacture, previously mentioned. No. 3 shows the "Chevron" decoration, and this specimen resembles those of New York State quite closely. No. 4 has the cornice-like design at the top of the rim, and is quite common in the Susquehanna River region, perhaps one of the distinctive differences from the Iroquois ware of the North. No. 5 is chiefly peculiar for the diamond cross-hatched design, rarely met with in this locality. No. 6 is of a design quite frequently met with, the top finishing with a slight outward flare, there being no collar at the top and a very slightly contracted neck, if any, making a wide-mouthed vessel. Almost without exception such shapes are quite thick and are decorated for a short distance on the outside at the top, on the upper edge of the rim and for a short distance down on the inside. No. 7 has a smooth finish on the outside, but is decorated on the edge of the rim and for a short distance inside. The outward flare of the rim is very marked in this specimen. No. 8 has the "repoussé" design as has also No. 9, the nodes showing on the outside, the clay having been pressed outward instead of inward, as in No. 2. Nos. 9 and 10 are both of unique decoration, and indicate that their makers had original ideas. No. 9 is the most elaborately decorated piece the writer has seen among many thousands of specimens. The decorations are made by incisions in the moist clay, the commonest

method in use in the region, but they have been so elaborated as to cover the entire outer surface, the edge of the rim and for some distance down on the inside. The specimen is from Rupert, Columbia County, Pa. No 10 is of primitive design, the rim apparently running straight up and down and the material of which it is made being also of inferior quality, which is checked with numerous fine cracks. Its chief peculiarity is in the decoration, which consists of pits in the surface, made with the blunted end of a stick and arranged like a festooning, hanging down from the top of the rim. No. 11 has a peculiar decoration, produced by the repeated impress of a dart-like figure on the soft clay. It also shows plainly where the welding took place in building up the vessel by the coil or band method. No. 12 and also 2 and 8 resemble, in the surface finish, specimens of the Potomac-Chesapeake bay regions, as shown in the 20th Annual Report of the Bureau of Ethnology, and there classed as Algonquin ware. No. 13 has neither neck nor rim, ending at the top with a simple curve inward from the largest diameter, before mentioned. No. 14 is chiefly peculiar for depth of the lines, which seem to carry out a set design but were afterwards much obliterated, as though they served the purpose also of maleating or kneading the clay to weld it together. No. 15 is shown because of its crudity of design and absence of surface finish or decoration. This specimen and also the one shown in the middle on the bottom line of Plate No. 2, seem to be emergency ware, made hurriedly for a temporary use without any effort at elaboration whatever. They were both found at Retreat, near Hunlocks Creek, Pa.

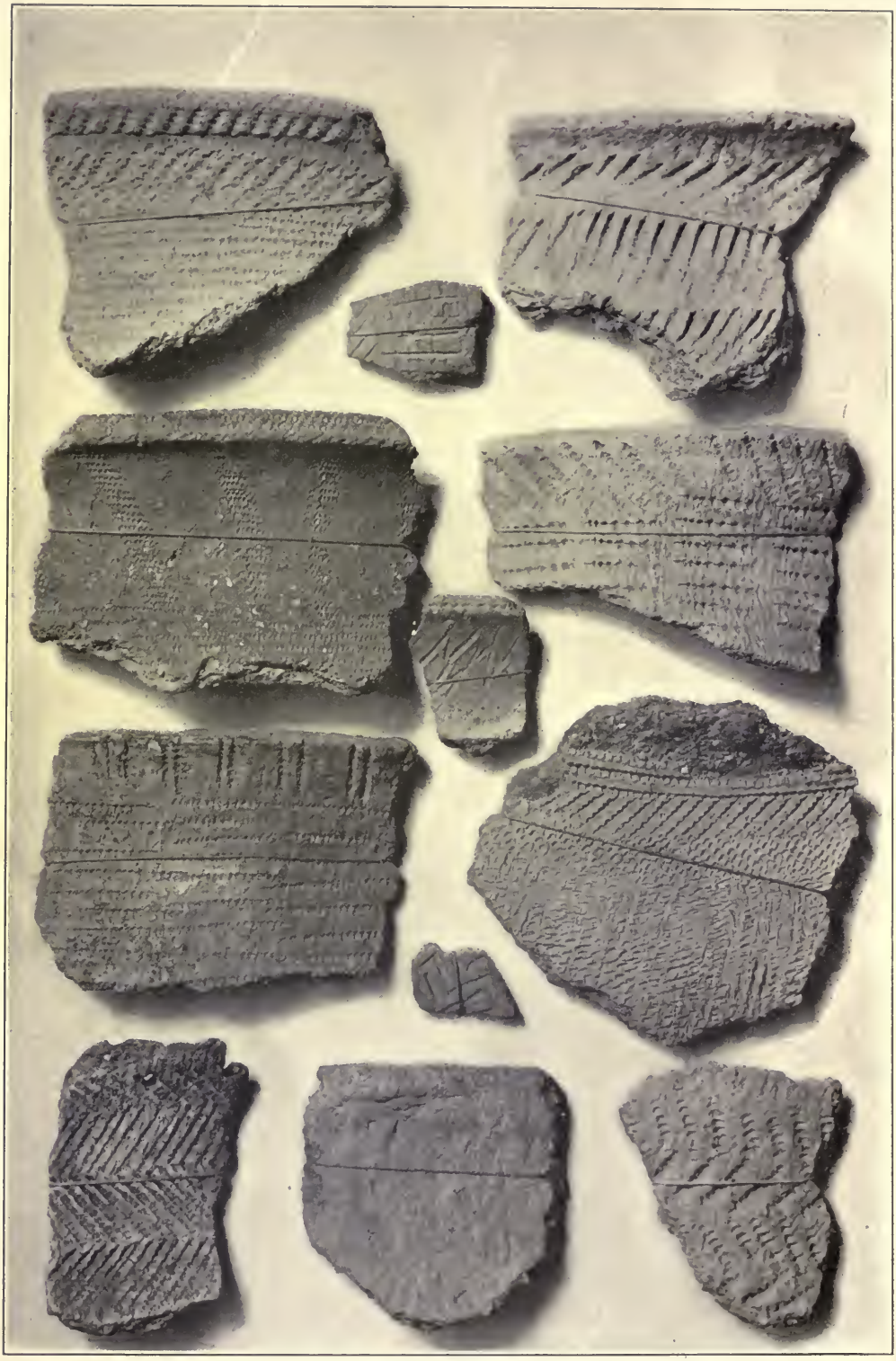


PLATE 8. (TWO-THIRDS ACTUAL SIZE).

Decorations of Susquehanna River Ware. Christopher Wren Collection, Wyoming Historical and Geological Society, Wilkes-Barre, Pa. (See description, page 163).

PLATE 9. (TWO-THIRDS ACTUAL SIZE).

Comparison of Susquehanna River Ware with Iroquoian Ware of New York. Christopher Wren Collection, Wyoming Historical and Geological Society, Wilkes-Barré, Pa. (See description, page 170.

Plate No. 8.

This plate shows only specimens of the Susquehanna River region. The six large pieces shown on the first, second and third lines are parts of quite large vessels with a capacity of from six to ten gallons each. None of these six specimens resemble the samples of Iroquoian ware, which have been kindly given the writer by the Rev. W. M. Beauchamp. Neither do they seem to resemble very closely the Chesapeake-Potomac wares, as illustrated in the 20th Annual Report of the Bureau of Ethnology. A method of decoration, seen in eight of the specimens, is by means of the impress of a notched or toothed tool, similar to a serrated arrow point. On the first specimen the "roulette" was used. The small specimen in the middle of the first line shows a square cross-bar decoration, rarely met with in the region; the middle specimen of the second line shows a diamond-shaped cross-bar design, also seldom seen. The small piece between the second and third lines is, with one exception, the nearest approach to a stamped design the writer has ever seen in the region. The middle specimen on the fourth line is very crude and shows but little attempt at symmetry and no decoration whatever; it is however strong and made of good material and would give better service than some others.

It is hoped the illustrations will more clearly show the decorations than they can be described.

Plate No. 9.

This plate is given especially for comparison of the Iroquoian ware of New York State with the ware found along the Susquehanna River, which bear resemblances to each other.

The specimens shown on the three top lines are Susquehanna ware and were found on camp sites by the writer. The seven specimens on the two bottom lines were kindly furnished the writer by the Rev. Wm. M. Beauchamp of Syracuse, New York, and are from Jefferson County, N. Y. Special attention is directed to No. 3, on the top line. It very closely resembles specimens figured in "Earthenware of the New York Aborigines," by Rev. Wm. M. Beauchamp, and there can be but slight doubt that it is of Iroquoian make. It was found by the writer on the river flats in Wyoming Valley, opposite Plymouth, Pa.

An actual comparison of the specimens themselves from the two localities shows much closer similarities in texture, color and those indescribable general features which give them their character, than can be seen in an illustration or described in words.

From an estimate made from a number of hundreds of specimens of Susquehanna River pottery the writer is led to believe that not less than one-third of them have features of what he, at this time, thinks is Iroquoian ware. About the same proportion seems to bear resemblances to the Chesapeake-Potomac wares, judging, however, only from illustrations. He hopes that something in the present article may enable the man with the "seeing eye" to identify things which are beyond his own range of vision.

Leaden Image of the Virgin Mary with Plaster Moulds; also Brass Cross, found in Wyoming Valley.

ROMAN CATHOLIC INDIAN RELICS,

IN THE POSSESSION OF THE WYOMING HISTORICAL AND GEOLOGICAL SOCIETY,

BY

CHARLES F. HILL.

READ BEFORE THE WYOMING HISTORICAL AND GEOLOGICAL SOCIETY, APRIL 15, 1905.

Among the very valuable and interesting collection of Pennsylvania relics in the possession of the Wyoming Historical and Geological Soceity are a number of Roman Catholic emblems which, of themselves, are a study and the subject of this sketch.

About 1885 Charles W. Goedecke, son of A. P. Goedecke, and Stephen Shellhammer, while engaged in tracing a north and south survey line on the Matthew Conrad tract in Denison Township, on the north side of the Nescopeck Creek near a living sand spring, found a pile of stones which indicated a fire place, and evidently had been used as a camping ground. In prosecuting their search further in front of this fire place they found some broken arrows and a number of plaster of paris molds and images imbedded in the sand. The images consisted of a Virgin Mary and crucifixes. A portion of this find only, found its way into the collection of the Society. Charles P. Goedecke, one of the finders, was killed by lightning in West Virginia. After his death his father made several unsuccessful attempts to find the spot with a view of making further explorations. It is, however, near the trail made by General Olewine and his command on their expedition to the relief of Wyoming, and also near the warriors' path, as will be seen by reference to the warrantee map of Luzerne County, near the boundary lines betwixt Butler and Denison Townships.

There are two molds and one leaden image of the Virgin Mary in the possession of this Society. One mold forms a cube of two inches square; the opening into which the lead was poured is in the base of the mold. The leaden image found in this mold shows the Virgin Mother with arms folded, but without the Holy Child Jesus. It is one and three-fourth inches long. The other mold is the lower half of the mold two and one-half inches long and two and one-quarter wide. The leaden image which it once contained represented the Virgin Mother with the Holy Child Jesus

in her arms. Both molds are roughly made, nothing but the inner forms showing what they are.

As to whom these relics belonged and from whence they emanated we can only conjecture by turning on the search-light of history, for whatever at this distant day it may reveal to us. These relics come down to us from the days when the French were in possession of Canada and the western part of now the State of Pennsylvania, which they regarded within the limits of the Louisiana territory, and of the French and Indian War.

On February 17th, 1754, the Ohio Company began the erection of a fort at the forks of the Ohio. It was not yet completed when the French, under Contrecoeur, April 16, 1754, appeared in sight, coming down the Allegheny River in large numbers. The French captured the post and erected Fort Duquesne in honor of the Governor General of Canada. This overt act of war was now resented by the English, and in April, 1755, there were said to be not two hundred French and Indians there, and that their great dependence for the next summer seems to be on the numerous tribes of Indians who had engaged to join them. The disastrous campaign of General Braddock is too well known to refer to here.

The French were very successful by intrigues and otherwise in allying the Indians, and lost no opportunity in gaining their friendship and converting many to their faith.

The Delaware Indians were adherents of the Moravian Church. Unfortunately they had been dispossessed from their lands in Eastern Pennsylvania through the Walking purchase, and were removed to the Susquehanna.

The contest between the French and English for the supremacy in Pennsylvania was very strenuous. The French at one time had planned to erect a fort on the Blue Hills, opposite Shamokin, now Sunbury, and to carry the war into Pennsylvania, but the English were first in erecting Fort Augusta.

Joseph Nutimus, a chief of the Delawares, who was dissatisfied with the outcome of the Walking purchase, and had been removed from the Forks lands to the Susquehanna, and located at the mouth of the Nescopeck, was a Moravian and friendly to the English. However, Conrad Weiser, the Indian agent and interpreter, suspected Nutimus's loy-

alty, and says that the author of the numerous murders of the people of Pennsylvania is Onionto (the French), and that they have prevailed upon the Delawares at Nescopeck who had given their town a place of rendezvous for the French and had undertaken to join and guide them on the way to the English.

About this time Weiser sent two spies, Silver Heels and David, a Mohawk Indian, from John Harris's (now Harrisburg) to Nescopeck to learn what was going on there. Upon their return they reported that they saw 140 warriors dancing the war dance; that they expressed great bitterness against the English, and were preparing an expedition against them, and thought they would go to the eastward. At a council of the Delawares on the West Branch, and held at Shamokin, it was decided, in order to avoid an invading army from the French to go to Nescopeck for safety. Tacknedorous, alias John Shikellimy, says:

"I went with them to Nescopeck and took my family with me. After awhile I found the Nescopeck Indians were in the French interest. I, with my brethren and others, then began to feel afraid and returned to Shamokin."

In November, 1755, occurred the burning and plundering of Gnadenhutten (now Weissport) and the slaughter of the Moravian missionaries, and the long list of murders that immediately followed, in this former home of old King Nutimus, after which the location of the 140 French Indians who joined in the war dance at Nescopeck became a mystery. The finding of these relics on the headwaters of the Nescopeck, taken in connection with the circumstances given, forces the conclusion that they belonged to these same French Indians. And again, Captain George Croghan in his journal under date July 19th, 1757, says the French have gone so far as to bribe a party of Ottowas to watch the road Tedyuscung came down, on his way to the the treaty at Easton, with a view to killing them and preventing the success of the treaty.

Now aside from the plaster of paris molds and the few leaden imagas molded in them, we come to another relic, a brass crucifix, also in possession of the Wyoming Historical Society, which was thus described by a reporter of the Wilkes-Barré *Record*, when first found:

"An interesting relic was unearthed the other day on the tract of land at the lower end of the city, near 'Firwood,'

now being laid out into lots. It is a crucifix, and was found in an Indian grave by Wm. G. Downs, who parted with it to Col. W. J. Harvey, who presented it to this Society. In the same grave with it were perhaps a quart of beads. The crucifix is apparently of brass, nearly two inches long. On one side is Christ on the cross, below is a skull and cross-bones. On the other side is a figure of the Virgin.

"What a story this old relic would tell if it had the power of speech. How long ago it was buried there with its aboriginal owner we can only conjecture. All Indians had abandoned the valley when the first white settlers arrived in 1769, 121 years ago, and the pioneers left no record of any Indian burying grounds in the valley. So this crucifix must antedate the first settlement many years. How did it come here? The Jesuit Fathers were in Canada a century and a half before Wyoming Valley was settled, and their influence ramified all through New York and Pennsylvania. Was the dusky warrior who took his last sleep along the Susquehanna a convert to those intrepid French missionaries, or had he taken it from some enemy in taking the latter's scalp? Or were these crucifixes sold among the tribes by hardy traders of whom we know two were in Wyoming Valley as early as 1737? These and other inquiries come to mind, but we can get no answer.

"The land on which the crucifix was found was an extensive burying ground and many relics have been found thereabouts. Unfortunately they have not fallen into hands where they will be treasured, but have been carried away piece-meal. It is said all the skeletons lay with their heads toward the west, and some have been found in a sitting posture. One skeleton was gigantic in size. It is hoped when the novelty of possession is past that the owners will turn over their interesting finds to the Historical Society. A fine string of blue beads, said to be made of Scotch stone, was also found."

This is not the only copy of this cross discovered in this State. Another is photographed and described in the late historical work entitled "Pennsylvania, Colonial and Federal," Vol. II., 313, found on the West Branch of the Susquehanna River, near the Great Island. It is identical with the one in this Society, which is one and seven-eighths of an inch long, and the arm is one and one-eighth of an inch long.

THE EARLY BIBLIOGRAPHY OF PENNSYLVANIA.

BY

HON. SAMUEL W. PENNYPACKER.

President Historical Society, Pennsylvania.

DELIVERED BEFORE THE WYOMING HISTORICAL AND GEOLOGICAL SOCIETY, MAY 13, 1904.

Mr. President, Ladies and Gentlemen:—I probably owe you an apology for appearing before this learned Society, upon so interesting an occasion as is the present, without having made more formal preparation, but, I sometimes think that an off-hand, informal address upon some subject with which a man is more or less familiar, appeals more strongly to an audience and is apt to be more attractive.

I suggested as such a topic that something might be said upon the early Bibliography of Pennsylvania.

Your Corresponding Secretary has suggested to me that a word such as "Bibliography" might be imprudent, and that he thought to make an address upon Pennsylvania Literature would be better. I prefer, however, to adhere to my own text, and though it may have, probably, a look of something technical and dry, I shall endeavor to tell you some incidents in connection with that pursuit which may, perhaps, soften its asperities.

If you have heard of me at all it has probably been as a judge of one of the county courts, or as Governor of the Commonwealth, but, long before I was either, I had developed a fancy for the pursuit of a book hunter Now, that is a pursuit which is not without its interest and attraction. It is very much like fishing in the sea, or going hunting in the woods. For five hundred years, since the establishment of the printing press, all over the civilized world, in the large cities and in the small towns men have been putting out books on all imaginable topics. Many of them perish almost

at once and never attract attention, but you can readily see that in such a mass, going around and about and among them, there is always an opportunity for discovery, and a sense of the accomplishment of some purpose in restoring the recollection of facts which have been apparently lost.

Of the book in which there was first announced the principle of the circulation of the blood there are but two copies known in existence. The man who wrote the book was burned, and the books were burned with him, but, in order to convict him of heresy the prosecutor and the court had to have two copies of that book and by this fortunate accident, although they have endeavored to destroy it, they preserved that much of the foundation of modern medical learning.

In the city of Philadelphia, in 1788, James Rumsey published a pamphlet upon the steamboat. That, as you see, was about twenty years before, according to the impressions we have had, that the steamboat was invented by Robert Fulton, when this book had been written and had been printed.

Some few years ago a man named Briggs wrote a work which he called the "Enemies of Books," and he had a chapter upon each one of these enemies. They were fire, water, dust, book worms, rats, and women. The good old housewoman in times past,—and you could not blame her,—finding these books lying around in the lower stories, crowding the corner cupboard in which it was important that she should put her wares, and in her way when she wanted to dust, presently seeing that nobody read them, sent them up to the loft, and after they had got into the loft a peddler presently came around with a silk handkerchief or a pretty piece of lace, and it was an easy thing to send this old rubbish away getting something for it that would be really useful, and in that way, very often, the books finally disappeared from the house, going into the possession of some paper maker.

I have said that there is always something of a sense of discovery in rummaging around and unearthing these past productions. The difference between the book-hunter and the fisherman or woodsman hunter, to which I have referred is in this, that the man who goes about with his hook or his gun intends to destroy something, but the book-hunter goes about with his inspiration for discovery and with the hope of preserving something which otherwise would have perished.

Some years ago there was a great controversy going on in the literary world of Holland as to the time or the date of the birth of the great Dutch Reformer, Menno Simons. He was a contemporary of Martin Luther, and the scholars in Holland were disputing as to which of two dates presented was correct; one set of them contending that he was born in 1492 and that he died in 1559, and another set that he was born in 1495 and died in 1561. Among others who were interested, contending for the 1492 date, was Dr. J. G. De H. Sheffer of Amsterdam. He was one of the most learned men of Europe, now dead, and wrote a most interesting history of the Reformation in the Netherlands. One of the authorities upon this disputed question was an old man named Gerard Rusen who lived at Hamburg. Gerard Rusen was a noted preacher and lived to be one hundred years old. His grandmother had known Menno, and it was therefore supposed that what Rusen said, came for that reason, with much authority.

That was the situation of the literary controversy, when one day I got a letter from a man out in Ohio saying to me "I have an old Menno Simon book, and if you want it I will sell it to you for two dollars." Well, he was out in Ohio, and I had not seen the book and knew nothing about what it might be, but it seemed to me that two dollars was not very much of a venture so I wrote to him and said, "send on the book." When it came it turned out to be a copy of the first

edition of the works of Menno, printed in 1646, but it was Gerard Rusen's copy and in which this old man had written down an account of a visit that he with two other preachers had made in 1670 to the birth-place and the burial-place of Menno in which it appeared that he had been buried in his own cabbage garden,—he was subject to such persecution in his lifetime,—that he was born in 1492, and died on a certain date in 1559.

I wrote to Sheffer and told him of this discovery which delighted him exceedingly, and he wrote to me to see whether I would not copy the notes and send them to him. This was done and he published a pamphlet on the subject in Amsterdam. Thus, by that happy accident, if you choose, there was settled upon this side of the Atlantic, or by discoveries made here, a question over which these people had been disputing for lack of evidence.

The first printer we had in Pennsylvania was William Bradford. He began to print in the year 1685, and he printed until 1692. The outcome from his press was mostly religious works. He printed some almanacs and some other books of perhaps more general interest, but still, the main subject was the religious books of the Quakers. Getting into a controversy with the Quakers, however, later he went over to New York, and he was likewise the first printer in New York. There was until quite recently, down on Commerce street in Philadelphia, a man who kept a bookstore named Moses Pollock. He was seventy-five years of age, perhaps, when I first learned to know him, and a man with a very keen scent for books and with a very good knowledge as to their values. He prided himself upon that knowledge, and really it would take a man as keen and with as much knowledge upon the subject as your Librarian to in any way get ahead of Moses Pollock on the book question or on a book transaction.

Some years ago, however, Dr. Brinley came over to Pol-

lock's store and looking around among his books he found there a copy of the "Laws of New York," printed by William Bradford. Now, it had been lying around that shop for countless years,—I suppose Pollock had it since he started into business, and he was anxious to dispose of it, so he sold it to Dr. Brinley who paid him $15.00 for it. Some years later the books of Dr. Brinley were disposed of at auction, and this copy of the Laws, which was at that time regarded as the first book printed in the State of New York, produced the sum of $1600. It was always an exceedingly sore point with Pollock, not so much because he had apparently disposed of something at a much less figure than it was really worth, but that a man with his keenness, and his knowledge of that subject should make such a mistake with respect to the value of the book.

No doubt each one of you has the impression, if your attention has been directed towards that topic at all, that the subject of the "Liberty of the Press" as we understand it, came out on the trial of John Peter Sanger in New York. There, Andrew Hamilton, a Philadelphia lawyer, asserted the right in a case of that kind to have the truth given in evidence, and the right of the jury to determine the question when it was presented to them. This is a mistake. The doctrine did not originate in that trial. Forty years before, when William Bradford, this early printer of books, was still in Philadelphia, and after he had got into his controversy with the Friends, he printed a little book called "An Appeal," which was regarded as a seditious paper and he, and a man named Peter Vass, and George Keith were arrested for having been concerned in the publication of that Appeal. They were brought to trial on that charge, and in that case not only was the principle contended for, but two Philadelphia judges decided the question, and held that the truth might be given in evidence. When Andrew Hamilton went over to New York he, no doubt, had the knowledge of this

decision, and that led him to contend for that position there. At all events, it became one of the most noted cases of the world, and it not only influenced us here, but it led to Lord Erskine's introducing the Libel Act in England, and the result was that the establishing of that principle of the freedom of the press is due to the decision of two Philadelphia and Pennsylvania judges.

William Bradford printed for a long while in New York after this.

Perhaps the most noted of Pennsylvania printers is Benjamin Franklin,—most noted in the sense of having more people who are familiar with him as a representative of printing, than any other follower of the craft. As a matter of fact, the printing which he did will not compare as to its merits either in the way of the character of the work looking at it as a trade, or in the way of the introduction of literature, either with those who preceded him, or those who were his contemporaries.

Franklin was a public man, what to-day would be called a politician. He was active in affairs, and very much of the printing that he did was what we would regard as job printing; that is, he printed advertisements; he printed the acts of Assembly and laws, and those things which were brought to him through his public connection with affairs. But, there are exceedingly few of what we would call books, that were printed by Franklin, and very little literature introduced by him into this country.

A man who had more to do with the introduction of literature into America than any other single individual is one of whom, perhaps, you have never heard at all. His name was Robert Bell. He began to print in Philadelphia in 1768. He gave us the first edition of Blackstone, the first edition of Milton. When Tom Paine wrote his "Common Sense," which was the pamphlet that is supposed to have had an influence upon the public mind which brought about the

Declaration of Independence, there was no other printer who had the courage to produce that pamphlet but Bell. He did it.

Among other famous printers, a man whose works are numerous, was Christopher Sauer of Germantown. It is to his credit that in America the Bible was printed three times, and the Testament was printed seven times in German before ever it appeared in English anywhere upon the Continent. That, as you can see, was a very great achievement.

So far as I know, there is but one complete set of those Bibles and those Testaments anywhere, and, as it happens, I, myself, am the happy possessor of that set.

Printing went on, not only in the large cities, but in the small towns, for the conditions one hundred years ago were quite different from those of to-day. Now you find few publishing houses in the inland towns. The reason of that is that it follows the principle of consolidation, and the great houses in the large communities put out books and papers so much more rapidly and at so much less expense, that it is impossible for inland people to compete with them. But a hundred years ago in every one of the inland villages as they arose, some enterprising man started a printing office and sent out from there what he thought would be of interest to the people in his community. A study of these books is of the utmost importance, because they indicate and show what was the life of the people,—what they were thinking of,—and, very often, they were important contributions to the sum of our knowledge.

In 1754 a man named Christopher Dock, a pious old school-master, living down in what is now Montgomery County, upon the Skippack Creek, wrote a little book upon the subject of school-teaching. He was a very kindly, sweet, simple, good-hearted old teacher and he had got beyond the ideas of school-teaching in his day. He was opposed to the

punishment of pupils,—to the use of the rod, and what he did was to encourage the pupils by giving to those who were meritorious little painted flowers, and specimens of writing, done sometimes with a brush in colors, very much like the samplers that some of your ladies have hanging up in your houses,—I saw one on the walls of my hostess' house this evening. Those things Dock gave to his pupils, and he was asked to write a paper upon his views of school-teaching, and that paper was printed by Sauer in 1770.

Down to a few years ago this pamphlet was unknown, but attention was called to it, and now no work upon Pedagogy the world over is written without some reference to Christopher Dock.

Down in Hanover a man named Milsheaver wrote a book upon Entymology. It was printed in that town. He is the father of American Entymology. Since that time the book has assumed the widest importance. Very much of the scientific work done by the Commonwealth to-day is the study of the habits of insects. If ever man is driven off the face of the earth, it will be by the growth and development of insect life, and therefore the study of that subject is important. The beginning of that science was laid in Pennsylvania, in the town of Hanover.

At Washington, Pa., Smith brought out the first magazine west of the Allegheny Mountains. At Somerset, Pa., upon that high ground, where there is the highest court-house in the Commonwealth, the Bible was printed for the first time in America west of the mountains.

If you were to be asked where you thought there had come the most important literary work of the Colonial era, before the time of the Revolution, you would naturally expect to reply that it came from somewhere in the neighborhood of Harvard or Yale. It did nothing of the kind. The oldest and most important of the literary ventures of Colonial America was a book printed in 1749 in the town of

Ephrata, in Lancaster County. It is a volume,—some of you may have seen it, containing some 1300 pages,—a book that consumed three years in its completion. That is, they printed it there, they translated it there, they made the paper there, and they did the binding.

It is to the credit of our Commonwealth, and it ought to be a source of pride to you and to me and to all of us, that the Bible, and Milton, and Blackstone, Thompson's Seasons, Young's Night Thoughts, Shakespeare, Homer, and the Arabian Nights, were all printed for the first time in America somewhere within the Commonwealth of Pennsylvania.

Now, here is a fact which I suppose is utterly unknown to you, or at least to the most of you. You have all heard of Thackeray, and you have all read his books. He is one of the most distinguished of the literary men of the world and of all time. The first time that a book of William Makepeace Thackery's appeared, and it was the "Yellow Plush Papers"—it was printed in Philadelphia.

That seems like an incredible thing, that our American people should have been able to appreciate the importance of this great literary mind before they did so in England.

I have said something about the interest of book-hunting, and I am inclined to tell you a few anecdotes to illustrate those pleasures and satisfactions.

Where I live is on the Perkiomen, in the county of Montgomery; that is my home, a place known as Pennypacker's Mills, and it is a noted place historically. The main road, in the early colonial times, was right out from Philadelphia to that place as its terminus. Long before Pittsburgh or Erie, or Scranton, or Wilkes-Barré, or Norristown were known, upon the first map of Pennsylvania, in 1759, this place is marked. It has not been out of our family since 1747. It was the headquarters of Washington, for a time, during the Revolution. I got the deeds long before I owned the place, in what is rather a peculiar way. It was

in my early days when I used to go wandering around the country, prowling about the graveyards, seeking for information, and I took my vacations in that way.

One time I went up on the Perkiomen and I met an old German who invited me into his house, and I sat down with him and pumped him with respect to the information about that section of the country, getting all that he was able to give me of the traditions concerning the army when it was there, and the stories he had to tell, and I was entertained for an hour.

When we got through with this important part of the interview, I said to him, "Well, have you any old papers of any kind." He looked at me a bit, and then went over to a cupboard in the corner of the room, and he brought out from that cupboard an old, linen, home-made bag, which was full of deeds, and he put it down on the table before me. I proceeded to inspect them. Among them were the title deeds, —most of them not recorded,—of this property to which I have referred. There was the original deed from William Penn with a beautiful impression of his seal, well preserved. Ordinarily they are broken up, but this one was all there. There was a deed in the handwriting of Francis Daniel Pastorious, the Pennsylvanian who founded Germantown. There was another signed by Hans Yost Hite. You may not know of him, but he was the first settler in Virginia west of the Allegheny Mountains. He went down there in 1732, established a colony where your Librarian and his wife lived for a time, and he took up forty thousand acres of land there; he had a great fight with Lord Fairfax which lasted through the whole of their lives, and he established a very important family,—a family intermarried with the Madisons, and all through the South, Virginia and Kentucky,—where they have been distinguished people. But, beside all that, what interested me more was a paper signed by my own earliest forefather, six generations back. At that

time I had none, since that I have got a good many, but then, because I had none, it impressed me forcibly.

I looked them all over, and I said to him, "would you like to sell them?" and he said, "Vell, what vill you give me for them?" I said, "I will give you a $5.00 note for them." Says he, "Very vell, you can take them along." So I put the deeds into the bag, and then he looked at me solemnly and he said, "Vell, some years ago ven ve settled that estate up over there, me and my brother, ve got everything fixed, and all was done, then there vas this bag of deeds, and I says to my brother, I says, what shall ve do with this? Oh, vell, he says, they are no good any more, you can just take them and put them into the fire." He said, "I was just about to chuck them into the fire, and then I says, vell now, maybe something vill come out of that sometime," and "now," he says, "you have come along and give me $5.00 for them."

Some years ago I went down to a sale,—an auction sale. There was a letter there which interested me exceedingly. It was a letter written by James Wilson, another Pennsylvanian and a great lawyer, afterwards a Justice of the Supreme Court of the United States, who, more than any other man, had to do with the creation of the Constitution of the United States,—written by James Wilson to George Washington, introducing to him Col. Ephriam Blaine, who lived in Pennsylvania, and who afterwards had an important position in the army. I wanted that letter, and I bid on it up to $33.00, but somebody bid more and I lost the letter. The man who bought it was a sort of a dealer in these articles; he had not much sentiment about it, but he knew a thing when he saw it, and he bought the letter.

Some three months later, perhaps, I was down on South street, in the lower part of the city, and I went into an old book-shop there and began rummaging around,—this is all in line of the pursuit of a book-hunter, as you see,—and I turned up on one of the shelves a little copy of Poe's Poems.

It did not interest me very much, I was not at all interested in Poe; the line for which I hunt for things is for early Pennsylvania publications. This was printed in New York, but still I knew enough to know that it was probably an interesting book, and I asked the man what he wanted for it, and he said he wanted sixty cents, which I gave him, and put the book into my pocket.

I went up on to Chestnut street,—I was off that afternoon,—to examine a catalogue at an auction store, and I was looking around over the things displayed on the table. Back, in the rear of the room there were some half a dozen men, people of the same kind, interested in books, one of them a Mr. George P. Fyles, who is a most learned man upon that subjest, one of the most learned to be found, and they were talking together while I was looking over these books, and presently I hear one of them say, "I wonder if that second edition of Poe will ever turn up again." That led me to prick up my ears, and I wandered over to them, knowing them all. They were talking on that subject, and presently I put in a word, and I said, "Is that a scarce book?" Then they smiled, and one says, "Why, did you ever see a copy?" "Well," said I, "Yes, I think I have seen a copy." They said, "Where did you ever see it." I said, "I have it in my pocket." Then there was a laugh, and I took out the book, and it went around, and sure enough, it was the second edition of Poe. "Well," said one of them to me, "do you know what that book brought in the Brinley sale?" "No," I said, "I don't know what it brought." "It brought $150.00," he said, and I replied, "I am very glad to hear it."

Now, it became noised around among this little coterie that I had that Poe book, and presently along came my friend who bought the letter. He said he was interested in Poe, and had been gathering books on that subject, and he came to see if he could not get my Poe. I said, "Yes, you take some things which you have, in which I am interested,

and you put them all together and make up the price for which this book has sold, and then you can have it," and he proceeded to do it, and I said, "You can begin with the letter," and a couple of books he had that I wanted, and I got those things which I wanted in my collection and I gave him the book.

Things, however, never go all one way. It is with book hunting as with other things, the man who tells the stories is very apt to tell that which looks favorable; occasionally it does not go quite in the same way.

I had been hunting for twenty years for a letter of George Washington, written from that house I told you about, and that is why I told you concerning the house. I now have two letters written by him, dated at Pennypacker's Mills, but I hunted for twenty years to get one, and it came about in this way: One day I went into old Pollock's shop, and he opened his heart that day; he had a fire-proof back in the rear of his building where he kept his treasures. He opened the fire-proof and went in and brought out a fine folio letter of Washington, written to John Hancock, and dated at Pennypacker's Mills. I looked at it, and said, "Pollock, I am bound to have that letter, there is no use talking about it, you must let me have it; I know you make a good bargain, but I am at your mercy and you must let me have that letter. I have a good letter of George Washington's, a fine letter, which was written at the time of the surrender of Cornwallis, in which he told the commissioner of prisoners that he was to hang on to Cornwallis, and not surrender him, which made it a very important item of historical interest, and I will give it to you for this letter." He said he wanted a couple of books that I had, too, and it ended in my giving the letter and two books to Pollock for his letter.

I was intensely gratified; I got what I wanted, but he died some time ago, and the letter which I handed over to him, was sold. Now I am not going to ask you to guess

how much it brought, but I will tell you—it brought $925.00. I therefore have the consolation of knowing that in one of my drawers down at my home there is a letter which, if I look at it that way, cost me $925.00 plus two books.

I am glad to see the success, the energy and the enterprise shown by your society. I need not say to you that historically this is a most interesting locality. It has everything to attract attention, looking at it from the point of view of one interested in such matters. Its name is significant; you look back to those of its early past, and you have a series of most important and interesting accounts,—tales of Butler, and of Bryant, the wars with the Indians, the romance of Queen Esther, the story of Francis Slocum,—the story of Wyoming is one of three Pensylvania tales which have become epics through being written up by poets whose attention they have attracted. You had your Revolutionary history with its romantic series of events; and the Pennamite War, and the struggles which resulted from it, and later you have these tremendous industries,—industries which have made the section important to the whole world, and have accumulated wealth almost unspeakable. What section of the country has greater interests, or those of more importance? I know of none.

You, of this society, try to look for these printed things which come out of your own town, and they began to print here early. Gather them all together, cherish and preserve them, and see that this association is maintained in the future in such a way as it now promises.

THE EXPEDITION OF COL. THOMAS HARTLEY AGAINST THE INDIANS IN 1778, TO AVENGE THE MASSACRE OF WYOMING.

BY

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The Battle of Wyoming, and the horrible massacre which followed, had sent a shudder through the civilized world. This awful tragedy had been succeeded by a series of attacks from the same quarter upon the comparatively defenceless settlers on both branches of the Susquehanna; in which the people were murdered or carried away captive, their homes burned, their crops destroyed, their stock driven off. This state of things could not be allowed long to continue. Some effort must be made to protect the exposed frontiers from the attacks of their merciless foe. General Washington and the Board of War both saw the necessity of prompt and vigorous measures, not only to repel savage excursions, but to prevent them.

Col. Zebulon Butler, who had been detached from the regular army by special orders[1] dated Fort Arnold, June 24, 1778, "with ye people of Wyoming until the danger of an attack from ye savages is over," had succeeded in collecting a force of sixty men; twenty Continentals of Capt. Simon Spalding's company, and forty militiamen, reached Wyoming August 4, 1778[2], and entrenched himself in a stockade within the present limits of the city of Wilkes-Barré. Small bands of Indians, engaged in plunder and devastation, were discovered, who fled on the approach of the soldiers.

1. Proceedings of the Wyoming Historical and Geological Society, Vol. VII, p. 131.
2. Ibid., p. 133.

While Colonel Butler was preparing the defences of Wyoming, Col. Thomas Hartley, then in command of the Eleventh Regiment of the Pennsylvania Line, was ordered with his regiment, and such militia from the counties of Northampton and Northumberland as could be collected, to the West Branch for the protection of the unhappy settlers in that region. He arrived at Fort Muncy, near the mouth of the Lycoming Creek, in the early part of August, about the same time that Colonel Butler reached Wyoming.

This fort, which was but little better than a stockade, he immediately took measures toward strengthening, and put it in condition to make a stout resistance in case of an attack.

A body of militia, about three hundred in number, was ordered up the river, out in the country, to assist those who were anxious to gather their crops, now suffering for the sickle. This had the effect of encouraging the people, and they began to return to their desolated homes in large numbers. Colonel Hartley seems to have been the right man for the place. The records show that one hundred men belonging to his regiment, two hundred and twenty-four from Lancaster County, one hundred and seventy from Berks County, one hundred from Northumberland County, and between sixty and seventy of Captain Murray's six months men, was the number enrolled for the West Branch valley, or about seven hundred men all told; a force deemed amply sufficient to cope with the enemy. They were stationed at various points on both branches of the Susquehanna, and directed to be vigilant.

Besides these forces, a company of the regiment commanded by Capt. George Bush had been sent to Colonel Butler at Wyoming. In a letter to the latter of August 9, 1778, Colonel Hartley says[3], "I am ordered up to assist the frontiers, which I shall do in the best manner I am capable; it

3. Collections Wyoming Historical and Geological Society, Vol. VII, p. 134.

will give me great pleasure to have it in my power to support and maintain yours."

Colonel Hartley soon saw the advantage to the service of a troop of calvary, where the enemy were so alert as those with whom the settlers had to contend. Accordingly on the first of September he informed the Executive Council that he considered it highly important to have a small body of horsemen ordered to join his command. He also wrote to the Board of War, making a similar request. It would seem, however, that it was not very favorably considered by either body. In the same letter he informs the Board of War that Captain Walker had succeeded in making the necessary repairs to Fort Muncy, and that he had obtained a four-pounder from Fort Augusta, which had been properly mounted.

During the long and bloody wars between Rome and Carthage, a Roman general and statesman said that the best way to defend Rome was to carry the war into Africa, and put the Carthagenians on the defensive. From that day to this it has been considered good defensive tactics to carry an offensive campaign into the enemy's country. A similar method of defence of the frontiers against the Indians had for some time been under consideration by the military authorities. In a letter of General Parsons to Colonel Butler of June 24, 1778, he adds the postscript "let me know nearly the distance from you to town of the Senecas and Cayugas, *for special reasons.*"

Notwithstanding constant scouts at exposed places, and the utmost vigilance of both inhabitants and soldiers, bold, swift-footed bands of Indians were stealthily lurking about the settlements; soldiers and men at work in the fields were shot from ambush, women were killed and scalped while at their household duties, children were carried off while playing on the door-steps of their homes, buildings were burned, and crops destroyed and their cattle driven off in sight of the

forts, and almost in the face of the men who were guarding them. Terror reigned throughout the whole West Branch valley. No one felt safe anywhere outside the forts. Nor were the people of Wyoming free from alarms. The unsatisfactory results of scouting and guarding determined Hartley to undertake the defensive method of carrying the war into the enemy's country and giving their warriors occupation at home.

Another object was to secure all the information possible as to the best routes into the Iroquois country, the locations of their principal towns, etc., preparatory to a more formidable invasion, then being planned for the following year. Hartley therefore determined in September to undertake an expedition against Tioga Point, and possibly Chemung; to destroy some of their towns, break up some of their haunts and places of rendezvous, learn what he could of the topography of the country, and the best methods of reaching it. This expedition, which proved entirely successful, was one of the most remarkable on record; and though its importance has to some extent been overshadowed by the much greater and more pretentious one of the succeeding year under General Sullivan, to which this was the prologue, it really made that expedition possible, and paved the way for its success.

There were two principal paths connecting the North and West Branches of the Susquehanna River; the first, known as the Wyalusing path, beginning at the mouth of the Loyalsock Creek on the West Branch, followed up that creek to its source, thence over the divide to the head of Sugar Run, and down that stream to its mouth at the present village of Sugar Run, opposite the Indian town Wyalusing. It was by this path that the Moravian Missionary Ettwein, in 1772, led the band of Indian converts from Friedenshutten (Wyalusing) to their new home in Tuscarawas Valley. It was by this path that Colonel Hartley first thought to lead his expedition into the Indian country. Under date of August 22, 1778,

he writes to Colonel Butler[4], "My firm intention is to act offensively against the enemy adjoining these frontiers. . . My plan is this: that on the 31st of August I march with all the force I can collect to Wyalusing, where we will arrive on the 2d or 3d of September. . . . That to provide against any Misfortune you Remain at Wyoming in garrison with between eighty and one hundred men of those who are worst prepared for an Expedition to the Woods; and that Capt. Bush should take the command of all the Remainder of the forces at Wyoming, Regulars and others, and March off the same 31st of August toward Wyalusing, to effect a junction with me on the 2d or 3d of Septr.; taking care to send on Spies to inform me of their approach and situation."

Better information, however, led Colonel Hartley to decide in favor of the other, sometimes called the Lycoming, otherwise the Sheshequin path. It began at Muncy on the West Branch, thence up the Lycoming Creek to its head near the south-west corner of Bradford County; here the path divided, one branch leading northward through present Elmira to Canadesaga (Geneva), N. Y., the other branch followed the Towanda Creek to some point between present LeRoy and West Franklin, where, crossing the divide at the lowest point, it came out on Sugar Creek, near the Bradford County Almshouse, thence down Sugar Creek to near the bridge at the Mills Place, when it followed near the line of the present highway across Hemlock Run, over Gibson Hill, where the Moravians called it "The Narrow Way," to the great path along the river at present Ulster, or what was formerly called Sheshequin.

It indicates the topographical skill of the men of the forest, that nearly every great railway in the country follows substantially an Indian trail. This rule holds good in regard to the Northern Central Railway of the Pennsylvania system, which is laid along the valley of the Lycoming, cross-

4. Collections Wyoming Historical and Geological Society, Vol. VII, p. 137.

ing the stream about as often as did the old trail. At Grover it takes the northern path to *Canandaigua.* (Query, *Canadesaga?*

The Sheshequin path was familiar to the early travelers in the country, all of whom speak of its deplorable condition, and almost insuperable difficulties. This will not surprise one who to-day travels over this route from Crogan's to Grover.

Forty years before the Hartley expedition (1737), Conrad Weisser, the courageous and tactful Indian agent and trader, who had been over this route, speaks of its difficulties, and notices the peculiarity of the common sources of the Towanda and Lycoming Creeks.

A few years later, Weisser, in company with Joseph Spangenberg, and David Zeisberger, two intrepid Moravian missionaries, came over this same path. On this account it is named in the records of that church "Joseph's Path." All speak of its extreme difficulty, and of the relief experienced when the end was reached. The troubles experienced by Hartley's men, which will be spoken of later, are not in the least overdrawn, and are but a repetition of the experiences given by all former travelers.

Of the sources of information relating to this expedition, Colonel Hartley's report of it made to Congress, in which he minutely describes every step taken from Muncy to Wyoming is the most complete. Besides this, his correspondence with Colonel Butler, orders, etc., published in Volume VII. of this Society's Transactions, are exceedingly valuable. From both these quotations will be made without further reference.

As to the force which made up his little army, Colonel Hartley says: "With volunteers and others we reconed on 400 Rank and File for the Expedition, besides 17 Horse from my Regiment under Captain Carbery. The place of rendez-

vous was Fort Muncy[5] on the West Branch, intending to penetrate Sheshecanunk Path to Tioga at the junction of the Cayuga with the main North East Branch of the Susquehanna; from thence to act as circumstances might require. The troops met at Muncy, 18th of September. When we came to count and array the troops for the expedition, instead of the 400 as had been expected, they amounted to only about 200 Rank and File. We thought the number small, but as we presumed the Enemy had no notice of our design, we hoped at least to make a good Diversion if no more, whilest the inhabitants were saving their grain on the Frontiers."

Of this force were one hundred and thirty from Wyoming.[6] Of these sixty were Captain Bush's company of the Eleventh Pennsylvania Regiment (Hartley's), who had been sent to reinforce the Wyoming garrison, and now returned to their regiment by order of its commander; fifty-eight were of Spalding's Independent Company, and twelve were volunteers under Capt. John Franklin, of the settlers, who had returned after the battle of July 3d. Of the remaining seventy, a part was from the troops at Fort Muncy, and part was Captain Murray's six months' militia, with some volunteers. The seventeen light horse were selected and mounted by special order of Colonel Hartley, and the command given to Captain Carbery. The most of these were connected with the Sullivan Expedition the following year.

5. Fort Muncy was located a few hundred yards northeast of the residence of Samuel Wallis, on Muncy Farms, after which it was named. It was about three miles west of the borough of Muncy, and ten miles east of Williamsport.—*Maginness.*

6. (Orders) "CAMP WESTMORELAND, 13th of Sept., 1778.

"That a detachment of 130 men of Continental Troops march From This post tomorrow under the Command of Capt. Bush on an Expedition and that they Draw four days provisions this afternoon and have it cooked and be in readiness to march by Eight o'Clock in the morning—and that they be Paraded this afternoon and the Officers see that the men are Compleat with arms and amunition."

A return of troops at Wyoming, made September 1, 1778, gives Captain Spalding's company 11 officers and 60 men; Captain Bush's company 10 officers, 4 musicians, and 79 men.

Capt. Henry Carbery retained the command of his calvary squadron until the Sullivan campaign, when that officer, deeming so small a number of horsemen unserviceable, and being unable to increase it, dismounted them. Captain Carbery retained his rank and his men resumed their places in the regment.[7]

At four o'clock of the morning of September 21st, the little force above mentioned were drawn up in line to set out on their tedious and perilous march of two hundred miles through the wilderness. Each man was armed with the long-barreled "Queen Anne" musket, and forty rounds of cartridges, four days' cooked rations, his blanket and overcoat, if he had one; besides eight days' rations per man, and two boxes of ammunition were loaded on pack-horses.

The path they were to take, always difficult, presented unusual obstacles. For a number of years it had been but little used, and was so overgrown with brush, and obstructed with fallen timber as to be hardly discernible, and constantly required a considerable force with axes to make the way passable, even for experienced woodsmen. The first day their route was from Fort Muncy up Bonsell's Run, now Miller's Run, then passed through what is now Blooming Grove, and joined the trail up Lycoming Creek near Cogan Station, on the Northern Central Railway. Here, or near, they encamped the first night, the distance being about eighteen miles. When it is considered that with good roads and no obstructions more than eighteen miles a day is considered a hard march for an infantry soldier, Hartley's little army made a good beginning on their journey the first day, owing somewhat to a more open country, and an early start.

On the morning of the 22d they soon entered the intermin-

7. In the affair of the "Hog-backs" near Chemung, August 3, 1779, he was severely wounded; but recovered, and re-entered the active military service. November 30, 1778, he was promoted from Lieutenant to Captain, and commanded the 8th company in the Eleventh Regiment. He was retired January, 1781. In June, 1783, he was concerned in the riot of the soldiers of the Pennsylvania line, and to avoid arrest fled to Maryland, where, so far as I know, he is lost sight of.

able tangle of the Lycoming forests. Their starting had been necessarily so delayed that their march fell upon the time of the September storms. Rain fell every day. The Lycoming has a rapid descent, and an exceedingly tortuous course through its narrow valley, as any one may observe from the window of a railway train. Now swollen by heavy rains, it was a mad and roaring current, which had to be forded, sometimes breast deep, six or seven times in this day's march. It must have been dark when the little band reached their bivouac on the cold, wet ground not far from the present railway station "Fields," a distance of ten miles. The way, this day, had been one of indescribable difficulty Sometimes the men were forcing their way through an almost impenetrable jungle of wild vines and underbrush, sometimes floundering through swamps,[8] where they waded through mire and water up to their knees, sometimes clamboring over slippery rocks and slimy logs, sometimes, to avoid crossing the stream, scaling steep hills whose conical tops seemed to reach the clouds, and which the Moravian travelers facetiously called the "ant-hills," tired, foot-sore, wet to the skin and chilled to the bone, these hardy pioneers ate their suppers in the twilight, and wrapping themselves in their blankets, sought brief rest from the fatigues of the day.

The 23d was but a repetition of the day before, except that as they were ascending toward its source, the stream became smaller, and the dozen times they were compelled to cross it were attended with less difficulty. Eleven miles brought them to near the present "Roaring Branch," in the neighborhood of which they must have spent their third night in the wilderness.

On the 24th they are on higher ground, the woods are more open, the stream has dwindled to a mere brook, the valley is wider and the hills less abrupt. A tramp of seven

8. The cutting away of the forests has allowed the sun to transform many of these swamps into meadow and arable land.

miles brought them to a swamp, at that time about a mile long, and forming the common source of the Lycoming and Towanda creeks, near the southwest corner of Bradford County. They arrived here in time for their mid-day meal. After a short rest they proceeded on their way down the valley of the Towanda, seven miles farther, about to where is now East Canton. On some dry knoll in this vicinity they spread their blankets and bivouac for the night.

Colonel Hartley says of this part of their journey: "In our route we met with great Rains & prodigious Swamps, Mountains, Defiles & Rocks impeded our March. We had to open & clear the Way as we passed." He declares the difficulties of the route, for the distance traveled, to have been equal to those of crossing the Alps, or those encountered by Arnold in passing up the Kennebeck, through the tangled forests of Maine, and the swales and swamps of Canada. He says, "In lonely woods and groves we found the Haunts an Lurking-places of the savage Murderers who had desolated our Frontier. We saw the Huts where they had dressed and dried the scalps of the helpless women & children who had fell into their hands."

The four days' cooked rations with which they had left Fort Muncy were now exhausted, and the greater part of the forenoon of the 25th was spent in preparing a new supply. It was expected that for the remaining part of the way the path would be more open, and the stream less difficult; time was therefore probably taken to dry and clean their clothes for their greater comfort.

They were now approaching the enemy's country. Greater care must be observed on the march, and preparations made for meeting a sudden attack. Guns and accoutrements must be in good order, and plenty of ammunition supplied. To provide against surprise, an advance-guard, consisting of from fifteen to twenty men, was kept some distance ahead of the main body. Wherever the way would

permit, flankers were thrown out to beat the brush for ambuscades, while the rear was to be continually on the alert for attacks from that quarter. These necessary precautions, together with the natural roughness of the path, made marching more slow and tedious. It must have been noon[9] by the time the little army was ready to resume its march on the 25th, from the dry knolls of East Canton. This afternoon the route was down the Towanda Creek about thirteen miles to present West Franklin. Here are evidences of a former Indian town. The corn-hills were still visible when the early settlers came into that region. Here was also an Indian burying-ground, from which A. T. Lilley, Esq., of Le Roy, has taken two Indian skeletons, with the usual accompaniments of pottery, arrow-heads, etc. Here, or in the immediate vicinity, the army probably spent the night.[10]

On the morning of the 26th the men were up betimes. They were now approaching the goal of their undertaking. This day would probably decide whether the enterprise would be a success or a failure. From the place of their encampment, a little west of West Franklin, the path led northwardly over the low divide to Sugar Creek, which was reached somewhere between Burlington and the Bradford County Almshouse. They had proceeded but a short dis-

9. At Wyalusing, when the utmost haste was required, it took until noon to cook their four days rations; no less time could be required here.

10. Mr. Lilley, who has devoted considerable time to antiquarian research, thinks there were three paths connecting the valleys of the Towanda and Sugar creeks: one beginning at West Le Roy, running northwardly by Shoemaker's swamp and along Kendall Hill, striking the creek a little to the right of Granville Centre; a second beginning at Le Roy and reaching the creek near Bailey's Cross-roads; the third is the one given in the text. Mr. Lilley inclines to the opinion that the first named was the Sheshequin path, and the one taken by Hartley. In this case the encampment for the night of the 25th would be about Granville Centre. Taking into consideration all the evidence, the topography, the existence of the former Indian town, and the records of travellers, it seems to me to be certain that the one described in the text is the right one. Joseph Elliott, who was on the Hartley expedition, says they followed the Towanda to its mouth. The old gentleman was, however, evidently mistaken. His account was given in 1831, more than fifty years after its occurrence, when he was past eighty years of age. This was not the Sheshequin path, and was five or six miles farther to Tioga Point.

tance when the advance-guard of nineteen men discovered an equal number of Indians on the path approaching them. The whites were the first discoverers, and had the first fire. A very important Indian chief was killed and scalped, the others fled.

It was now certain that although the expedition had been concealed from the enemy thus far, it could be so no longer. The fleeing Indians would give the alarm, and a force be collected to receive them as soon as they emerged from the wilderness. Whatever success the expedition might now achieve would depend upon the celerity of its movements in reaching Tioga before the enemy could collect his forces, which, owing to the recent attacks upon the New York frontiers, were considerably scattered. To push forward with all possible speed was now the order. A little further on, probably in the neighborhood of the present village of Burlington on Sugar Creek, they discovered where upwards of seventy warriors had slept the night before, on their way to the frontier settlements. The fleeing Indians from the party encountered a little time ago communicated to these their panic, and all ran off to the towns on the Chemung.

No time was to be lost in reaching Tioga Point, still twenty miles distant. The path was down Sugar Creek to near the present State bridge across it, then up the river near the head of Hemlock Run, thence along a narrow bench or "defile" on the side of Gibson Hill, called by the Moravians "The Narrow Way," thence up the Susquehanna river to Old Sheshequin, present Ulster. Here, for a number of years before the Revolutionary War, a Monsey chief named Eghobund, frequently called "King," and his wife Esther, generally thought to have been of the Montour family, had a considerable village on the north side of the present Cash Creek. Eghobund invited a number of Christianized Indians from New Jersey, "Brainerd's Indians," to settle in his town. They came, and laid out their town on the south

side of the creek. They had a Moravian missionary, and maintained the Moravian order of worship, and joined the migration to the Tuscarawas Valley in 1772. About the same time Eghobund died, and his widow, the notorious "Queen Esther," moved their town six or seven miles up the river, between present Milan and Tioga (present Athens).

After the battle of Wyoming, Queen Esther abandoned this place and went to Ganoga, N. Y., where she married an Indian named "Steel Trap," and where she died at the beginning of the last century.

Colonel Hartley reached Queen Esther's town after dark, but pushed on through the darkness, forded the Chemung, and lodged that night in the abandoned Indian town of Tioga, the Moravian "Diahoga," on the right bank of the Susquehanna. This day's march of twenty-two miles had been a very hard one. The men were exhausted, and could do nothing but make themselves comfortable for the night.

Tioga was for many years the fore-town and southern door of the Iroquois Confederacy. Here was stationed a Cayuga chieftain, the viceroy of the confederacy, who had charge of their southern dependencies. After the breaking out of the Revolutionary War it lost much of its political significance, but continued to be the rendezvous of parties making marauds upon the settlers on both branches of the Susquehanna. One of the diarists of the Sullivan Expedition the following year, gives a rough pen-sketch of the town, which is there located about half-way between the "neck" and the "point," near a little swale or rivulet, on the bank of the Susquehanna. This was doubtless the location of the deserted town which Hartley found the year before, the inhabitants having taken alarm and retired to Chemung. Here it was learned that one of the Van Alstynes, a member of Captain Spalding's company, who had been left at Wyoming when the detachment went to Fort Muncy,

had deserted from the garrison, and gone to Tioga, giving the enemy information as to the proposed expedition.

At Sheshequin fifteen persons who had been captured by the Indians and Tories from the settlements below were rescued. The forenoon of the 27th was spent in the search for others, also in gathering up what stolen cattle and other plunder could be found. One prisoner, nearly fifty head of cattle, twenty-eight canoes, and many other articles rewarded the search.

About noon of September 27th, having burned Tioga, the little army, with their recovered prisoners, cattle, canoes, and other plunder, set their faces homeward, and began to retrace their steps. Soon after fording the Tioga (Chemung) they came upon Queen Esther's plantation. This lay on the west bank of the Tioga near its junction with the Susquehanna and extended some distance along the river bank. The place is to this day known locally as "Queen Esther's Flats." Her town consisted of a one-story log house of some size and pretension, called by the people, her "palace," and a number of small huts in which lived the remnant of the village which had remained loyal to her. As at Tioga, all were deserted and desolate. The men set fire to this town, and while the flames were devouring the "palace" where Queen Esther had reigned in silent sullen majesty, resumed their march toward Sheshequin, eight miles from Tioga, where they spent the night.

Of the events of the eventful 26th, after speaking of the skirmish of the morning, Colonel Hartley writes: "No time was to be lost. We advanced toward Sheshecunink, in the Neighborhood of which place we took fifteen prisoners from them. We learned that a man had deserted from Captain Spalding's company at Wyoming after the troops had marched from there, & had given the Enemy notice of our intended Expedition against them. We moved with the greatest Dispatch towards Tioga, advancing our Horse and

some foot in front, who did their duty very well. A number of the Enemy fled before us with Presipitation. It was now dark when we came to that town (Tioga). Our troops were much fatigued; it was impossible to proceed further that night. We took another Prisoner. Upon the whole Information we were clear the Savages had intelligence of us some days. That the Indians had been towards the German Flats, had taken 8 scalps & brought off 70 oxen intended for the Garrison of Fort Stanwix; that on their return they were to have attacked Wyoming and the Settlements on the West Branch again:—That Colo. Morgan or no other person had attempted to penetrate into the Enemy's Country, as we had given to understand,[11] and that the collected Force at Chemung would be upwards of 500, & that they were building a fort there. We were also told that Young Butler (Walter Butler) had been at Tioga a few Hours before we came, that he had 300 men with him, the most of them Tories dressed in Green—that they were returned toward Chemung, 12 miles off, & that they were determined to give us Battle in some of the Defiles near it.

"It was soon resolved that we should proceed no further, but if possible make our way back to Wyoming. We burnt Tioga, Queen Hester's Palace or Town, and all the settlements on this side.[12] Several canoes were taken, and some Plunder, Part of which was destroyed. Mr. Carberry with the horse only was close on Butler. He was in Possession of the Town of Shawnee,[13] 3 miles up the Cayuga Branch

11. From this it would appear that this expedition was not an independent movement, but was intended to co-operate with others in laying waste the Indian country. Col. Morgan, to whom Col. Hartley refers, with six companies of riflemen, forming a part of the Fourth Pennsylvania Regiment, commanded by Col. William Butler, was attached to Gen. James Clinton's brigade, then in New York State. Morgan was expected to form a junction with Hartley at Tioga, but for some reason failed to do so. He was in the Sullivan expedition the next year.

12. Mr. Meginness (Otzinachson, p. 554, foot note), says that Robert Covenhoven claimed to be the man first to apply the torch to the "palace."

13. A little town between Sayre and Waverly, N. Y., occupied for a short time by a few families of Shawanese Indians.

(Chemung or Tioga) but as we did not advance he returned. The Consternation of the Enemy was great. We pushed our good fortune as far as we dare, nay it is probable that the good Countenance we put on saved us from destruction as we were so far advanced into the Enemy's Country, and no return but what we could make with the sword.

"We came to Sheshecanunk that Night. (Sept. 27th). Had we had 500 Regular Troops and 150 Light Troops, with one or two Pieces of Artillery we might probably have destroyed Chemung which is now the receptacle of all villainous Indians from the different Tribes and States. From this they make their Excursions against the Frontiers of N. York and Pennsylvania, Jersey and Wioming & commit those horrid Murders & Devastations we have heard of. Niagara and Chemung are the Assilums of those Tories who cannot get to New York.

"On the morning of the 28th we crossed the river and marched toward Wyalusing, where we arrived that night at eleven o'clock—our men much worn down—our whiskey and flour was gone."

The route this day was down the old Warior-path on the east side of the river. This path was not only well defined, but in constant use by both Indians and white people, and was almost as easily traveled as a modern road. The distance from Sheshequin to Wyalusing is twenty-seven miles. It was a hard day's march, from daylight until eleven o'clock at night. Besides their arms and blankets, they had fifty head of cattle, a number of pack horses, with a considerable amount of other luggage. It is no wonder if after such a tramp the men were footsore and much worn down. Besides their whiskey and flour being gone, the four days' rations cooked at East Canton on the 25th were used up; so, although it was known that they were being pursued by a large body of Indians and Tories, and

danger of an attack was imminent, yet they were obliged to halt here for half a day and cook rations. It must be remembered that the place of encampment was the Indian town Wyalusing, situated on the Stalford Flats, more than a mile below the present village. Colonel Hartley continues: "On the morning of the 29th we were obliged to stay until eleven o'clock to kill and cooke Beef. This necessary stop gave the Enemy Leisure to approach."[14]

From Wyalusing the path followed a bench of land separating the higher from the lower flats, on which are laid the tracks of the Lehigh Valley Railroad, until a little stream is crossed at the old Jabez Brown homestead, at the foot of the Browntown mountain, where it turns at almost right angles up the hill to near the present residence of Mr. John W. Brown.[15] From this point the view is magnificent. Looking up the river with the field glass the little monument that marks the site of the Moravian "Friedenshutten" (Wyalusing), is plainly visible, while looking down the river its course can be seen for miles, as in the graceful curves of "Quick's Bend" and "Rocky Forest," which make appropriate the name given it by the Moravians, "the winding

14. The next year was the Sullivan expedition. Col. Adam Hubley, who succeeded Col. Hartley in the command of the Eleventh Regiment, and had with him some of the men who were with Hartley, said of this town, "since the commencement of the present war the whole has been consumed and laid waste, partly by the savages and partly by our own people." Wyalusing, like Sheshequin, was a Christian Indian town, under the care of the Moravian church, and abandoned six years before by the Indians. Sheshequin had remained unoccupied; while at Wyalusing a number of white people, mostly from Wyoming, had come as settlers and lived in the best of the houses. At each place was a church and school house, which with many of the houses were built of hewn pine logs, and roofed with shingles. The dwellings were surrounded with gardens and enclosed with fences, and the people enjoyed many of the comforts of civilized life. The diarists of the Sullivan Expedition speak of Wyalusing, even in its desolation, as an oasis in a desert. Hartley found it considerably dismantled. Early in the preceding Spring a party had come up from Wyoming, who had made rafts of the timber in the church, and of some of the best dwellings, upon which were loaded the family and goods of Mrs. Lucretia York, whose husband had been carried off by a band of Indians and Tories the preceding February, and of a few other families who had remained there during the winter, and all were taken to Wyoming. What was left of this beautiful and interesting town was burned before Hartley's troops left their encampment.

15. Mr. Brown says he built his house exactly on the path.

river." The men in Sullivan's army speak with admiration of the extent and variety of the landscape embraced within the circle of vision from this point.

Hartley was well aware that not only were spies of the enemy watching every movement of his men, but that also a considerable force was in pursuit, and an attack liable to be made upon him at any moment. As has been said, it was eleven o'clock of the morning of September 29th before the expedition was able to leave its Wyalusing encampment. The Colonel says: "Seventy of our men, from real or pretended Lameness, went into the canoes; others rode on the Pack Horses, we had not more than 120 Rank & File to fall in the line of March. Lieut. Sweeny, a valuable officer, had the Rear Guard consisting of 30 men, besides five active Runners under Mr. Camplin. The advanced guard was to consist of an officer & fifteen. There were a few Flankers but from the Difficulty of the ground and Fatigue (of the men) they were seldom of use. The rest of our little Army was formed into three Divisions, those of my Regiment composed the first, Capt. Spalding's the 2nd, Capt. Murrow's (Murray's) the 3d. The Light Horse was equally divided between the front and rear. The Pack Horses and the cattle we had collected were to follow the advance guard. In this order we moved from Wyalusing at twelve o'clock."

The distance from the Wyalusing encampment to Mr. Brown's place on the top of the hill is at least three miles, of which the last is up the pretty steep mountain side. It must have been between one and two o'clock in the afternoon when the army reached this point. Behind them were the smoking embers of the village to which they had just applied the torch; before them the dark shadows of Rocky Forest; but they had no time to admire the glowing beauties of Nature's autumnal scenery, for they had scarcely reached the summit of the hill before they were apprised of the presence of the enemy, who opened a sharp fire on the ad-

vance-guard. This being returned, they, Indian fashion, retired. This Hartley understood to be a ruse to entice him into an ambush, and refusing to take the bait, pushed rapidly forward.

At the top of the hill near where the house of Mr. J. W. Brown stands, and where the skirmish occurred, the path, conforming to the general course of the river, turns sharply to the right, passing a little below the road on which the residence of the late Patrick Mahoney[16] stands, thence continuing on nearly the same course across the farm of the late Hamilton Brown, running between the farm buildings and the top of the river bluff, which at one point is less than half a mile distant. At this point there has been from time immemorial a path leading down to the river near where "Greasy Lock" formerly was, which has been used by the people of both sides of the river, and is to this day known as the "Indian Path."

About a mile farther on from where the first skirmish took place, half an hour later in the day, and near the present home of Irving Brown, the advance-guard met a sharper attack and by a larger force. Hartley at once disposed his men to repel the attack, when the enemy pursued his former tactics and retired. This skirmish was so near the river that the men in the canoes heard the firing and hastily debarked and pushed up to the scene of action, reaching there after the affair was over and the army had passed on, closely followed by the main body of the enemy. The Colonel thus speaks of these skirmishes: "A slight attack was made upon our Front from a hill. Half an hour afterwards a warmer one was made on the same quarter. After ordering the 2nd & 3d Divisions to out flank them we then drove them. But this as I expected was only amusement. We lost as little time as possible with them."

16. Mr. Mahoney said that he had pulled out the logs used by Sullivan's men to corduroy the wet places at the head of the little stream now used to supply water to the tanks of the Lehigh Valley Railroad Company. At that time, when covered by forests, what is now beautiful meadow, was a miry swamp.

The path continued in the same direction to a little sag leading toward the river, in which a small stream flows in wet weather, on the Houser farm, when it turns to the left and leads directly over the ridge still known as Indian Hill, coming down on "Lacey Street" near the Bunnell place, just at the upper end of the village of Laceyville. It is about a mile from where the last skirmish occurred to the top of the ridge. Hartley had just reached this point when he was fiercely assailed on flank and rear by a large body of the enemy. It was now evident that the two skirmishes were for the purpose of delaying the army until the main force of the enemy could come up and make the attack in a favorable place. At this point the wood was very open, the few trees affording neither protection to the assailed, nor hindrance to the assailants.

The Colonel says: "About two o'clock a very heavy attack was made upon our Rear which obliged the most of our Rear guard to give way, whilest several Indians appeared on our left Flank. By the weight of firing we were soon convinced we had to oppose a Large Body. Captain Stoddard commanded in Front, I was in the Centre. I observed some high ground which overlooked the Enemy Orders were immediately given to the first and third Divisions to take possession of it, whilest Capt. Spalding was despatched to support the Rear Guard. We gained the Heights almost unnoticed by the Barbarians. Capt. Stoddart sent a small force toward the Enemy's Rear. At the critical moment Capts. Boone & Brady & Lieut. King with a few Brave Fellows landed from the canoes & joined Mr. Sweeny" (of the rear-guard, which had been driven in on the main body), "and renewed the action there. The War Whoop was given by our People below and communicated round. We advanced on the Enemy on all sides with great shouting and Noise. The Indians after a brave resistance of some minutes conceived themselves nearly surrounded,

fled with the utmost Haste by the only passes that remained, & left ten dead on the ground. Our troops wished to do their duty but they were much overcome with Fatigue otherwise as the Indians imagined themselves surrounded we should have drove the Enemy into the River.

"From every account these were a select body of Warriors sent after us, consisting of near 200 Men. Their Confidence and Impetuosity probably gave the victory to us. After they had driven our Rear some Distance their Chief was heard to say in the Indian Language that which is interpreted thus: 'My Brave warriors we drive them; be bold and strong, the day is ours.' Upon this they advanced very quick without sufficiently regarding the Rear. We had no alternative but conquest or Death. They would have murdered us all had they succeeded, but the great God of Battles protected us in the day of Danger. We had 4 killed and 10 wounded. They received such a Beating as prevented them from giving us any further trouble during our March to Wyoming, which is more than 50 miles from the place of Action. The officers of my Regiment behaved well to a Man. All the party will acknowledge the greatest Merit and Bravery of Capt. Stoddart. I cannot say enough in his favor. He deserves the esteem of his Country. Mr. Carbery with his Horse was very active and rendered important services till his Horses were fatigued. Nearly all the other officers acquitted themselves with Reputation. Capt. Spalding exerted himself as much as possible. Capt. Murrow (Murry) from his knowledge of Indian affairs and their Mode of fighting, was serviceable. His men were marksmen and were useful. The men of my Regt. were armed with Muskets & Bayonets. They were no great marksmen and were awkward at wood Fighting. The Bullet and three Swan Shot in each Piece made up in some measure for the want of skill."

While not wishing to interrupt this detailed and interest-

ing account of the engagement by the commanding officer, I shall venture to supplement his statements in two or three particulars.

The exact order of events seems to be that the party in the canoes, numbering seventy men, hearing the firing at the second skirmish, landed at the "Greasy Lock" place and hurried up the "Indian Path" to where the action occurred. By the time they reached the place, which could take not less than fifteen or twenty minutes, the action was over, and the army had pressed on closely followed by the enemy, who, however, managed to keep out of sight. Getting sufficiently near, they made an attack upon the read-guard of thirty men with such celerity and force that it yielded to the weight of superior numbers. Captain Spaulding was sent by the left flank to support the rear, and at the same time to prevent the Indians from escaping in that direction. Before he could effect a junction with the rear-guard on its left, the party from the canoes came up and formed on the right of the rear-guard, and renewed the fight in that direction. The Indians by this movement were surrounded, except the gap which Spalding had not had time to fill, between himself and the rear guard, through which the enemy fled. There are several facts which lead to this opinion. The place where the skirmish occurred was a scant half-mile from the river, while that of the battle was a mile further. The firing at the former point, which was severe enough to indicate serious action, could be more distinctly heard by them than that of the engagement further on. The path up from the river would bring the men directly to the ground on which the skirmish occurred; and then, if the men did not leave their canoes until they heard the noise of the battle, they could not possibly reach the scene of the conflict until it was over.

Hartley reports four men killed and ten wounded in this engagement, and ten Indians killed and left on the ground. Were their wounded in the same ratio to the killed as in

Hartley's troops, the number would be at least twenty-five. The colonel gives neither the names nor of what command were the killed. Probably none of them were from the Wyoming companies. Joseph Elliot and Jonathan Terry were from Wyoming, and in this expedition. In giving his account of it, Mr. Elliott said he did not remember that any were killed, while Mr. Terry thought that one was killed and one wounded. If any of the killed had belonged to Wyoming, it would be strange if these two comrades in arms had not remembered them.

The place where this action occurred is still known in the locality as "Indian Hill." It is in Bradford County, but near the line separating it from Wyoming, on the Nye farm, and on the ridge between the Lacey Street and Indian Hill roads.

On the 5th of August the following year was the Sullivan expedition. Some of the diarists of that movement call attention to the Hartley fight. As they were going in an opposite direction, places are named in reverse order. Abstracts from some of these will be given:

Thomas Grant.—"Likewise passed the place where Col. Hartley defeated the Indians in '78. We then ascended a hill known by the name of 'Wyalusing Hill,' the ascent being very gradual, the descent very steep."

Col. Adam Hubley, who succeeded in the command of Hartley's regiment.—"We arrived in a small valley called Depew's farm (at the month of Tuscarora Creek), the land very good. Observed and reconnoitered this ground for some distance, it being the place at which Col. Hartley was attacked by the savages last year on his return from Tioga to Wyoming. The country being fine and open, some loss was sustained on both sides."

Rev. William Rogers, D. D., Chaplain to the Pennsylvania Brigade.—"About two miles from Black Walnut Bottom we crossed a small run or creek called Tuscaroge; took a partic-

ular view of the two places where the enemy last fall attacked Colonel Hartley's regiment in its return from Tioga. Both of them were as favorable for action as the regiment could have wished. We passed by the skull of one of our men who was then killed, hanging on a small tree. Having left this height we marched over a low and swampy piece of ground, we came to Wyalusing mountain."

The brief and hurried style of the diarists makes these accounts somewhat vague and confused, yet to one on the ground they are easily understood and located.

The latter part of August, 1904, I had the opportunity of going over the route of the expedition between Laceyville and the top of Browntown (Wyalusing) mountain, in company with Hon. John B. Edwards of Laceyville, Pa. Taking the usually traveled road to Wyalusing, about a mile brought us to the Indian Hill road, which we followed nearly a half-mile to the John Rosencrantz place, where again turning to the left up quite a steep hill, a few rods brought us to the top. "There," said Mr. Edwards (who, by the way, is a land surveyor, and thoroughly familiar with the local history of the region), as he pointed to a field at the left of the road, then filled with fragrant blossoming buckwheat, is the battle-ground of Indian Hill. Those who fell in the action here were left unburied, and the skull mentioned by Rev. Dr. Rogers is the only human relic known to have been found here. A number of musket-balls have been picked up about the place, and the barrels and locks of three muskets of the Queen Anne pattern. Of these one has been re-stocked, and is in the possession of the Bradford County Historical Society at Towanda, a second is said to be in the possession of Horace Ruger of Laceyville, the third I cannot place."

From the battle field we went westerly across the fields of the Nye farm to the highway. Here could be seen what Dr. Rogers calls the low and swampy place, the ascent to the Hamilton Brown farm, where the second skirmish oc-

curred, and the gradual rise of ground to the house of John W. Brown. Here, from this beautiful but wind-loved spot, the sweep of the field-glass takes in the same extent and variety of landscape that so delighted the early traveler over these romantic heights.

Returning to Colonel Hartley and his victorious little army, after resting a few minutes, they resumed their march toward Wyoming. From the battle-field the path continues down a long even slope of more than a mile, to "Lacey Street," a few rods above the Little Tuscarora, a small stream at the upper part of the village of Laceyville. Thence it continued down near where the Baptist Church now stands, on a course nearly parallel with the river, crossing the Tuscarora half a mile or more above its mouth, over the mountain to Van der Lippe's, present Black Walnut, where they bivouacked for the night. It had been an eventful afternoon for the little army and its stout-hearted commander; two skirmishes, a pitched battle, and a march of thirteen miles is a pretty good record. It may be observed that the next year General Sullivan's command was all day in passing over this same ground from Black Walnut to Wyalusing.

The rest of the story is soon told. Two days of hard but unobstructed marches, the first, September 30th, from Black Walnut to LaGrange, a distance of 26 miles, the second, on October 1st, from Lagrange to Wyoming, a distance of 22 miles, and the expedition was practically at an end.

Colonel Hartley thus sums up the results: "We performed a circuit of nearly 300 miles in about two weeks; we brought off near 50 head of cattle (and) 28 canoes, besides many other articles;" and he might have added the rescue of sixteen persons taken captive by the Indians from the settlements on the Susquehanna; the destruction of the four Indian towns of Tioga, Sheshequin, Queen Esther's and Wyalusing, and the collection of much information useful for the expedition of the next year.

Under date of Camp Wioming, Octo. the 3d., 1778, Colonel Hartley issued the following congratulatory order:

"Colo Hartley takes the opportunity of Returning his thanks to the officers and Soldiers Volluntiers and Others under his command on the Late Expedition for their Good Conduct and perfservation during that Tolesome and dangerous March amidst Hunger Wading of River at Midnight.

"Marches no Complaints were heard all was Submifsion and Resignation in Action several of the Continental officers difhtinguished themselves Capt Boone and Capt Champlane of the Voluntiers deferve particularly to be Named—Capt Franklin with his Voluntiers from Wyoming Were Very Ufeful in this Expedition In short with Very few Exceptions the Whole detachment have acquited themfelves With the Highest Reputation—and they have this further Satiffaction to know they have Saved the Lives of many and Servd their Country Sergt Allison and Sergt thornbury for their good Conduct on the March and their great bravery in action are appointed Enfigns in Colo Hartley's Regiment."

This is followed by orders preparatory to the return to Fort Muncy, and some promotions in his regiment for bravery in the action of the 29th September.

Colonel John Franklin, who accompanied the expedition as captain of the Wyoming militia, says the people were greatly pleased to see the stolen cattle and goods brought back, and then greatly disappointed to learn that all was to be sold at auction, so that to regain possession of their former property they must become the highest bidders.

The following orders give the reason for this procedure, the arrangements for the sale, and the proportion each officer and private was expected to receive from the proceeds:

"Wyoming Oct 1st 1778

"It if agreeable to the Articles of War in general and to the Articles of thefe States in Particular that the Whole of the Articles taken upon any Excurtion or Expidition (Similar to the one in Which We have Engaged) Called by the Name of Plunder (Except Military Stores) Should be the property of the Whole Party who took the Same—"Otherwise there Would be the Hiest Encouragement to

Worthless men to Quit their duty and go in search of Plunder

"The Colo Commandant
Orders Captains Stadder (Stoddert) Spaulding and Morrow With the Afsistance—of Lieut King Qr Mr to Examine into the Number of Articles plundered and Make Report tomorrow—

"All Perfons Who have been engaged In thif Expedition are Ordered to make an Exact Return of the Articles taken and Now in their Pofsefion—to those four Gentlemen this Evening or to-morrow Morning Should any one Volunteer or Other be Hardy Enough to Conceal any Article he Shall be punifhed to Military Laws and His Carrictor and punifhment Publifhed

"Weftmoreland Oct 2d 1778

"The Colo Comdt orders the Sale of the Goods taken from the Enemy by the Detachment under his Command to begin Capt Bufh vendue Mafter and Cafhier

"Capt Brader Clerk Capt Stodder Spaulding and Morrow to Superintend the Vandue.

"Any officer of the detachment may bid £10 without Cash but for anything above that Sum one of the above officers or a Capt of one of the Continental Companies muft be Security to pay in ten days. A Non Commissioned officer or Soldier may bid to any Sum not exceeding £5 an officer Must be Security for Anything Above.

"Any other persons Not belonging to the detachment may bid for any Articles but Must pay Cash for the same—the Money arifing from these Sales to be difposed of as follows—

"the Colo his Capts and Subls Capt Spaulding and his Subls Capt Morrow and his Subls Capt Boone Capt Brady Mr Carbury Mr Chatham Mr Sims Mr Robt King Mr Wm Stewart Mr Boyd Mr McCoy Mr Wiggins Mr Allifon Mr Barkley and Capt Campler and Franklin—each to draw two Shares—

"the Rest of the whole Detachment horse and Foot Volunteers and others each to draw one share."

For these and other valuable matters in this paper I am indebted to the Butler papers printed in Vol. VII, of the

Proceedings and Collections of the Wyoming Historical and Geological Society, and to its learned and accomplished Librarian, who has called my attention to them.

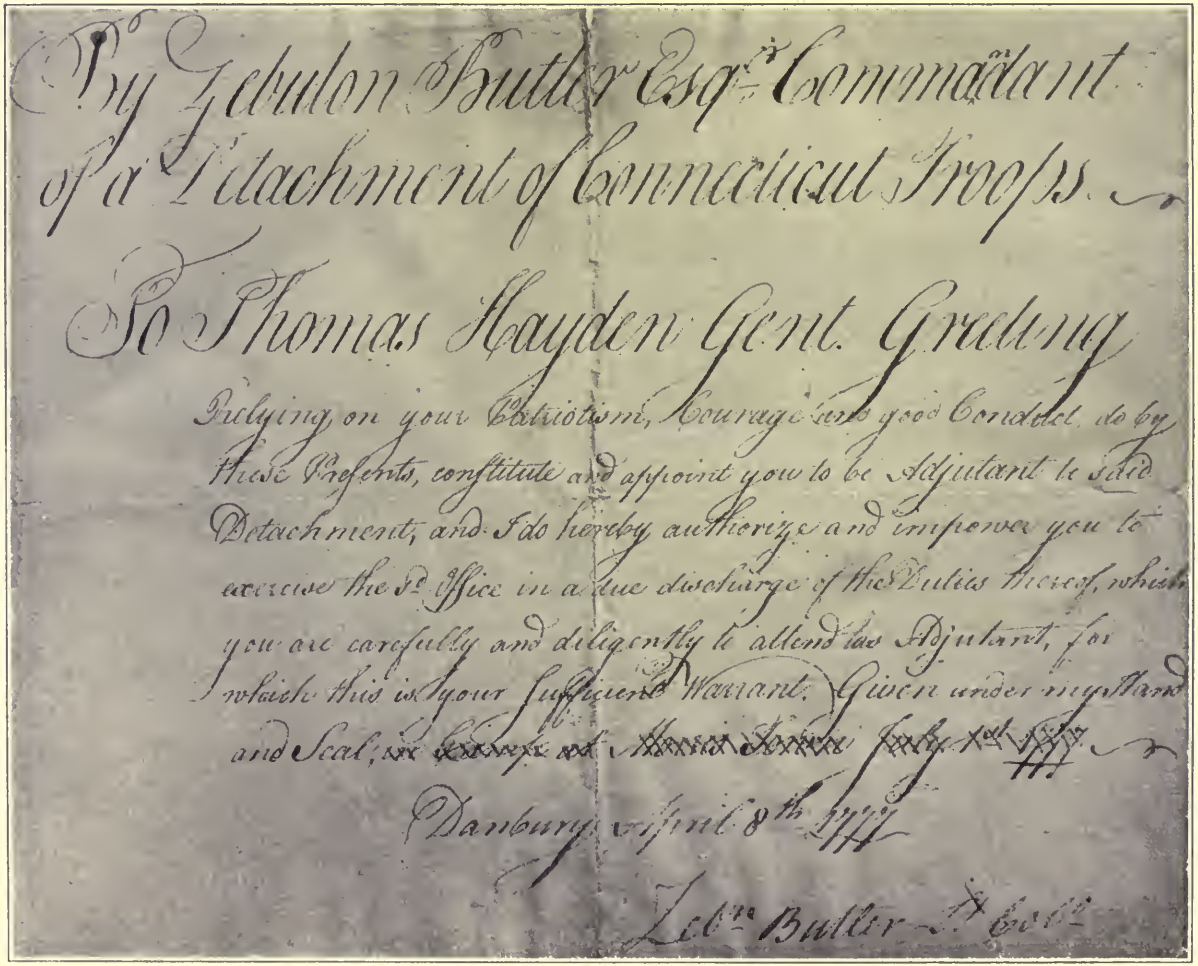
It had been my intention to conclude this monograph with short biographical sketches of Colonel Hartley and the commissioned officers connected with the Expedition, but the length of the paper already precludes further enlargement. Those interested are referred to my History of Bradford County, and to the publications of the Tioga Point Historical Society for sketches of Colonel Franklin and Colonel Spalding, and to Maginnis' "History of the West Branch" for others.

ITINERARY OF THE HARTLEY EXPEDITION, 1778.

In the following itinerary an attempt has been made to mark the journey of the Expedition day by day. The encampments of September 26th, 27th and 28th are given by Colonel Hartley himself, the others are conjectural, but are believed to be substantially correct.

The distances from Cogan's to Grover are obtained from the time tables of the Northern Central Railway, the others from reliable local authorities. From Fort Muncy:

		DISTANCE.
Sept. 21,	to encampment at or near Cogan's, ...	18 miles.
" 22,	" " " Field's	10 "
" 23,	" " " Roaring Branch, .	11 "
" 24,	" " " East Canton, . .	14 "
" 25,	" " " West Franklin, . .	13 "
" 26,	" " " Tioga, ...	22 "
" 27,	" " " Sheshequin, . . .	8 "
" 28,	" " " Wyalusing, . . .	28 "
" 29,	" " " Black Walnut, . .	14 "
" 30,	" " " La Grange, . . .	26 "
Oct. 1,	" " " Wyoming, . . .	22 "
	Total distance, ...	186 "



By Zebulon Butler Esq.r Commandant
of a Detachment of Connecticut Troops.

To Thomas Hayden Gent. Greeting

Relying on your Patriotism, Courage and good Conduct, do by
these Presents, constitute and appoint you to be Adjutant to said
Detachment, and I do hereby authorize and empower you to
exercise the said Office in a due discharge of the Duties thereof, which
you are carefully and diligently to attend as Adjutant, for
which this is your sufficient Warrant. Given under my Hand
and Seal, at [illegible] this [illegible] day of [illegible]

Danbury this 8th day 1777

Lt.o Butler A. Gen.l

Commission of Adjutant Thomas Hayden, Connecticut Line.
Danbury, 1777

THE ZEBULON BUTLER TABLET
AND THE
ZEBULON BUTLER ETHNOLOGICAL FUND.

A handsome bronze Tablet to the memory of Col. Zebulon Butler, who passed away at Wilkes-Barré, Penna., July 28, 1795, was placed on the front wall of the Wyoming Historical and Geological Society, July, 1904, one hundred and ten years after his death. This was done by the Librarian of the Society, at the expense of the Zebulon Butler Fund, with the approval of the Trustees of the Society; and with the consent of the Trustees of the Osterhout Free Library, to whom the Historical Society building belongs, it having been erected by them for the Society, in accordance with the will of the late Isaac S. Osterhout.

As it is believed that a brief history of this Tablet and Fund will be of much interest to the one hundred descendants of Colonel Butler, as well as to the public, it is recorded here.

The Tablet on the Historical building is twenty-five inches wide and forty-five inches long. In the centre of the Tablet at the extreme top there is a fine representation of the insigna of the Society of the Cincinnati, of which Colonel Butler was one of the first members from Connecticut.

The insigna is an American eagle displayed; on a medalion covering the body of the eagle the principal figure is CINCINNATUS; three senators are presenting him with a sword and other military ensigns, on a field in the background his wife stands at the door of his cottage, near it is a plow, implements of husbandry, etc. Round the whole is the motto of the Society, *"Omnia reliquit servare Rempublicam."* In the membership of the Connecticut State Society, organized May, 1783, the first two names on the list as they signed the Constitution, are those of Jed. Huntington and Zebulon Butler. On the Tablet under the insigna, as

will be seen in the frontispiece of this volume, the memorial inscription is as follows:

IN MEMORY OF
COLONEL
ZEBULON BUTLER
BORN IPSWICH, MASS. 1731
DIED WILKES-BARRÉ, PA. 1795
COMMANDED
THE AMERICAN FORCES AT
WYOMING, PA. JULY 3, 1778
ENSIGN, 3D REGT. CONN. TROOPS, 1757–1758
LIEUTENANT, 4TH REGT. 1759
CAPTAIN, 1760–1762
SERVED IN THE HAVANA CAMPAIGN
COL. 24TH CONN. REGT. WYOMING, 1775
LIEUT-COLONEL, CONTINENTAL LINE
1776–1778
COLONEL, CONTINENTAL LINE, 1778–1783
RETIRED JUNE 3, 1783
MEMBER CONNECTICUT STATE SOCIETY
OF THE CINCINNATI, 1783
MEMBER CONN. ASSEMBLY, 1774–1776
JUSTICE, 1774–1779 JUDGE, 1778–1779
COUNTY LIEUT., LUZERNE CO., 1787–1790

ERECTED BY SOME OF HIS DESCENDANTS
JULY 25, 1904.

The Fund has been created for Ethnological purposes. The Wyoming Valley and the lowlands that border the Susquehanna River to the north and west have long been known to be rich in the stone relics of the various Indian tribes that lived and hunted along this stream. More than twenty thousand specimens of these are preserved in the collections of the Historical Society. These are included

in the collection of Andrew J. Griffith, gathered in the vicinity of Pittston, numbering about three thousand pieces; the large collection of Christopher Wren, of ten thousand pieces from the Wyoming Valley and the water-shed of the Susquehanna River from Tioga Point to Sunbury; and that of the "Colonel Zebulon Butler Fund," a collection of one thousand fine pieces found in the vicinity of Wilkes-Barré; and others. Besides these, many thousand pieces have been found during the past fifty years, by boys and other seekers, broken up, lost or sold to dealers to grace other collections. The necessity for a special fund for the purchase of such specimens as are valuable, that may be yet found, has long been felt by the Society. But the several appeals made by the Librarian for such a fund to be created by the Society, having met with no response, he resolved to create such a fund himself. This Fund he started with one hundred dollars, made personally, but through the medium of the Society, hence while his own legally, not his own in equity. When the name to be given to the Fund was considered, an inspiration came to his aid. Recalling the fact that no monument exists anywhere to the memory of that distinguished and gallant soldier, Col. Zebulon Butler, except the plain slab of marble that covers his grave in the Hollenback Cemetery, placed there by his family; and recalling the words of the Historian of Wyoming, Charles Miner, that "the history of Colonel Butler is the history of Wyoming," the Librarian determined to name the Fund after this almost forgotten hero. Personal reasons entered largely into this decision, which justify this choice beyond the right of any one to criticise.

For over one hundred years the names of Col. Jed Huntington and Col. Zebulon Butler have been household words in the Hayden family. Lieut. Thomas Hayden of Windsor, Conn., the great-grandfather of the Librarian, and an officer in the Continental Line for five years, was in turn

the Adjutant of each of these officers, and thus a member of their military family. With the family of Colonel Butler, his own family has intermarried, and a special interest in the fame of Colonel Butler has long existed in the Hayden family from these facts. The Librarian has, hanging in his home, the original commissions of Lieutenant Hayden from Congress, Jed Huntington, and Zebulon Butler. He has also, deposited in the Historical Society, a very handsome sword with hilt of silver cord, and figures of burnished gold, bought by Lieutenant Hayden at the time he was made Adjutant to Colonel Butler, together with his Revolutionary Order book, watch and ink-horn used at that time; also the official order of Colonel Butler, announcing his appointment as Adjutant (see illustration). This association has always been a matter of pride to the Librarian, hence the idea of naming this Fund for the purchase of Wyoming Indian relics after the distinguished commanding officer of the Wyoming military forces from 1769 to 1783, was promptly put in practice, and the Fund was named for Col. Zebulon Butler.

To interest the many descendants of Colonel Butler in this memorial Fund was the natural sequence, and a circular letter was mailed to each of seventy descendants, whose names and addresses were procured, with prompt replies from thirty of them. One descendant immediately added two hundred dollars to the Fund, and two others gave one hundred dollars each with the condition that out of the general Fund a memorial bronze Tablet should be placed on the Historical building to Colonel Butler. Others contributed until the Fund had reached the sum of eight hundred dollars, from members of the Butler family. The condition of having a memorial Tablet was gladly accepted and acted upon. The duty of securing it, writing the inscription, and seeing to its being placed, of course fell on the Librarian, who, with the approval of the President of the Society, and the largest contributors, ordered and accepted from Cabaret

& Co. of New York City, the handsome Tablet now standing on the outer wall of the Society building. The work is of the very best character, and has commanded the admiration of all who have inspected it. The cost was two hundred dollars. The Fund now amounts to six hundred dollars, invested at five per cent. It is sincerely hoped that this history of the matter will interest others of Colonel Butler's descendants to increase the Fund to one thousand dollars, the minimum sum, without calling on the Society, or others outside the family, to do so. This Fund carefully invested in five per cent. bonds, will, within the next ten years, have established as a memorial of this hero of Wyoming, first, the Butler Fund; second, the Butler Tablet; third, the Butler collection of Ethnology; fourth, the Butler library of Ethnology. The collection now contains one thousand pieces, and the library of Ethnology, two hundred volumes. The Librarian will be grateful for any sum contributed by descendants of Colonel Butler to complete this Fund.

The historical side of this subject is full of interest. The commission of Thomas Hayden as adjutant to Colonel Butler is as follows:

"By Zebulon Butler, Esq., Commandant of a Detachment of Connecticut Troops:

"To Thomas Hayden, Greeting: Relying on your Patriotism, Courage and Good Conduct, do by thefe Prefents, conftitute and appoint you to be Adjutant to said Detachment, and I do hereby authorize and empower you to exercise the said office in a due discharge of the Duties thereof, which you are carefully and diligently to attend as Adjutant, for which this is your sufficient Warrant. Given under my Hand and Seal in camp at Morris Town July 1st, 1777.

"Danbury, April 8th, 1777,

Zebn. Butler Lt. Col."

The handwriting of this Commission will be recognized as that of Gen. Lord Butler, the son of Colonel Butler, and then a youth. He accompanied his father through all his campaigns.

The official order announcing Hayden's appointment is as follows:

"Head Quarters Danbury April 10th, A. D. 1777.
Lt. Colo. Butlers Orders,

"That the Detachments from Colo Huntington's Wylly's & Duglafs's Battalions Now in this Town are to Draw Provifions to the 13th Instant Inclusive that their Flower be Baked & Provisions Cooked for one day at Least—that the troops be ready to Martch by One o'clock this Afternoon —under the command of Major Sill.——

"The Colo. recommends that all officers take Special Care that the Troops now ordered to Martch Abstain from every kind of Violence Noife and Disorders on their martch or in Quarters

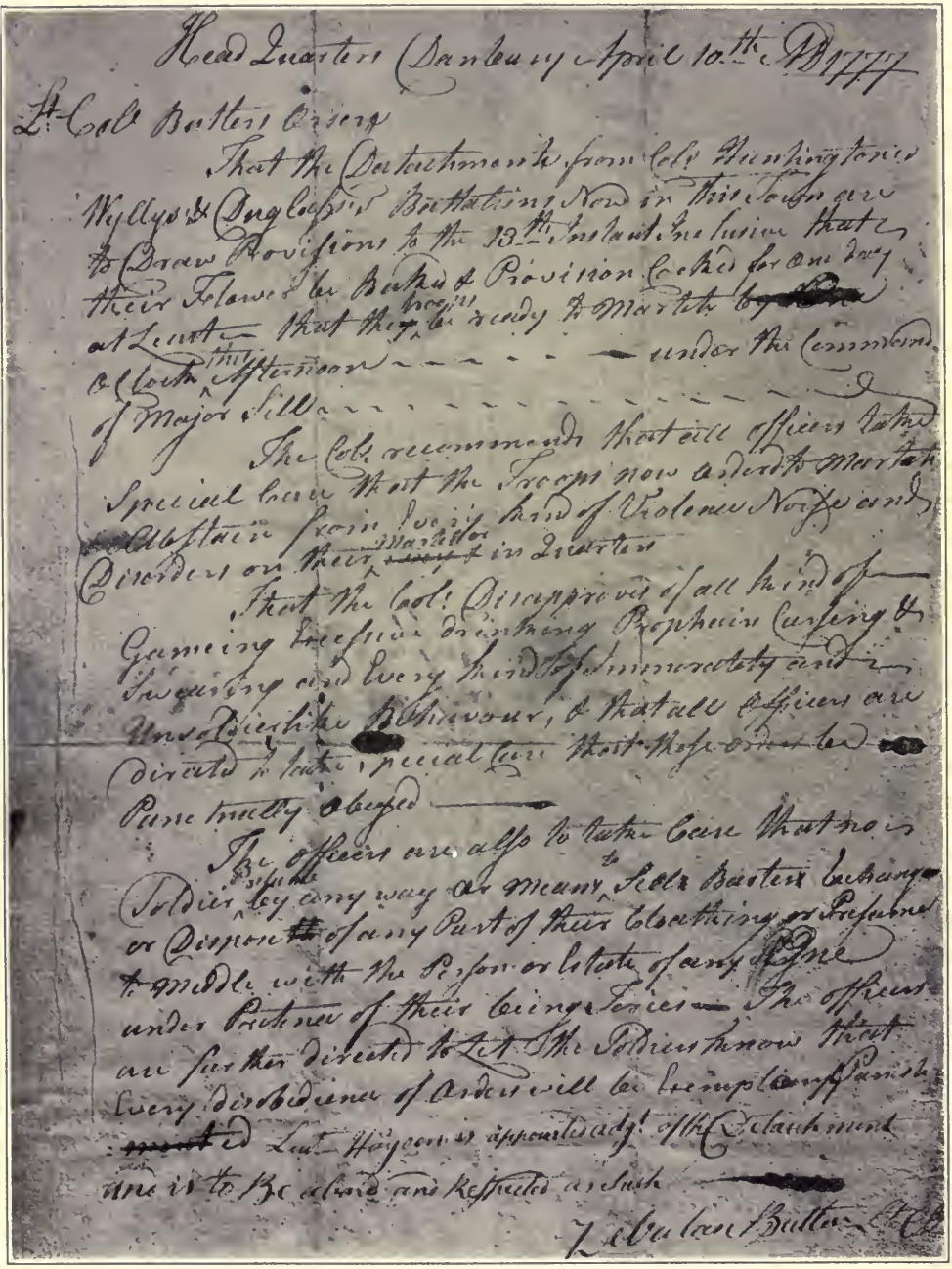
"That the Colo Disapproves of all kind of Gaming Excefsive drinking Prophain Curfing & Swearing and Every kind of Immoralety and—Unsoldierlike Behaviour, & that all officers are directed to take Special Care that thefe orders be Punctually obeyed.—

"The officers are alfo to take Care that no Soldier Presume by any way or means to Sell Barter Exchange or Dispose of any Part of their Cloathing or Presume to meddle with the Perfon or estate of any One under the Pretence of their being Tories—The officers are further directed to Let the soldiers know that every disobedience of Orders will be Exemplarily Punished. Lieut. Hayden is appointed Adjt of the Detachment and is to Be abaid and Refpected as such.—"

ZEBULON BUTLER LT. COLO."

This paper is not only personally valuable as showing the appointment of Adjutant Hayden, but it is historically so, as giving the only evidence that Colonel Butler was at Danbury with a detachment of troops from the regiments of Huntington, Wyllys and Douglass, April, 1777, a fact not stated in any history of the raid of Tryon.

It is doubtless well known that adjutants are appointed and commissioned by colonels of regiments as members of their personal staff, and the appointment does not usually appear in official military records. Lieutenant Hayden was appointed Sergeant Major to Col. Jed. Huntington, August



Head Quarters Danbury April 10th 1777

Lt Col Butlers Orders

That the Detachments from Col Huntingtons Wyllys & Douglass's Battalions Now in this Town are to Draw Provisions to the 13th Inclusive that their Tents & Baggage be ready to March by at Least that they be ready to March by ~~Day~~ this Afternoon ~~~~ under the Command of Major Hill ~~~~

The Col recommends that all Officers take Special Care that the Troops now ordered to March in Platoons keep void [illegible] Disorders on their Marches in Quarters

That the Col disapproves of all kind of Gaming Excessive drinking Profaneness Cursing & Swearing and every kind of immorality and Unsoldierlike Behaviour, & that all Officers are directed to take Special Care that those orders be punctually obeyed

The Officers are also to take Care that no Soldier by any way or means Col Butlers Cabbins or Dispose of any Part of their Cloathing or Presume to meddle with the Person or Effects of any Person under Pretence of their being Tories ~~~~ The Officers are further directed to Let the Soldiers know that every Disobedience of Order will be complained Against

~~Mr~~ Lieut Haydon is appointed Adjt of the Detachment and is to be Obeyed and Respected as Such

Zebulon Butler Lt Col

ORDERS OF COL. ZEBULAN BUTLER, AT DANBURY, CONN., 1777.

11, 1775, as his commission shows, and this appointment appears in official records. He was appointed Adjutant August 20, 1776, and April 8, 1777, and his commissions are the only evidence of the fact. His appointment as Adjutant to Col. Zebulon Butler, as the photograph here presented shows, occurred April 8, 1877, Colonel Huntington then being slated for promotion to brigadier general. The commission shows that it was written by the clerk at Morristown, in July, at which point it was first dated, but as the appointment was made April 8, at Danbury, the words "in Camp at Morris Town July 1, 1777," were erased and the exact date and place of appointment added before Colonel Butler attached his signature. This shows that Butler was at Danbury through April, but after the raid of Tryon was ordered to Morristown.

The "Record of Connecticut men in the War of the Revolution" states (page 157), that the Second Regiment, Connecticut Line, under Colonel Webb, whom Butler succeeded in 1778, "was ordered to assemble at Danbury in April, 1777, preparatory to taking the field, and soon after went into camp at Peekskill."

It is also stated of the Third Regiment, under Colonel Wyllys, of which regiment Colonel Butler was Lieutenant Colonel (page 168), "The regiment in part assisted in repelling the enemy at Danbury, April 26-7." But in the record of Douglass' regiment no mention of its presence at Danbury is made, nor does the document in the office of the Comptroller in Hartford indicating what commands were at Danbury, mention any of the three regiments or officers referred to in Colonel Butler's orders (page 492). Huntington's regiment is not credited in official records with participation in the action at Danbury, but official records do show that Colonel Huntington, with five hundred men, attacked the enemy; "The rear of the British was attacked by Col. Huntington, commanding a party of five hundred men, who, sending to Arnold for assistance, General Silliman

was ordered to his aid." (Schenck's History of Fairfield, ii, 342.) It is evident, therefore, that Colonel Butler with his detachment, was at Danbury from April 8 to some time in May, and when the British marched on the place Colonel Huntington, as superior officer, was sent there, taking charge of the detachment under Lieutenant Colonel Butler, and repelled the enemy.

These documents, Hayden's commission and Butler's orders, add an important fact to the life of Colonel Butler, that had otherwise been entirely unrecorded and unknown.

The inscription on the large marble tablet marking the grave of Colonel Butler, in Hollenback Cemetery, is very brief. Under the stone lie buried the remains of Colonel Butler and his third wife, of Gen. Lord Butler and his wife, all of which were removed from the old City Cemetery on the site of which the present City Hall now stands. The full inscription is as follows.

"Colonel Zebulon Butler
of the Revolutionary Army
Died July 28, 1795, Aged 64 Yrs.

Phebe
wife of Colonel Butler
Died January 19, 1837, Aged 81 Yrs.

Lord Butler Esq.
son of Colonel Butler, born at Lyme, Conn.
died March 3, 1824, Aged 63 Yrs.

Mary
wife of Lord Butler Esq born at Plainfield Conn
died October 28, 1834, Aged 72 Yrs."

The original stone placed over Colonel Butler's grave in the old City Cemetery had also a stanza of four lines, as recorded in Miner's History, in the Appendix, page 63. These lines were not inscribed on the present stone.

HORACE EDWIN HAYDEN.

OBITUARIES.

MISS MARTHA BENNET,

Life member of this Society, born Wilkes-Barré, January 24, 1863, died Birmingham, Michigan, June 27, 1903, was the daughter of Charles and Sarah (Sly) Bennet of Wilkes-Barré, and granddaughter of John Bennet of Forty Fort, who was deputy surveyor of Luzerne County for some years, and the son of Andrew Bennet and his wife Abbie Kelley, the son of Thomas Bennet of Kingston. This Thomas was one of the one hundred and seventeen persons who settled at Wyoming 1763, and escaped the Indian massacre of that year. Thomas and his son Andrew, who was born 1764, and died 1821, hence was a boy at the time of the massacre of July, 1778, were captured by the Indians March 27, 1780, and, with Lebbeus Hammond, who escaped the tomahawk of Queen Esther, were carried off. The capture of these three, their gallant attack on and destruction of their savage captors, and marvellous escape with their arms, is graphically described by Peck in his "History of Wyoming," pp. 281-302 (see also Harvey Book, pp. 995-997).

Charles Bennet, son of John Bennet and his wife, was born Kingston, February 28, 1819, died August 6, 1866, studied law with Gen. Edward Warren Sturdevant, and was admitted to the bar April 7, 1845. But when the coal industry developed he gave much of his attention to mining enterprises and aided largely in opening the coal field to the railroads, acquiring a large fortune for those days. Miss Martha Bennet, his eldest child, became at the death of her parents, the dispenser of this estate and her short life of near forty years was full of charitable and benevolent activities. She inherited the disease which shortened her life, but she crowned that life with the prayers and blessings of the poor and needy. She was one of the founders of the Young Women's Christian Association of this city, and a liberal financial supporter of it and of the Martha Bennet branch of the institution on the Heights, the Edwardsville Y. W. C. A., the Kindergarten for children of foreign par-

ents at Luzerne, the United Charities, the Luzerne County Humane Association, of all of which she was a member. She also paid off the debt of $2,000 on the Bennet Presbyterian Chapel of Luzerne. She became a member of the Wyoming Historical and Geological Society in 1895, and a Life Member 1898. She was also an earnest communicant of the First Presbyterian Church of this city. In disposing of her estate, after several large bequests to individuals, she left the residue of her property to found a Home for Poor Children.

HON. CHARLES ABBOTT MINER,

Life member of this Society and President in 1881, born Plains Township, Luzerne County, August 30, 1830, died at his residence, Wilkes-Barré, July 25, 1903. Mr. Miner was the son of Robert and Eliza (Abbott) Miner, and grandson of Asher and Mary (Wright) Miner. Asher Miner was the son of Ensign Seth Miner, who served in the Connecticut Line during the Revolutionary war, and his wife, Mary Wright, the daughter of Thomas Wright of Ireland, who was the founder of Miner's Mills, and who built the first mill there in 1795. Ensign Seth Miner was descended from Thomas Miner, who came to Connecticut in 1642. The family history for many generations in England has been published in the New England Historical and Genealogical Register, XIII, 161-4.

Hon. Charles Abbott Miner was educated at the Wilkes-Barré Academy and the Westchester, Pa., Academy. He was engaged in the milling business from his majority until his death, on the same spot where his maternal grandfather, Thomas Wright, erected his mill, 1795. Of late years this work has been under the firm of The Miner-Hillard Milling Company, owning one of the very finest flour and grain mills in the United States. Mr. Miner was until his death the president of this company. He was also for years a member and president of the Pennsylvania State Millers' Association. He was also prominent in Luzerne politics and enterprises. He was treasurer of the Coalville (Ashley) street car line, 1871-1872, and its president 1873-1886; president of the Luzerne County Agricultural Society; of

the Wilkes-Barré City Hospital, 1871-1903; of the Harry Hillman Academy, 1886-1903; an original member of the Wyoming Historical and Geological Society, 1858, Life Member, 1889, Vice-President, 1877–1880, President, 1881, Trustee, 1887-1903, and one of its most enthusiastic supporters; director of the Wyoming National Bank, 1886-1896, and vice-president, 1896-1903; member of the Pennsylvania Geological Survey Commission, 1881-1895, when it ceased to exist. He was also prominent in the civil history of Wilkes-Barré, representing the city in the Pennsylvania House of Representatives, 1874-1880; member of city council, 1871-1874, 1886-1887, serving as president of that body, 1874; he was also a member of Landmark Lodge 442, F. and A. M., and treasurer, 1880-1881; Companion of Shekinah Chapter, 182, R. A. M. since 1874, and a Sir Knight of Dieu le Veut Commandery, 45, Knights Templar, since 1875. He was a staunch Republican in politics, and having enlisted in the 30th emergency regiment Pennsylvania Volunteers, 1863, a member of Conyngham Post, G. A. R. He was for years a communicant of St. Stephen's Church in this city, a member of its Vestry, and for years the Junior Warden of the Parish. He was a member of the Pennsylvania Society of the Sons of the Revolution, 1891-1903, as a descendent of Ensign Seth Miner, Sergeant William Searle, and Privates John Abbott and Constant Searle, all of whom were soldiers in the Revolutionary war.

In the death of Mr. Miner the various charities of this city have lost a generous supporter and a faithful friend. "He lived a good life above the sordid and selfish interests that animate so many men of means. He followed the promptings of a heart that felt for all humanity, and he leaves a memory that will always be cherished in fond remembrance."

Mr. Miner married, January 19, 1853, Eliza Ross Atherton, and had six children, of whom three sons survive, Col. Asher Miner, Dr. Charles H. Miner and Sidney Robey Miner.

REV. NATHAN GRIER PARKE, D. D.,

Life member of this Society, born Slate Ridge, York County, Pennsylvania, December 16, 1820, died at his cottage, Glen Summit, Luzerne County, Pa., June 28, 1903. He was the son of Rev. Samuel Parke, the life-long pastor of the Presbyterian Church at Slate Ridge, and his wife Patty Grier, daughter of Rev. Nathan Grier, for twenty-seven years pastor of the Presbyterian Church of Brandywine, and one of the four sons of John and Agnes (Caldwell) Grier of Ireland, and Bucks County, Pennsylvania, all of whose sons became prominent ministers of the same church in America. It is worthy of note that these four sons of John and Agnes Grier gave nearly twenty eminent ministers of the Gospel to the Presbyterian Church of the United States.

Dr. Nathan Grier Parke was educated at Jefferson College, Canonsburg, Pa. (now Washington and Jefferson College), where he graduated A. B., 1840, receiving from the united college in 1884 the honorary degree of Doctor of Divinity. In 1840 he entered the Theological Seminary of Princeton, from which he graduated in 1844. He was licensed to preach by the Presbytery of Donegal, Columbia, Pa., April, 1843, and ordained an Evangelist by the Presbytery of Luzerne, July 7, 1846. Meanwhile he engaged to serve the congregation at Pittston, Pa., June, 1843, as stated supply, an engagement that ended only at his death. He ministered as pastor to the Pittston Church for fifty years, when he became Pastor Emeritus, remaining connected with the church there until he rounded out sixty years of service. Here he built his first church in 1846, at a cost of $2,000. In 1857 the enlarged congregation made a second church necessary, which he also erected. During his work at Pittston his missionary zeal made him diligent at other points in that vicinity. He was the organizer of the church at Slocum Hollow, now First Presbyterian Church of Scranton, to which he ministered for six years in connection with the Pittston work. Indeed he was the father of the Presbyterian Church in the Lackawanna Valley. In 1867 he was one of the representatives of the General Assembly of the Presbyterian Church in the United States, to the General Assembly of the Free and United Presbyterian Church of Scotland. Dr. Parke became a Life Member of the Wy-

oming Historical and Geological Society in 1898. In 1847 he married Ann Elizabeth Gildersleeve, daughter of W. C. Gildersleeve of Wilkes-Barré, and granddaughter of Rev. Cyrus Gildersleeve, an early pastor of the First Presbyterian church of that city. Mrs. Parke died May 9, 1900. He is survived by five children, William Gildersleeve Parke, Scranton; Samuel Maxwell Parke, Pittston; Mrs. Thomas H. Atherton, Wilkes-Barré, and Dr. Charles Riggs Parke, Florence, Italy.

MRS. PRISCILLA LEE BENNETT,

Life Member of this Society, was born Hanover, Luzerne County, Pa., March 14, 1819, died at her country residence, Leehurst, Olivers Mills, Pa., September 26, 1903. She was the daughter of James Stewart Lee of Hanover, and his wife, Martha Campbell, and granddaughter of Captain Andrew Lee, and his wife Priscilla Espy Stewart, who was a daughter of Josiah and Elizabeth (Crain) Espy, and widow of Jas. Stewart. Captain Andrew Lee, was son of Thomas Lee of Lancaster County, Pa. He served under Braddock in 1755, and under Washington, 1776-1783, in Col. Moses Hazen's "Congress regiment." (See sketch of his life in Harvey's History of Lodge 61, F. and A. M., p. 362.) Mrs. Bennett was also descended from Lieutenant-Colonel (Captain) Lazarus Stewart, who was slain in the Wyoming Massacre.

She married, as his second wife, February 18, 1856, Hon. Ziba Bennett, a prominent merchant and an associate judge of Luzerne County, and thus was stepmother of Mrs. John Case Phelps and Mr. George Slocum Bennett, to whom she was as dear as an own parent. She was a member of the First Methodist Episcopal Church, connected with its Sunday School for over forty years, and assistant superintendent for over thirty years. The fine Sunday School building of the church was donated by her at a cost of $20,000, and the organ, $10,000. She largely donated the beautiful Bennett Chapel, at East End, which was named for her. She was a large contributor to all the missionary work of her church, to Drew Theological Seminary, Weslyan University, Wyoming Seminary, The Wilkes-Barré Y. M. C. A., Y. W.

C. A., and Home for Friendless Children, of which she was founder, treasurer and president. She endowed the Washington Lee bed in the Wilkes-Barré City Hospital. Indeed her charities were endless and her benevolences to the poor and needy countless. She became a member of the Wyoming Historical and Geological Society 1882, and a Life Member 1889.

MEMBERS DECEASED SINCE ISSUE OF VOLUME VIII.

LIFE.

Hon. Garrick Mallery Harding, died May 19, 1904.
John M. Crane, died November 17, 1904.
Major Jacob Ridgway Wright, died January 20, 1905.

ANNUAL.

Mrs. Clorinda (Shoemaker) Stearns, died May 6, 1904.
Harry Hakes, M. D., died April 20, 1904.
Joseph C. Powell, died July 18, 1904.
Col. George Murray Reynolds, died September 24, 1904.
Mrs. Stella (Dorrance) Reynolds, died November 13, 1904.
Rev. Francis Blanchard Hodge, D. D., died May 13, 1905.
Abraham G. Hoyt, died May 20, 1905.
Mrs. Anna Buckingham (Dorrance) Reynolds, died October 4, 1905.
Liddon Flick, M. A., LL. B., died July 2, 1905.

Sketches of these will appear in the succeeding volumes.

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Bibliography of the Wyoming Historical and Geological Society. Wilkes-Barre, Pa., 1896. 8vo., pp. 4.

Pedigree Building. Dr. William H. Egle. 1896. pp. 4.

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Reynolds, M. A., a Member of the Commission, and President of the Wyoming Historical and Geological Society. With a brief Memoir of the author, by Andrew H. McClintock, M. A. Read before the Society December, 1894, and reprinted from The State Report, 1896. Seal. Wilkes-Barre, Penn'a, 1896. 8vo., pp. 48 Illustrations. $1.00.

The Frontier Forts within the North and West Branches of the Susquehanna River, Pennsylvania. A Report of the Commission appointed by the State to mark the Frontier Forts erected against the Indians prior to 1783, by Captain John M. Buckalew, a Member of the Commission, and Corresponding Member of the Wyoming Historical and Geological Society. Read before the Society October 4, 1895, and reprinted from the State Report, 1896. Seal. Wilkes-Barre, Penn'a, 1896. 8vo., pp. 70. Illustrations. $1.00.

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Charter, By-Laws and Officers, 1858-1899; Members, Papers, 1858-1899; Contributors, &c., 8vo., pp. 36. Wilkes-Barre, 1899. $0.25.

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