

THE
JOURNAL

OF THE

Lycoming County Historical Society

VOLUME XXI
NUMBER ONE

SPRING
1985



JOURNAL
of the
LYCOMING COUNTY HISTORICAL SOCIETY

Published Semiannually in Williamsport, Pennsylvania

Museum Office - 858 West Fourth Street

Telephone (Area Code 717) 326-3326

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MUSEUM ENDOWMENT FUND

A long planned project was launched this Fall with the creation of an Endowment Fund for the Lycoming County Historical Museum. This fund, administered by Commonwealth Bank, will insure the continuing operation of the museum by creating operating monies not dependent on government grants or outside funding sources. Monies will be deposited in a secure account and only the interest from the fund will be used. The endowment is being created by donors who may make a cash gift to the fund (all gifts are tax deductible), or by Will bequests. The following is a list of donors to whom we owe our most gracious thanks. Won't you pitch in and join them in this worthy project?

1. Clarence R. & Evelyn Antes Mutchler - \$5,000.
This gift to be listed as the Gibson G. Antes Memorial Fund in the Lycoming County Historical Museum Endowment Fund and shall be a continuing memorial to him. (Mr. Antes was a past president of this Lycoming County Historical Society.)
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COVER

Beaded designs on black velvet to be made into slippers, a crewel-trimmed needlecase and floral embroidery on pale blue satin suspenders are samples of Victorian needlework. Neither the slippers nor the suspenders were completed.

This photograph, like the others in this issue, was made by Miss Gladys Widemire.

GREETINGS FROM THE PRESIDENT'S DESK

Dear Member:

As this Journal goes to press we are at the end of our fiscal year and I think an informal report of the many things we have accomplished during this past year is in order.

First, I'm very happy to be able to report that our membership is up about 25% over last year and still growing as we approach the time for our second Annual Membership Drive.

The attendance at the museum has been about 20,000 people, up from about 12,000 last year. This number includes Lycoming County natives, travelers, tours from all over, school children and members. The last being the least I am sorry to say.

We have our Endowment Fund well started and under the management of the Commonwealth Bank and Trust Company, N.A. I am very happy about this, as I know we all are, but we still have a long, long way to go. Our income from this fund is approximately \$3,000.00, about 3% of our budget which is approaching \$100,000.00.

Our new genealogy room is now in operation and we have a staff to take care of the requests for searches as they come in.

We also have a public access information room full of local history.

We have added several historians to our volunteer staff who are experts in one field or another.

There is a brand new information file open to the public. It is full of old articles and personal memories of happenings in Lycoming County through the years.

Last, but certainly the very best, perhaps by the time the next Journal comes out we will have a beautiful new meeting room to go with our beautiful new parking lot.

It has been an exciting year for the Society and to make it even more wonderful we end the year with a bit of a surplus. Until very recently that was not at all a sure thing and many a year we have had a deficit.

May the next year be even better.

Sincerely,



Jane W. Ingersoll,
President

THE TEXTILE COLLECTION

Textile Curator Jane Ingersoll estimates that "there are probably more individual items in the Textile Collection than in all the Museum's other collections put together - there are thousands of them." The relatively few objects on display are only the tip of the iceberg, with the remainder in hundreds of boxes in storage.

The range is as extensive as the total number: buttons to paper dolls to quilting frames and military banners as well as clothing and accessories for men, women and children; needlework pieces (samplers, "show" towels, embroidered slippers); spinning and weaving equipment; furs; and quilts, blankets and coverlets.

It is worth noting at the outset that most of the clothing in the collection is of the expensive variety and hence not typical of what the average 1850's housewife wore to do her shopping and cleaning or how a lad of 1900 was dressed when he went out to play. Costly apparel was saved for infrequent "best" wear, but less expensive clothes were used until they wore out or were passed on to someone else to wear, make over or cut up into quilt patches. Too, the dresses and shirts most likely to survive to become museum acquisitions were those made for special occasions - weddings, fancy balls - whose elaborate designs and fine fabrics made them unsuitable for frequent wear.

STYLE CHANGES MAKE FASHIONS APPEALING

Typical or not, clothing and accessories have great human interest. The personal quality appeals to us; we see ourselves as the taffeta-and-lace clad belle of the Governor's Ball or, in checked-linen plus fours, receiving the 1925 Golf Championship trophy. Another reason for the interest in dress is the frequent shifts of fashion. Although clothing styles had changed only very slowly over the centuries, the novelty of the sewing machine, invented in 1846, brought about more rapid, more frequent variations in design and also made possible more elaborate dress patterns and details.

Another, earlier, invention also effected sweeping changes: this was the cotton gin, developed in 1793. Previously settlers here, as elsewhere, had produced their own fabrics. From flax which they had planted and harvested, they spun thread and wove linen; wool from their sheep, goats, and even dogs and rabbits was made into heavier goods. Fabrics were of solid color or made with stripes or checks. Many people wore garments of linsey-woolsey, a coarse, durable stuff woven from linen wrap and woolen woof. Silk and cotton fabrics were prohibitively expensive and hence very rare among the early settlers in the Susquehanna Valley. By the 1820's, calico, first imported from Calicut (Calcutta), India, and later produced in England, cost more than a dollar a yard—and a woman's dress required eight or nine yards; nevertheless the printed goods grew to be very popular with those who could afford it. As cotton dresses and shirts became more common, so too did underwear; lightweight outer garments necessitated the wearing of more layers for warmth.

WOMEN'S ITEMS PREDOMINATE IN COLLECTION

As might be expected, women's clothes and accessories make up the largest segment of the Textile Collection.

The oldest dress dates to about 1820. The fabric is natural, unbleached cotton woven with narrow vertical stripes of red, blue, black and white cross-

ed by blue shadow bars. Below the V-neckline, the boned bodice, which is lined with linen, is trimmed with a Shirred panel five inches wide and two inches deep; fullness is gathered into the shoulder seams. Sleeves, fitted at the top and full at the cuffs, each have four one-inch tucks above the elbow. The set-in, slightly vee'd, waistband was cut across the grain so that narrow stripes run around the waist. Gathered all around, the unlined skirt also has a decorative deep tuck near the hem and a pocket set into a side seam. Sewn into the hand-stitched seams is the narrowest of pipings. A "best" dress in the owner's wardrobe, the garment would have been worn to church.

Also, for church, or for formal calls in the early 1900's is a four-piece black silk suit which belonged to Mrs. Elmer Horn (see "Margaret Horn Remembers", in the issue). The full satin-weave skirt boasts a nine-inch train; the hem is edged with three rows of tucks and backed with a narrow band of black velvet. A cutaway coat, 45 inches long in back, has long sleeves, a mandarin collar and wide lapels. Buttons and long loops fasten the coat; buttons also at the closed ends of the loops create a double-breasted effect. Lined in pale grey satin, the coat is heavily weighted at the hem to keep it in place. The accompanying shirtwaist is black silk with a high-collared panel of finely tucked white net; the three-quarter length sleeves have deep net cuffs. Under all of this silk, satin and net, Mrs. Horn wore a black taffeta petticoat complete with train and velvet-backed ruffles around the hem.

YOUNG GIRL CHOOSES TAFFETA FOR GOWN

A more elegant gown in the Collection was made for a specific occasion: a ball marking the inauguration in 1858 of Judge William Packer as Governor of Pennsylvania. Williamsport teen-ager Anna Butler (later Mrs. George Snyder), a friend of Governor Packer's daughter, must have been thrilled to receive an invitation to the fancy affair, and a new gown was definitely in order. It is impossible to know whether the dress was made at home or by a dressmaker, but in either case the fabric chosen was aquamarine taffeta, much softer and less "rustly" than that woven today. The hoop skirt is topped by a separate boned and fitted bodice trimmed with ecru lace; an off-the-shoulder neckline and tiny cap sleeves make the gown a very formal one indeed. For less dressy occasions, a pleated and lace-trimmed bertha collar could be added. Mrs. G. Carlyle Whiting, of Jersey Shore, granddaughter of Mrs. Snyder, remembers that little girls of the family loved to "dress up" in the ball gown.

In cold weather a nineteenth-century woman donned her shawl before going out. One of the various types available, by far the most desirable was the Paisley. Originating in India and brought back from there by Napoleon's soldiers, these heavy garments featured colorful borders around dark — usually black — centers; the width of the border determined a shawl's value. The design was created patchwork-fashion: small pieces of solid-color fabric (green, blue, salmon) were stitched together and appliqued and embroidered in brilliant hues. Later a Scotsman developed a Jacquard loom capable of weaving the colorful shawls in one piece. Like those imported from India, these garments were extremely expensive: a local bride whose heart's desire was a Paisley shawl from Scotland had to settle for a less costly mink cape. To give the greatest effect for the least expenditure, one piece in the Collection has a bi-colored center so that, by doubling the six-foot length along the line where the colors joined, its owner could make one shawl seem like two: green-centered one day, red-based the next.

Not all shawls, of course, were Paisleys and not all were heavy. By the early twentieth century ladies were covering their shoulders with triangles or rectangles of silk and lace. One handsome affair, suitable for a bride, features tone-on-tone floral embroidery which covers much of the six-foot square of soft white silk; knitted lace and fringe make up the ten-inch edging.



SOFT-DRAPING SILK FABRIC, satin embroidery and fringed lace add up to a very feminine, very sensuous shawl.

In earlier days, as now, women embellished their wardrobes with all sorts of accessories: combs, lace jabots, jewelry, fans. The Museum has approximately 200 of these last items, most of them from the collection of Miss Marguerite Quigley. The variety is bewildering. One of them calls to mind a ballroom filled with elegant ladies and handsome gentlemen circling to the strains of the *Merry Widow Waltz*: dark tortoise shell blades and ring are topped with 20-inch ostrich plumes of brown and white. By contrast, the eighteenth-century fan which once belonged to Marie Antoinette is small and almost plain. Perforated ivory blades and feather-shaped leaves of ivory-colored taffeta make up the design of its seven-inch length.

A more colorful fan is one given as a graduation gift in 1898. Its white goose feather leaves are tipped with peacock-eye feathers. The white leaves bear a painted scene of two Japanese men and a spray of flowers; and other floral spray appears on the back of the leaves, and pink and yellow silk tassels add more color. The blades of this fourteen-inch-long piece are of carved and perforated ivory.

Fans were for every occasion. One was carried by a bride; it is made of white satin decked with hand-painted pink roses and blue forget-me-nots. A smaller fan has wooden blades painted black and leaves of plain black taffeta: a mourning fan. Blades could be of bamboo, leather, ivory, wood, or later plastic, and leaves might be feathers, silk or paper. Decorations ranged from languid Egyptians to bullfighters to cherubic children wreathed in flowers.

HAIR ORNAMENTS POPULAR AND VARIED

Milady decked her hair with various ornaments. One particularly handsome comb, which dates to 1860, is of intricately carved brown tortoise shell; its 15 teeth anchored it securely. Another item suggests feminine vanity. It consists of a small, dark brown crocheted cap trimmed with fat sausage curls and may have been worn under an ordinary house cap to hide its owner's lack of real curls.



QUILTING, OF WHICH a section is shown here, covers the entire surface of a full-length silk petticoat. The garment will be on view from April 28 until June 10 at Bucknell University's display of "19th and 20th Century Quiltmaking Traditions."

Among miscellaneous pieces of women's frippery is a combing cape made from red-and-white damask linen and sporting red embroidered designs; comb and brush on one side, a variety of hair pins on the other. Another Victorian lady sewed a linen bag for her bureau drawer and embroidered on it the identification "Corsets." Also for milady's bureau drawer is a more historic piece: a glove box which once belonged to the Empress Eugenie, wife of Napoleon III. After the collapse of the Second Empire in 1870, Eugenie went into exile in England with her husband and son. There she met and became friendly with a Williamsport resident, and invited the local woman to visit in her home. The glove box was a keepsake, a parting gift from hostess to guest. Finished in black lacquer, the wooden box has a carved design of cherubs on the top and is lined with red moire taffeta.

MEN ALSO WORE SHAWLS

Like women, men too donned shawls in cold weather; Abraham Lincoln is often depicted wearing one, and the Collection includes several of these rather unwieldy garments. Woven of wool with subdued plaid patterns, they were as large as six feet by twelve feet. The shawls are related to a Scotsman's plaid, a long strip of his clan's tartan worn over the shoulder and serving as outer garment or blanket, as need dictated.

From Judge William Hepburn's wardrobe comes a pair of white linen knee breeches dating to the end of the eighteenth century. These pants, which would have been worn on summer Sundays, are, of course, entirely handmade and still have some of the original covered buttons. A sliding buckle adjusted the fit in back; in the front are two buttoned pockets and a watch pocket set into the waistband seam. The judge must have been a slight man physically, for the pants would fit a 26-inch waist.

One of the Collection's most functional, and certainly the heaviest, pieces of clothing is a full-length coat made of buffalo hide. This fuzzy brown garment, which weighs almost 11 pounds, belonged to a Trout Run native, Dr. Lester K. Ade, who wore it during World War I when, as a lieutenant in the infantry, he served with the A.E.F. in Siberia. Bear-skin gloves completed his ensemble.

Less weighty, more civilized items among the men's clothing are several linen dusters which recall the early days of motoring, when open cars made protection from dust a necessity. A gentleman's accessories included gloves (some of them of white kidskin) and collar boxes and bags.

In the children's department, surviving pieces are infants' clothing-bibs, booties, coats and sweaters and, from pre-Civil War days, several linen undershirts. Two baby dresses, both from 1880, show an interesting contrast. One, of fine white cotton, has an eyelet embroidered waistband, decorative tucks and a drawstring neck; the other, described as an "every-day" dress, is made of cotton print, black on a blue background. Given the enthusiasm with which older youngsters wear out their clothes, it is not surprising that most of the few existing pieces are toddler-sized. A pair of white muslin underdrawers for a little girl are trimmed with embroidered ruffles and date to 1870; a red-and-white plaid cotton dress for a two-year-old boy of 1882 sports trim of black velvet ribbon and a brown cambric lining. Some nightwear also survives. Shown in the Christmas display, these items (gowns, wrappers) were made from fine white muslin.

Household linens make up another important segment of the Textile Collection; these are bedding primarily, although some table linens are also included.

The fifty or so quilts vary according to their dates, with both fabric and design significant in the dating. Crazy quilts, for instance, were a Victorian idea, and quilts made of silk pieces can be assigned generally to the second half of the nineteenth century. As with many other items, however, full documentation is impossible because most records were destroyed when the Museum building burned in 1960.

Coverlet Weaving

THE subscriber respectfully informs the public, that he carries on the above business at the residence of his father, Level Corner, Lycoming county, where he is prepared to do work on the shortest notice, and in a style not equalled in the state, such as:

Patent Damask Coverlets
(a superior article.)

STRIPED CARPETS

Diaper, &c. &c.

And every other description of weaving that may be desired. From his experience and close attention to business, hopes to receive an extensive patronage.

WM. LOWMILLER.

Lycoming twp. April 20, 1836

MOST BEDDING PRODUCED COMMERCIALY

Unlike quilts, which were produced in the home, other bedding was more likely to be the work of a professional. Hand weaving was a common occupation in the late eighteenth and early nineteenth centuries. John Carr is known to have been weaving in Lycoming County as early as 1774, and up until 1830 weavers outnumbered other craftsmen in central Pennsylvania. (The introduction of water-powered looms between 1830 and 1860 sharply reduced the number of hand weavers). Many weavers dyed their own yarns, using either natural dyestuffs (bark, nut hulls, leaves) or coloring materials (indigo, madder, cochineal) available at the local general store. Dyeing could be done at different stages: fleece (dye penetrated best at this time and hence the phrase "dyed in the wool"), spun yarn, woven cloth. An individual hand weaver could turn out ten to fifteen yards of cloth per day.¹

The Jacquard loom, introduced into Pennsylvania in the early 1830's, made possible the production of coverlets of complex geometric patterns. William Lowmiller was probably the first craftsman in this area to use such a loom. Two of his reversible coverlets, shown in the Museum's weaving display, are dated 1836 and 1838 respectively; at this time Lowmiller was working at Level Corner, near Linden. (By 1845 he had moved his shop to Muncy, no doubt floating his loom downriver on a flatboat). Coverlets sold for a dollar or two, but old records indicate that Lowmiller sometimes bartered his work for firewood or potatoes. Both coverlets are woven of blue, red, green and tan woolen yarns with fringe at one end and on both sides. The earlier example is 80 by 108-inches and is signed in two corners: "Wm. Lowmiller, Level Corner, Lyc. Co., 1836." The other piece, which measures 75 by 110-inches, has the signature woven into one corner only.

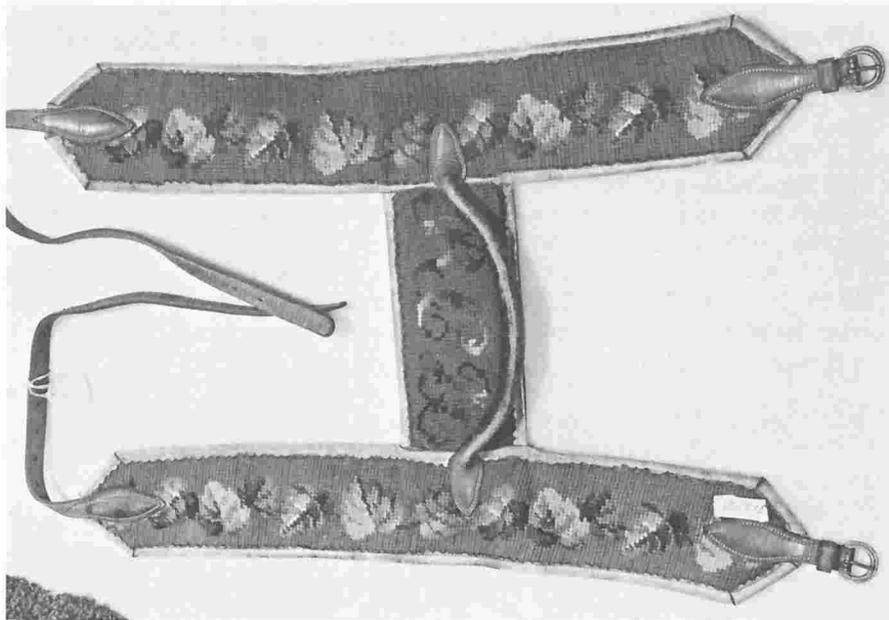
Although hand weaving was primarily a cottage industry, with most craftsmen working intermittently or part time at looms in their homes, the introduction of waterpowered machinery brought about the appearance of full-time, commercial weaving establishments. One of these was at Balls Mills, where customers could take their homespun yarns to be dyed and woven into yard goods or blankets. One such blanket, now on display, was made in 1870 for a Trout Run family. Measuring 78 by 86-inches, it is natural white with three narrow red stripes at either end. Red blanket stitching or cross stitching secures the ends.

Linen sheets in the Collection are a little older than the blanket, dating to about 1850, and so may have been made at home instead of at a mill. One example, of handspun woven flax, is seamed in the middle to make up its 72 by 86-inch expanse; and rolled edge is handsewn.

LACE AND LINEN FORM TABLE COVER

Among table linens is an outstanding round table cloth formed of concentric circles of fine white linen, probably handwoven, and Battenberg lace; its 60-inch diameter has a 13-inch wide lace border and a 3½ inch circle of lace around a linen center eight inches in diameter. Battenberg, sometimes called Renaissance lace, is made by arranging braid in the desired pattern and joining the braid pieces by fagotting or crocheting stitches. The table cloth is probably from the turn of the century.

Skilled needle-women created samplers, beaded slippers and show towels as well as table cloths. Two samplers come from the first half of the nineteenth century, one being dated specifically 1827. Both are true "sampler" samplers, without pictures or mottoes. One is worked entirely



TO MANAGE A bulky Paisley shawl, some nineteenth-century lady created this carrier of needlepoint mounted on leather. The straps buckled around the shawl to secure it, and the suitcase-type handle was easy to grasp.

in alphabets of varying sizes and designs, while the other consists of assorted small motifs embroidered in unbelievably fine cross stitch. Show towels were so named because they were intended solely to demonstrate their makers' skill and never to dry wet hands; a fine example hangs on the wall on the kitchen display. This cotton piece, $18\frac{1}{2}$ by $39\frac{1}{2}$ inches, has a $9\frac{1}{2}$ inch panel of drawn work with the date "1836" at the bottom and an edging of scalloped lace.

Beading was also a popular occupation, and Victorian ladies created slippers for their husbands or finger bags for themselves; smaller than handbags, these last could hold only a handkerchief and perhaps few coins.

Caring for such a varied and extensive collection, which grows constantly, could be virtually a full time job, but, Mrs. Ingersoll says, "we aren't able to do what we should to restore the things which come in." Such restoration is so complex that college-level courses are based on textile research and repair. In the Museum items are stored, flat or rolled, in acid-free boxes, away from the deteriorating effects of light, for the fabrics are irreplaceable. Although clothes are not lent for use away from the Museum, and especially not for wearing, they are available to those interested in doing serious research: students writing assigned papers, costume designers or, as recently, a needle-woman dressing a period doll.

Thus the Textile Collection helps to carry out the purpose of a museum as Webster saw it: "a building in which are preserved objects of permanent interest."

1. The information in this paragraph has been taken from *Country Cloth to Coverlets*, written by Sandra Rambo Walker.

This and That About Thread

by

Eva Berry Steffan (1890-1974)

"Sugar and Spice," we all know what little girls "are made of," but from what was lace made that trimmed every petticoat, pantie apron, sleeve, collar and ruffle that little girls used to wear? Cotton, of course!

Many of us can remember the mother of a dozen or more children, (sometimes less) who never sat down down to breast-feed a baby without first taking her knitting-needles or crochet-hook to keep adding to the piece of lace she had started. In 1870, a spool of cotton thread cost 60 to 80 cents.

From the dawn of civilized history, flax thread was used in making decorations for grave clothes.

The pure color of unbleached flax is the natural color seen in old lace.

At one time a pound of flax thread was so costly that the lace-maker was not allowed to wear lace made from it. (by decree.)

In Brussels, at the beginning of the Twentieth Century, a pound of the finest hand-spun thread cost more than a thousand dollars. This exquisite thread was so fine the spinner could barely see it. She depended on the "feel" of the thread as it passed through her fingers. A lace-maker had to produce a half pound of lace for every pound of thread supplied to her.

The silkworm has been pampered for five thousand years, and no wonder, when a half mile of silken thread can be unwound from the cocoon of the silk worm, which takes three days and nights to wrap it around himself.

In Rome, at the beginning of the Christian Era, silk that was imported from the East was really worth its weight in gold. Often gold and silver threads were mixed with silk for trimmings. Only the emperor and members of nobility were permitted to wear it.

Later when lace was made by machine many lovely silk black and blond laces were manufactured.

Some lace-makers were expert craftsmen with human hair. This fine-point lace was generally made by elderly women using their own silvery-white hair. Human hair lace was costly due to its rarity, which brought high prices from the aristocracy. A cravat of silvery-white hair was worn by Louis XVI at his coronation.

At one time, the hair of the vanquished was made into fringes and ornamental braids with which the conquering barbarians decorated their garments.

At one time, large hairy caterpillars were used in Germany to make fine lace of superb daintiness. This light-weight lace produced by the caterpillar was extraordinary.

A food paste was thinly spread upon a flat stone over which a lace design was traced. All parts [not] of the design were blotted out with oil. Then the caterpillar was placed on the bottom of the upright stone. There, he went to work eating his way to the top of the stone, avoiding any part touched by oil. As he went along, he spun a strong web connecting parts of the lace design. Though the lace web was strong and beautiful it never became anything more than an experiment for lace making.

A similar lace made of the finest flax thread was a hundred times heavier than the lace spun by the caterpillar.

The exceedingly strong web of the spider was once used in lace making, but craftsmen found it too difficult to handle, and the work too tedious for profit.

A form of spinning wheel was known to have been used for the spinning of cotton thread from time immemorial in certain parts of Asia.

In 1519 cotton garments were presented to Cortez by the natives of Yucatan. Efforts were made in Virginia to raise cotton as a staple crop in 1621, but the cultivation really began in 1770. One of the first consignments of cotton to a merchant in England was seized and lay unsold for a long time because thread spinners thought that cotton could not be profitably spun into fine enough thread to take the place of the linen thread in demand at that time. It took a skilled linen thread worker ten months, working fifteen hours daily, to complete a pair of men's lace sleeve ruffles.

Yarn spun from white wool of lambs in Colonial times was knit into baby caps, saques, women's fascinators and bonnets. The coarse yarns dyed and spun from older sheep were knit into stockings, mittens, and lace for flannel petticoats. Some homespun pieces of wool had a six-inch width knit lace.

In France, after the introduction of lace-making machinery in 1818, the history of old lace ceases and we have modern laces made of cotton, silk, linen and the synthetic threads.

Lace is one trimming that never vulgarizes the peasant or the lady.

(NOTE: This article, handwritten in the script reproduced in part, was found in the Museum's files. Can anyone provide information about the author?)

JOHN ALDEN KNIGHT AND THE SOLUNAR TABLES



LOCAL ARTIST ROSCOE Alexander painted this portrait of his friend Jack Knight. The painting hangs in the Solunar Sales Company office in Montoursville.

(NOTE: All quotations are from John Alden Knight's book, *Moon Up, Moon Down*, published by Scribners in 1942).

Jack Knight was a fisherman — had been, for most of his life. After all, he had been born in Williamsport, practically on the banks of the Susquehanna, and as a boy he had gone for sunnies and chubs in the

small streams near his home. In later years he had fished for bass in central Florida, for trout in Connecticut and for tarpon in the Florida Keys: years of experience, thousands of catches.

Yet Knight was puzzled. He was aware, as are all persistent anglers, that dawn and dusk are generally the most productive periods to fish. Yet he knew, too, that there are times when, in spite of conditions which seem ideal, no fly, however alluring, will attract a trout and that, conversely, on other occasions, fish will strike ravenously at almost anything, at any time of day or night. Why? The answer was years in coming.

Guide Gives First Clue

Snippets of clues finally began to accumulate, the first while "J.A.," as his family knew him, was on a bass-fishing trip in Florida. Although hours of casting had been unproductive throughout that hot July morning, Knight's guide insisted that shortly after noon the bass would begin to feed — and they did. As Knight describes it, "Accordingly...we went fishing under the broiling rays of the July sun. Never in all my wildest dreams have I seen such bass fishing as we had that day. [There were] almost three hours of hysteria. We broke lines, skinned knuckles, lost plugs, laughed, yelled and cursed. How many fish we caught and released, I do not know, certainly more than we had ever caught before. That evening we hung on the boathouse scales that part of our catch we had brought out with us — nine large-mouth bass that totaled seventy-eight pounds." (Pages 3-4).

How did Bob, Knight's guide, know when the fish would begin to feed? He knew because his grandfather told him. Bob's "granpappy" had been a market hunter and fisherman in Georgia when those activities were still legal, and he taught Bob what he himself had learned — among other things, that the moon has a distinct effect on the behavior of fish, that they feed best when the moon is directly overhead or directly underneath. If this theory was correct, the moon ("moon-up, moon-down") — not the sun — governed the feeding periods of fish and other wildlife as well.

Results Are Inconsistent

Over the next several years, whenever the demands of his work at a New York City bank permitted, Knight tested the "moon-up, moon-down" theory and discovered that sometimes it worked and sometimes it didn't. One by one, he eliminated all the variables he could think of (temperature, water condition, availability of food, barometric pressure) until none were left, and he was no farther along than he had been before.

Then the investigation took a new track. Considering that the feeding activity of salt-water fish is governed by tidal phases, Knight wondered whether fresh-water fish might, for reasons unknown, follow the same schedule. A visit to the New York office of the United States Coast and Geodetic Survey produced maps, tide tables, and the suggestion that Sandy Hook (New Jersey) represented the true Atlantic Ocean tidal flow, unhampered by shoals or bars. Having adapted this schedule of tides to allow for the longitudinal difference between Sandy Hook and the inland areas of eastern New York and Pennsylvania, Knight began to feel that he was on the right track at last: his calculated feeding times, based on low-tide stage, came much closer to actual activity than did his Florida guide's "moon-up, moon-down" approach. His own experiences were borne out by those of other anglers whom he questioned.

Solunar Theory Published

For some time Knight had been writing hunting and fishing articles for outdoor magazines, and in January 1935 *The Sportsman* published the first formal presentation of the radical new theory of feeding activity, the theory which Knight termed "Solunar." The response amazed Knight; hundreds of fishermen all over the country wanted to know more about the relationship between tides and fish activity.

Additional articles in other magazines increased the hundreds of inquiring letters to thousands. Almost every writer wanted to know how to obtain a schedule of feeding times for his or her own area, and Knight finally saw a way to deal with the letters heaped on his desk: for 50 cents, to cover printing and mailing, he would send a booklet showing the Solunar feeding periods for all regions for every day of the season. In only five weeks the first printing was exhausted. Orders and letters of query came in so fast that the Knights' postman could stand it no longer and confronted Mrs. Knight: "Excuse me, Mrs.; I know it's none of my business but I can't help wonderin'. A month ago you was gettin' three-four letters a day and a few mags. All of a sudden, mail comes pourin' in here 'til I get round-shouldered carryin' it. Just what the hell is goin' on?" (Page 16).

So much was goin' on that in the spring of 1938 Knight resigned his position at the bank to work on the Solunar Tables in earnest. Although he had written, published and lectured about the theory, there was still one big question that he could not answer: how did it work?

PRINTED IN STANDARD TIME—ADD 1 HR. FOR DAYLIGHT SAVING TIME
Solunar Periods begin approximately at the times shown in the SOLUNAR TABLES and continue for about an hour to two hours thereafter.

April—1984 Solunar Periods

Date	Day	AM		PM		Sunrise and Sunset	Moon Phases
		Minor	Major	Minor	Major		
1	Sun...	4:40	10:40	4:50	11:00		☉
2	Mon..	5:15	11:25	5:35	11:45		
3	Tues..	6:00	....	6:25	12:10		
4	Wed..	6:45	12:35	7:15	1:00		
5	Thurs.	7:35	1:25	8:05	1:50	5:43	
6	Fri....	8:30	2:20	9:00	2:45	6:38	
7	Sat...	9:25	3:15	10:00	3:45		
8	Sun...	10:30	4:15	10:55	4:40		
9	Mon..	11:25	5:20	....	5:50		☾
10	Tues..	12:05	6:15	12:25	6:40		
11	Wed..	12:55	7:05	1:15	7:35		
12	Thurs.	1:50	7:55	2:05	8:25	5:32	
13	Fri....	2:40	8:45	2:55	9:10	6:45	
14	Sat...	3:25	9:35	3:45	10:00		
15	Sun...	4:15	10:20	4:30	10:45		☉
16	Mon..	5:00	11:15	5:25	11:40		
17	Tues..	5:55	....	6:30	12:15		
18	Wed..	6:50	12:45	7:15	1:10		
19	Thurs.	7:55	1:40	8:30	2:15	5:21	
20	Fri....	8:55	2:45	9:25	3:10	6:53	
21	Sat...	9:50	3:45	10:20	4:05		
22	Sun...	10:50	4:40	11:25	5:10		
23	Mon..	11:40	5:30	....	5:55		☾
24	Tues..	12:05	6:15	12:25	6:35		
25	Wed..	12:50	6:55	1:05	7:15		
26	Thurs.	1:30	7:35	1:45	7:55		
27	Fri....	2:10	8:10	2:20	8:30	5:10	
28	Sat...	2:45	8:50	3:00	9:20	7:01	
29	Sun...	3:35	9:25	3:55	9:45		
30	Mon..	4:00	10:05	4:15	10:25		

Moon in Apogee Apr. 26

Moon in Perigee Apr. 14

Tables Tested

With his life free of the business routine, Knight moved his family back to his boyhood home in Williamsport. Here he found the opportunity to make continuing observations of wildlife in order to test, check and refine the Solunar Tables. There had already been many changes and revised methods of calculation — so many that Knight wondered why anyone should have any faith at all in his system. On the other hand, he realized that the Tables should be regarded at best as approximations; within Solunar periods many factors may affect the schedule. As a result of these variables, peak feeding may last as long as 3½ hours or as little as twenty minutes. However, as Knight points out, “Considering these things, the schedule has at no time been at radical difference with the true activity cycle. Meanwhile, those anglers who have had the breadth of vision quality of their sport has improved in spite of the fact that the whole thing was, and still is, in the process of experimentation...At least, we are gaining on it annually,” (Page 53).

Since tides result from the gravitational pull of moon and sun, Knight researched these conditions. He determined the resultant of the two forces — the pull of the moon and that of the sun, the moon’s being approximately twice as strong — and used as the Solunar period the time that this resultant force was either directly over or directly underneath his specific longitudinal location; the times of minor activity he placed midway between the primary periods. He found that this schedule, while still not exact, was more satisfactory than the one using tidal times as the sole criterion.

Barometric Pressure Becomes A Factor

Meanwhile other odd bits of information had been accumulating in his brain (his wife termed him a “mental pack rat”), and Knight was intrigued by one of those bits. A fellow angler, the author of a book on fly fishing, had reported that fish respond better to dry flies on bright, sunny days, whereas in bad weather they find wet flies, fished deep, more attractive. Do changes in barometric pressure affect the behavior of fish? Knight wanted to find out. After a year or two of observation, he learned that when the barometer fell as little as 1/100 of an inch, feeding stopped. Thus he justified the old verse known to all fishermen:

“Wind in the East, fish bite least.
Wind in the west, fish bite best.
When the wind is in the North
The prudent angler goes not forth.
When the wind is in the South
It blows the hook in the fish’s
mouth.”

Easterly winds correlate with low pressure, and those from the north are often strong, cold winds which shift into the east. On the other hand, a high or rising glass is likely to bring a west wind, while southerly breezes are usually gentle, indicative of steady atmospheric pressure.

Humans Affected By Ions

Recognizing that, like fish, human beings also react positively to good weather, Knight tackled the question of “Why?” From scientific readings and talks with the scientist in charge of an experimental laboratory, he determined the effects of millions of ions, tiny electrical particles which pervade all matter. Some of these particles carry positive charges, the others negative. In contact with a high concentration of positive ions, plants, small animals and even human beings suffered unpleasant reactions, but the atmosphere of negatively charged particles produced beneficial stimulation. The reason for these reactions lies in the relationship between the barometric level and the capacity of all things to absorb ions: as atmospheric pressure increases, so does ion absorption. As Knight explained it, “Because of the fact that negative ions are more active — possess higher mobility — they soon unite with positive ions and no longer remain in their free, beneficial state. Positive ions, on the other hand, are of lower degrees of mobility and remain free for longer periods of time. Thus they are always available in their free form to be taken in by all living things...[When] there are fewer of these harmful ions in the atmosphere to be absorbed,...we feel fine and the world seems a good place in which to live.” (Page 30). The converse, of course, is also true.

Cosmic Rays Increase in Solunar Periods

These tiny particles which so affect our well being reach our world from outer space as what we term generally “cosmic rays.” Considering the gravitational pull between the earth and the heavens which determines tidal flow, Knight theorized, “It seems to be highly possible that the cosmic rays may be attracted and concentrated by the magnetic fields surrounding the lines of force between the earth and the moon and the earth and the sun, just as raindrops would be collected and concentrated by a large funnel. Thus, during Solunar periods, they are showered upon us more densely than at other times, contributing to their stimulating effect and causing the activity that is so typical of those times.” (Pages 34-35). As his observations continued over the years, Knight found that this “activity” was manifested by all forms of life, but he learned too that reaction times differed. Insects, for example, responded most quickly to Solunar influence, and game fish followed; next in order were birds and small animals, then animals such as dogs and large predators, and finally man — difference of about two hours in the arrival time of activity periods.

Although his major interest in the schedule was that of a fisherman, many letters sent to Knight pointed out correspondence of the Solunar times with other phases of life’s activity. An obstetrician reported that of 2000 maternity cases he studied, 56% had gone into labor during a Solunar period — that is, within a six-hour segment of the twenty-four hour day. A sales manager permitted salesmen to call on a usually-difficult customer only during times of the strongest Solunar influence and found the customer no longer difficult. Lecturers and actors reported audiences were more responsive, and a naturalist observing flowers learned that more blossoms opened during Solunar times than in other intervals of similar length.

These reports, as well as other letters telling of record fish catches, were among thousands which John Knight received. But not all of his cor-

respondents agreed with his theory. One particularly forthright communication came from a member of an angling club in Great Britain: "It seems inconceivable to me that such a cycle of feeding periods should exist. If it did exist, I feel sure that one of our members would have discovered it long since." (Page 133).

Criticism made little difference, though, to the developer of the Solunar theory. His own experiences and those of countless other sportsmen convinced of the system's validity even though he was still puzzled, after 30 years, as to *why* it worked.

Jack Knight's list of accomplishments as writer and sportsman is impressive. From his first book (*The Modern Angler*, published in 1936) to his last (*The Complete Book of Fly Casting*, produced in 1963 in conjunction with his son, Richard Alden Knight), he wrote twelve books and collaborated on two others. Except for one volume of short stories, all his works dealt with shooting or fishing; five of these books are accepted as standards on the subjects about which they were written. In addition, he authored countless articles for such magazines as *Field and Stream*, *Outdoor Life*, *Literary Digest*, *Fishing World*, and *Pennsylvania Angler*. He was the first man successful in establishing a syndicated feature dealing with shooting and fishing; at one time 133 newspapers across the country were under contract for the feature.

Another "first" occurred in 1937 when Knight originated the idea of a lecture course dealing with angling, a course carried out for two years at Columbia University.

Many outdoor groups listed Knight as a member: The Izaak Walton League, Sportsmen's Club of America, Anglers' Club of New York, London Fly Fishers Club, and, in Paris, au Bord d'Eau; locally he served as president of the Country Club in 1954. (An avid golfer, he had built a home on Sand Hill, in sight of the #6 fairway). In 1950 he founded the Half Limit Club to foster the taking of only a half limit of legal sport fishes. The first president of the Fishing Hall of Fame, he was also the first outdoor writer elected to the Hunting and Fishing Hall of Fame; when his son Dick was chosen for membership a few years later, they became the only father-and-son combination so honored. Jack Knight's accomplishments were further recognized when, in 1963, he received the Winchester Sportsman of the Year award.

Jacqueline Knight (Mrs. Richard Alden Knight), who now carries on the publication of the Solunar Tables, wrote in 1972 of her late father-in-law, "Ten years ago I had my first lesson from 'the boss' in figuring the times. He was a firm and fine teacher — and patient! — at the desk as with a fly rod or shotgun." ("Afterward" — unpagged).

MARGARET HORN REMEMBERS

Her friends claim she could "talk the leg off an iron stove," and Margaret Horn agrees that's probably true. But her 90 years have given her much to talk about. In a recent one-hour conversation she spoke of her father and his influence on her life; she discussed growing up in a turn-of-the-century lumber mill town; and she recalled coping with regulations at [then] Dickinson Seminary.

When Miss Horn's father, Elmer Ellsworth Horn, was only 16 and still a student, he suddenly found himself on the other side of the teacher's desk, instructing pupils scarcely younger than himself. "The county superintendent came to my grandfather and said he needed a teacher for a school in either McIntyre or McNett Township, I don't remember which," Miss Horn says. "Papa was a big, strong boy for 16, and the superintendent thought he could keep discipline." The young man continued to teach, after some training at the Muncy Normal School, until he had saved enough money to attend the Jefferson Medical School in Philadelphia.

Dr. Horn Goes To Austin

At about the time that he received his M.D. degree, the owners of a large lumber operation in Potter County needed a young doctor because "the old doctor was most always drunk. The Dean gave their letter to Papa, and that's how he got to Austin. He got into Austin late in the afternoon, a roaring lumber camp with lots of 'Pig's Ears.' or saloons. If he had had enough money he would have left on the morning train. But he didn't have the fare, so he stayed and grew up with the town. He acquired a house and married Mamma."

Dr. Horn was a loving and indulgent father to his three daughters: Margaret, Dorothy (deceased), and Eleanor (Mrs. Charles Corson). Admitting that "we were probably spoiled," Miss Horn remembers an early birthday — "maybe my fifth. I didn't know what to expect for a birthday, but I announced that the town band would play for me," Sure enough, as the children were playing in the yard, the band — as many of them as could get away from their work — came marching up the street, stopped and faced the birthday girl and played two or three numbers. "I never knew how much that cost Papa."

The Children Acquire A Pony

The sisters drove about in a cart drawn by a pony. "The Methodist minister's son won a contest for selling the most subscriptions to the SATURDAY EVENING POST. The prize was either a pony and cart or \$100. Since the minister didn't have much money, the boy was going to take the \$100. "But Papa told him to take the pony and cart and he (Papa) would buy them from him for \$100." The pony's name was Olivine and the children called her Ollie.

Miss Horn recalls how the doctor impressed his daughter with historical persons and events. When she was seven, he took her to the Pan-American Exposition at Buffalo and showed her the Indian chief Geronimo, saying, "Now, Margaret, remember — that's Geronimo." When McKinley was elected, "Papa got us up out of bed to see the torchlight parade." The leader of the parade tried to walk his horse up the porch steps of the house of the town's fiercest Democrat, but the horse — perhaps more sober than its rider — refused.



THE HORN FAMILY posed in their Sunday best for this early 1900's portrait. The children are, from left, Dorothy, Margaret and Eleanor.

In the 20 years after Dr. Horn arrived there, Austin changed from a rough-and-tumble lumber camp to a family town with grade and high schools and Dreamland, a "moving-picture palace," as well as saloons. The Horn house had gas lights ("We never turned them off, just down in the daytime"), running water and a telephone. "Austin was a snobbish little town," Miss Horn recalls. "Society was in layers," the layers determined by ethnic background, church affiliation and occupation. Presbyterian Yankees, lumber tycoons from Boston and New York, topped the heap, while Italian and Irish Catholic tradesmen and blue-collar workers were mired below. The daughter of an Irish-Catholic hotel keeper, a triple out-cast, suddenly became respectable when she was married to a Presbyterian dentist.

Formal Calls are Made

Austin's social mores required that everyone who was anyone set aside specific times and days when she would be at home to receive callers. "There was no informal visiting back and forth; neighbors didn't just drop in on one another." Rather, elegantly dressed ladies went out calling, to leave their cards ("Every hall had a little table with a silver tray for calling cards"), to drink tea perhaps, and to chat politely for the proper 15 minutes. Sometimes they just left cards. "When I was taken along, I was starched to the nines and told to sit still and not talk". ("Starched" meant, in summer, beruffled white dress, black cotton stockings and shiny black patent-leather slippers which "Papa ordered from Buffalo.")

By 1911, as a young lady of 17, Miss Horn had completed studies at Austin's high school and "was packed off to Dickinson Seminary." There she, like the other coeds, was required to present herself to a female faculty member for inspection before setting out for down-town Williamsport

— "to make sure our petticoats didn't hang down and we had our hats and gloves. We weren't to go to town alone but always in groups of three or four at least."

Other regulations were intended to keep boys and girls safely apart. But "Our room was the communication room. It was on the fourth floor, over the boys' rooms on the third floor. We would rap on the floor, or the boys would pound on the ceiling, and up would go the windows for the 'air line.' Buckets went up and down on ropes to carry notes."

Summing up her 90 years, Miss Horn concluded, "I owe so much to my family — parents and grandparents, sisters, aunts and uncles and cousins, It's been a good life."

THE GREAT STORM OF 1871

(NOTE: This report has been transcribed from an audio tape made several years ago by a Mrs. Lehman; she spoke to Williamsport Area High School students who were compiling an oral history of the area.)

Mid-afternoon thunder clouds on a very hot day heralded heavy ice fall. Hail stones to the size of walnuts stripped trees and bushes of their leaves, killed mother hens and their chicks and swept hundreds of birds from their nests in Lycoming County's greatest hail storm.

The storm struck all of Eldred and Hepburn Townships and portions of Williamsport in the early afternoon of July 16, 1871. It lasted less than half an hour but left the ground white as snow for miles and miles. It was known for years as "The Great Hail Storm," an occurrence without equal in the 190 years that white men had inhabited Lycoming County. It is an all-but-forgotten storm now. Indeed, not more than a score of men and women residing in the county have any personal recollection of it.

But L.F. Koch, of Williamsport R.D.1, is among that small number. He was 87 years old last May 31 (1951), so he was just a little less than seven years old when the storm occurred. He gave an account of "The Great Hail Storm" at the Shafer Family Reunion in August 1938. A copy of this paper has been made available to the Sun-Gazette and is reprinted herewith as an item worthy of preservation.

Mr. Koch told his relatives at the Shafer reunion that the year 1871 has long been remembered by local residents as the year of "The Great Hail Storm". The storm itself is still remembered by a few of the older persons. There is, to my knowledge, no written account, and after we old sticks, who were then living, are gone, it will be forgotten like many other interesting local events. We all know that memory is a treacherous, uncertain element, short-lived at best. Yet there are some things we never forget. The hail storm of 1871 is one that I have not entirely forgotten. After rummaging through the deserted quarters of my memory, I salvaged a few recollections that I am willing to jot down, believing they will be interesting to coming generations as well as to the present generation.

It was on a Sunday afternoon, July 16, 1871; for the date I am entitled to Elias Ulmer and David J. Heim. Mother, sister Mary and myself lived in a little house along the road west of the Hepburn Church. At that time, there was no church; the schoolhouse served as a church. Tilda Bower was visiting her mother. Mary and I were spending the afternoon at Leonard Ulmer's, just south of the school house. I was seven years old, but Mary was some years older.

It was exceedingly hot. Every living creature not too lazy to move sought the shade.

On the west side of the Ulmer house was a wide porch with a long wooden bench against the wall. Part of the porch was shaded by a tree. Elias and I tried to enjoy that shade, dividing the time between stretching on the bench and hanging over the porch banister.

About mid-afternoon heavy thunderclouds began piling over Gehr's hill in the west. They looked black and angry. Elias said, "It is going to hail." I had never heard of hail in the summer and thought he was joking. I crawled under the bench to watch from a safe place, for Elias was serious. He warned me to get out and go to the house because rain and hail would drive all over the porch and I would be caught if I stayed under the bench. I got out, and one look at the sky convinced me there was more than a one-horse affair on the afternoon's program.

Black and white clouds were rolling and tumbling as if in a gigantic wrestling match. To me it was terrifying, for I had never seen anything like it. Suddenly I wanted to go home to Mother. But it was too late; the rain was already in sight, and in a few minutes it was upon us in full fury.

We all gathered in the living room and closed the doors.

Then came the hail with a din and a roar that made me tremble with awe and fear. It was so dark we couldn't discern faces across the room.

Storm Comes From All Directions

First the storm came from the northwest; then, after a moment's lull, it switched to the east. Some said it came from all points of the compass. Whatever the direction, it came with tremendous fury.

There has been a lot of wild guessing as to its duration. If anyone timed it by the clock, I never heard of it. But estimates ranged from five minutes to half an hour. To me it seemed like several hours.

I well remember that it all ended with a jerk. Someone said the ending was so sudden it was like cutting a string.

With the ending of the storm everyone went outside to see what had happened. Porch floors on both sides of the house were covered with hail. Even under the bench where I had wanted to hide, it was several inches deep. Fields and woods were white as with snow. Trees and bushes were neatly stripped of leaves. Flowers, plants and small shrubbery were beaten flat to the ground, some completely covered with hail. Many windows were broken.

Where hail beat against the walls and rolled from the roofs of buildings, it was piled more than a foot deep. Leonard Ulmer and Abe Miller came from the barn where they had been during the storm, took the butter scales and a quart measure and a rule and measured the depth of the hail in several places on the lawn and board walk. They counted the number of hail stones in a quart and the number in a pound. If I ever knew the number, I have long since forgotten. But I do remember one of

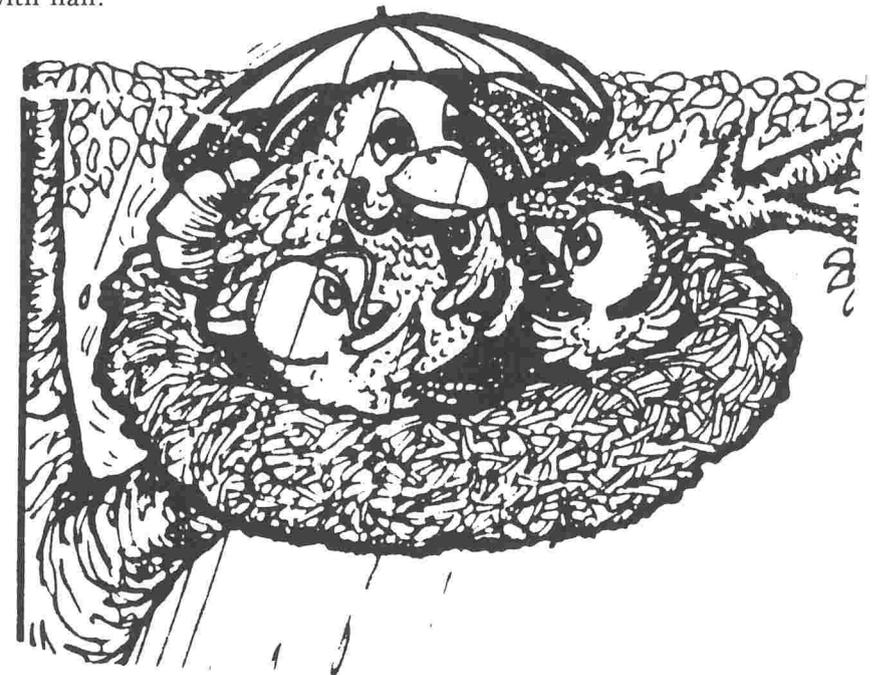
Ulmer's girls once showing someone the fly leaf of their family Bible on which Mr. Ulmer had made the notation of the size, weight and depth of hail at that storm.

Going Home Barefoot Is Painful

I was interested in getting home more than anything else. The youngsters were all bare-footed. Mary was loaned a pair of shoes and a pair was offered to me but I hadn't time to bother with shoes. I started home on a run. There was a path leading up to the road, probably 200 yards away. The path being low and clear of grass, water had carried away all of the hail and was still running in a little stream. Strange as it may seem, while the water was ice cold, the ground under the stream was still comparatively warm. Some of the path was bare and I made for those spots as best I could. It wasn't bad going until I reached the road. Here there were only a few specks of ground visible and I didn't take time to avoid the hail stones.

When I reached home, my feet were numb and cold and cut and bleeding, too. For hail stones are not smooth and round as marbles. Often two or more stones are frozen together or broken into pieces, leaving sharp, jagged edges, mighty hard on bare feet. Mother dressed my wounded feet with sweet oil and bandages until I could get into shoes.

Then we started to take inventory. A number of windows on the east side of the house were broken. Hail on the floor looked like a snowdrift. We, like most people in those days, had paper window shades. I was proud of our window shades with their pictures, but now they were wet, ragged and torn. There were five trees in our yard: two apple, two cherry and a pine. The pine tree didn't suffer too badly, but the outer branches of the fruit trees were stripped of leaves. Rose bushes were almost flat on the ground; flowers and garden truck were flat and some completely covered with hail.



Storm Kills Animals, Bruises Boys

In the garden near the path was a small peach tree with a nest of robins. I had often fed papa and mama robin. They were so tame I could almost touch them with one hand while tossing a worm with the other. Now the grown birds lay dead on the ground buried in hail. Baby robins in the nest were covered with hail and their open mouths were filled with hail. Beside the pig pen a mother hen and her brood were completely covered with hail. Several peeps were under the mother's outstretched wings, others were at her side. They had little resemblance to baby chicks. The hail had beaten them into an almost shapeless mass. Hundreds of birds and some barnyard fowl were killed. One farmer had two calves so badly beaten by the hail that they died. Three boys caught in the open huddled together in a fence corner. Hail cut the brims off their straw hats and left them so bruised and sore it required a week to recover.

The size and amount of hail and the territory covered is a guess. Several parties say the stones were the size of large walnuts and from one-half to two and a half inches deep on the ground. Hepburn and Eldred Townships were probably the hardest hit. Very little, if any, hail fell west of Lycoming Creek or east of Loyalsock Creek. Some fell on Rose Valley and in some parts of Williamsport. I have been told it reached as far as Muncy, following the river from Sylvan Dell.

Farm Crops Suffer

Damage was heavy. Most wheat was in shocks and badly thrashed. Some farmers spread bed sheets on their wagon beds to catch the loose grain when hauling it in. David Heim tells that some spread sheets on the ground beside the shock when hauling in wheat and carefully shook the loose grain from the sheaves before pitching them on the wagon. However, much grain was lost.

Oats lay on the ground flat as a carpet; I don't know that anyone tried to cut any. John Ulmer made a horse rake fashioned after an old-time wooden corn marker, but instead of three wooden shovels it had a number of long wooden teeth, with this he tried to gather oats and straw. Straw's all there was; the grain all stayed on the ground.

Corn also was flat on the ground. Most of it later grew to crooked stalks and produced a few nubbins. Many farmers sowed their corn fields to buckwheat, which proved a good crop. Much buckwheat straw was fed to livestock. Hay was scarce. All standing grass was ruined. To help solve the feed problem a number of farmers crossed Lycoming Creek and husked corn on shares.

Not all damage was due to hail. During or immediately following the hail there was a heavy fall of rain. Ditches and gullies were washed in fields that took years of time and much work to repair. On the Edler farm, in plain view of our house, a small stream usually meandered peacefully through the field; it was nowhere more than a foot deep. For years it had circled a stone pile of a dozen loads or more, but on this Sunday afternoon it swelled to such proportions that it carried the entire stone pile a hundred and fifty yards downstream and dropped it against a rail fence. It piled up so high that water poured over the top of the fence. The rails long ago rotted and the hail melted, but the stone pile is still there now, covered with ground. It has been farmed over for more than fifty years now. Few people living today know of its existence and still

fewer know how it got there.

Hail Lasts Several Days

At another point loads of leaves were washed from the woods and piled five rails high along a fence. The following Sunday, one week after "The Great Hail Storm," the Gehr boys, on their way to Sunday School, dug from this pile a handful of clean hail and took it along to church to show that not all of the hail had melted. It was said that a number of farmers packed butter for market the following Saturday in hail stones dug from piles of grass and leaves under which bushels of it were still to be found. For several years hail marks could be plainly seen on the sides of buildings.

As already stated, trees were almost stripped of foliage. Within a few weeks they put out new leaves, and strangest of all apple trees came out in full bloom just like in spring. Apples grew to the size of hen's eggs before being killed by frost.

For a week or more after the storm the air was very cold and winds were chilly. Only 24 hours before, it had been suffocatingly hot.

Hail storms have come and gone, but it is doubtful if this section has ever seen a storm like that of July 16, 1871.

The following people have helped make this Journal possible through their generous contributions. Thank you all.

Mr. & Mrs. Clyde C. Bastian
Leslie E. Bower
Mr. & Mrs. John J. Brandt
Mr. & Mrs. Richard J. Case
Ralph R. Cranmer
John C. Decker
R. Eldon Drick
Louise M. Gibson
Paul G. Gilmore
Caroline B. Grieco
Louis S. Grieco
Rollin E. Hain
Helen M. Hannen
Mr. & Mrs. George K. Harris, Jr.
Thomas W. Haste
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