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Carroll Hopf

Ellen J. Gehret


Alan G. Keyser

Louis Winkler

Mac E. Barrick

See next page for additional authors

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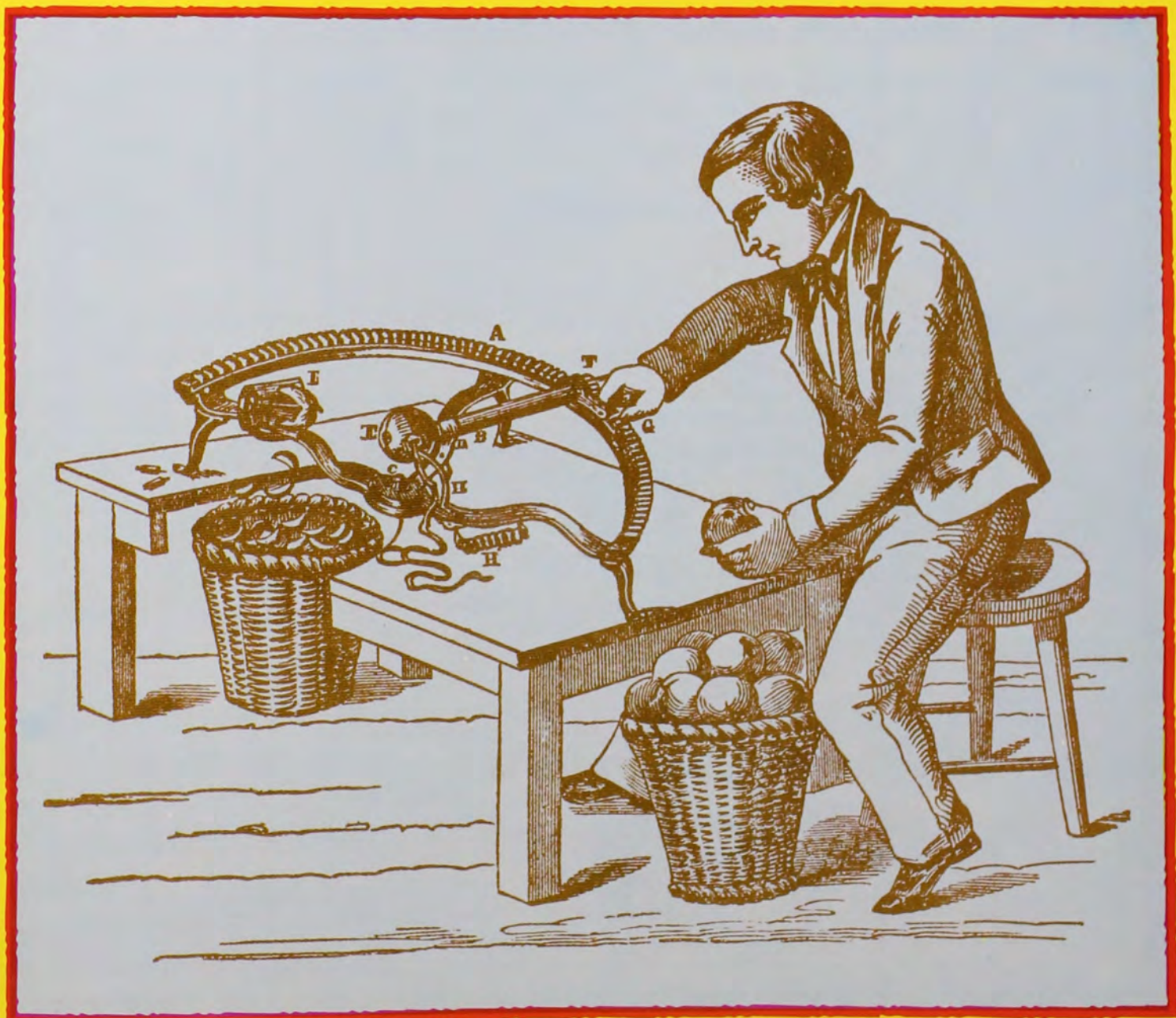
Authors

Carroll Hopf, Ellen J. Gehret, Alan G. Keyser, Louis Winkler, Mac E. Barrick, and Friedrich Krebs

Pennsylvania FOLKLIFE



AUTUMN 1972



Contributors to this Issue

CARROLL HOPF, Marietta, Pennsylvania, is Curator of the Pennsylvania Farm Museum at Landis Valley, Lancaster, Pennsylvania, under the Historical and Museum Commission of the Commonwealth. A graduate of the Cooperstown program in American folklife under the State University of New York, he is a specialist in early American arts and crafts. His most recent article for our pages was "Decorated Folk Furniture," *Pennsylvania Folklife*, XX:2 (Winter 1970-1971), 2-8.

ELLEN J. GEHRET, Perkiomenville, Pennsylvania, is Director of the Goschenhoppen Folklife Museum at Green Lane in Montgomery County. A specialist in early Pennsylvania textiles and dress, she is the author of the forthcoming volume *Rural Pennsylvania Clothing, 1750-1810*, to be published in 1974 by George Shumway of York, Pennsylvania.

ALAN G. KEYSER, Lucon, Pennsylvania, one of the founders of Goschenhoppen Historians, Inc., and Curator of the Goschenhoppen Folklife Museum, has worked in many research areas in Pennsylvania German culture. His latest article on our pages was "Gardens and Gardening among the Pennsylvania Germans," *Pennsylvania Folklife*, XX:3 (Spring 1971), 2-15.

DR. LOUIS WINKLER, State College, Pennsylvania, is a member of the Department of Astronomy at the Pennsylvania State University. The article contained in this issue is the third in his series on Pennsylvania German astronomical knowledge and astrological beliefs. The research was supported by a grant from the College of Science, Pennsylvania State University.

DR. MAC E. BARRICK, Carlisle, Pennsylvania, is a member of the Department of Romance Languages at Shippensburg State College. To this issue he contributes a documentary article—an analysis of the account book of a Lutheran minister in Central Pennsylvania from the 1850's and 1860's. Other articles by Dr. Barrick have appeared in the *Keystone Folklore Quarterly* and *Ethnologia Europaea* in addition to *Pennsylvania Folklife*.

DR. FRIEDRICH KREBS, Speyer, West Germany, retired archivist of the Palatine State Archives at Speyer, has furnished us with a lengthy series of articles on 18th Century emigration to the New World, particularly Pennsylvania. The materials in this issue are translated from the German periodicals, *Hessische Familienkunde*, XXV (1968), columns 341-344, and *Nordpfälzer Geschichtsverein*, XXXV (1955), 63-66.

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Editorial correspondence:
Dr. Don Yoder, College Hall,
Box 36, University of Pennsylvania,
Philadelphia, Pennsylvania 19104.

Folk Festival correspondence:
College Blvd. and Vine,
Kutztown, Pennsylvania 19530.

Folk Festival public relations:
Peg Zecher, 717 N. Swarthmore Ave.,
Swarthmore, Pennsylvania 19081.

Subscription, business correspondence:
Box 1053, Lancaster, Pennsylvania.

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Illustration of patent apple-paring machine from pre-Civil War American agricultural periodical.

Calligraphic Drawings and Pennsylvania German Fraktur

By CARROLL HOPF

The history of that form of calligraphy known as round hand flourishing as it was practiced in Europe and this country is intriguing when analyzed under the topical heading of acculturation. This article will attempt to provide an insight into the origins of calligraphic flourishing, its genesis and extension not only geographically, but even more important its cultural integration culminating, for our inspection, in south-eastern Pennsylvania by the latter decades of the 19th Century.

It becomes quite apparent through the analysis of historical printed sources that the intangible process of acculturation is a key factor in material culture studies of diverse natures. It is evident, for instance, that long established European dietary traditions were naturally modified as colonists settled along the coast of North America. For it was here that what was to

become an important food staple and commodity in this country, maize, was introduced to English and European settlers by indigenous Indian tribes. The significance of this grain crop was noted by William Bradford for he wrote in 1621: "Afterwards they began to plant their corn, in which service Squanto stood them in great stead, showing them both the manner and how to set it, and after how to dress and tend it."

Another interesting account, from the 18th Century, recognizing acculturation in progress, is to be found in the published journal of Peter Kalm for the year 1749.

¹William T. Davis, ed., *Bradford's History of Plymouth Plantation, 1606-1646* (New York: Charles Scribner's Sons, 1908), p. 115. A note of added interest regarding the importance of corn is that in 1751 alone, 90,743 bushels of corn were exported from Pennsylvania. The figure is taken from Benjamin Rush, *Manners of the German Inhabitants of Pennsylvania*.



Figure 5. Title page from the Albrecht copybook published in Nürnberg in 1764. The classical baroque composition of the design may have been copied from an engraving of the period and reinterpreted through the use of flourished strokes. Pennsylvania Farm Museum Collection.

He writes: "Almost all the old Swedes say, that on their first arrival in this country, they made stables for their cattle, as is usual in Sweden; but as the English came, and settled among them, and left their cattle in the fields all winter, as is customary in England, they left off their former custom, and adopted the English one. They owned, however, that the cattle suffered greatly in winter, when it was very cold, especially when it froze after a rain; and that some cattle were killed by it in several places, in the long winter of the year 1741."²

So too, civilized man's styles of written communication were copied and modified by the various cultural groups promoting contacts of diverse sorts with one another. Probably some of the earliest exchanges of this nature took place between the established scriptoria of medieval Europe and England. It was also in these institutions that early attempts at flourishing were originated for by the 14th Century decorative cursive embellishments were being introduced into the formal composition of church manuscripts. In an analysis of a manuscript book *Psalter and Hours* (Fig. 1), the following comments provide insight into the origins of

²Peter Kalm, *Travels into North America* (London, 1772), I, 350.

Figure 2. Page from a Church Missal depicting the formal angular calligraphic hand with marginal pen flourishes. This manuscript was executed in Paris in the latter part of the 14th Century. Courtesy of the Walters Art Gallery, Baltimore.

fidelis pontifex ad dñm ut
 rppinaret iica populi in
 eo enim in quo missus est
 ipse i tempore potens f
 i eos qui temptant. aut
 hanc vnde fuites sancti
 uocationis celestis parti
 cipis confidetur apñm
 pontificem confessionis
 voftra dñm nrm ielum
 vultum. Ad romanos.
 rñs. **H**icms eni
 legis est xpc ad mlti
 aeam dñm accenti. vof
 tes enim scapit qm mlti
 ficam que ex lege est qui fe
 cerit homo. mder m ca.
 q ne aut ex fide est mlti
 fic die. non dms m corde
 tuo. q ms ascendit i celu.
 id est xpm redire. aut
 quis descendit m abyssum.
 is est xpm. q mortuus re
 uicauit. q qmo dicit scap
 nra. prope est vbrum m
 ore tuo. q m corde tuo. H e
 vbrum fidei quod predica
 mus. q uia si confiteamur
 m ore tuo dñm xpm. q m
 corde tuo credidit qz dñs
 emittant illum a mortui
 is. saluus eris. fer. vj. p.
 oct. aferuiois ad qphos.
Hicms dñs qui di
 gnus est m miferico

dia. pñmiam caritate
 suam qua dilexit nos. cum
 carnis mortu peccatis con
 munitauit nos qd carit
 qia eius saluati. et conde
 fultamari conlecta fere
 celestis m ipñm. ut offe
 derit m sanis fuperecenti
 b. m abundantias vna aas.
 gance sue m caritate sua se
 nos. In qd vbi dno nro. ar
 me. oct. eunq. Scilicet mlti
 in dno. **Q**um uelit ma
 ritus. In oct. sic m die. In v
 gilla penti. idones segunt
 huc nento. quaru pma le
 gis. illis gar dicit.
Lampant dñs abia
 hant i dicit ad eum. Abia h
 abraham et ille rñdit. ad
 huc. mlti. tolle filium
 tuu m iugentium quem dili
 gas. Isaac. Isaac m tenam
 in honis. atqz offeres eum i
 toto mltum. fupet unal mo
 amu quem monstrauo tibi
 fupet. abraham de nocte con
 fuprens. fupit ofmñi fup.
 dñens feru. dñs nuentes
 ysaac filiu fup. emqz con
 adit. ligna m toto cañtu
 abnt ad locum quem ptece
 pent a dno. Sic aut terro
 elematis oculis uidit lacum
 pñu. Dicit qz ad pñs fup.

Sancta karitas. **S**ancta oporuna. **S**ancta integritas. **S**ancta letitia. **S**ancta constantia. **O**mnis sa uirgines. **O**mnis sa orate pro nobis. **A**bscondis diaboli. **A**bs omni malo. **A**mpulo mortis. **A**mpulans nostris. **A**bs irania.

Figure 1. Page from an early 14th Century English manuscript *Psalter and Hours* illustrating early attempts at calligraphic pen embellishments. Courtesy of the Walters Art Gallery, Baltimore, Maryland.

Figure 6. Page of a Last Will and Testament from Lancaster County, Pennsylvania, dated 1771. The fish in flourished form appears quite frequently in 18th and 19th Century writing books. The signature of Edward Shippen is also beautifully executed and exemplifies the trend of cursive ornamental writing appearing common- place in secular fields of commerce and law. Anonymous loan.

BY the Tenor of these Presents I
 Benjamin Chew — Register General for the Probate of
 Wills & granting Letters of Administration in and for the Pro-
 vince of Pennsylvania, and Counties of New-Castle, Kent and Sus-
 sex Delaware

DO make known unto all People, that on the Day of the Date of
 these Presents at Lancaster, in the Province aforesaid, before me
 was proved, approved and intimated the Last Will & Testament of
 Mathias Bro lak of Bethel Township in the County of
 Lancaster Yeoman

Deceased, a true Copy whereof is hereunto annexed *he* having
 whilst *he* lived and at the Time of *his* Death divers Goods,
 Chattles and Credits within the said Province and Counties, by Means
 whereof the Approbation and Intimation of the said Last Will and
 Testament, and the Auditing the Accounts, Calculations and Reck-
 oning of the said Administration, and a final Dismission from the same
 to me is manifestly known to belong, and Administration of all &
 singular the Goods, Chattles and Credits in any wise concerning the
 said Deceased, and his Last Will and Testament was committed to
 Anna bro & Peter gram the Executors

in the said Testament named, chiefly of welland truly Administring
 the Goods, Chattles and Credits of the said Deceased, and making a
 true and perfect Inventory thereof, and exhibiting the same into the
 Registry Office at Lancaster, at or before the *fourth*
 Day of *August* next, and rendering a true and just
 Account and Reckoning of the said Administration, when thereunto
 duly required, being legally attested thereunto, IN Testimony where-
 of I have hereunto set my Hand and Seal of Office, at Lancaster,
 the *fourth* Day of *July* Anno
 Domini One Thousand Seven Hundred and *Sixty* *seventy* *one*

E. Shippen

flourishing: "The relentless sharpness of the lettering [formal gothic minuscules and rubricated captions] has been relieved—as is usual in English manuscripts of this kind—not only by the gaiety of color and burnished gold in historiated initials and in line-fillers, but most notably by the fluent and abundant use of marginal pen-embellishments. This kind of ornamentation by its very nature is a calligraphic one, and was developed to a high degree in England."³ Fig. 2 represents an example of European work, a church Missal produced in Paris in the second half of the 14th Century. Referring to this piece: "The particular mannerisms of the marginal pen-flourishes are a hallmark of the Paris scriptoria of the fourteenth century."⁴

During the 15th Century a gradual demand for books of a secular nature instituted the growth of what "were really editorial or publishing houses."⁵ These establishments catered to the rising literary demands of an emerging affluent middle class. Fig. 3 "is one of only five or six known fifteenth century writing manuals" and therefore can be considered one of the earliest known examples of a writing manual. It is attributed to Austria and about the middle of the 15th Century. It is thought to have been executed at the Benedictine

³Two Thousand Years of Calligraphy, compiled by Dorothy E. Miner, Victor I. Carlson, and P. W. Filby. This book is a catalogue of an exhibit of calligraphy organized in 1965 by the Baltimore Museum of Art, the Peabody Institute Library, and the Walters Art Gallery. The quotation is taken from page 49.

⁴Ibid., p. 50.

⁵Ibid., p. 53.

Abbey of Melk. "This little treatise was designed not so much to introduce a beginner to the art of calligraphy as to assist the instructor in presenting basic rules. Much of the text is in verse form, and illustrates different kinds of secretary hands current in Germany at the time. All, whether formal, fractured and flourished hand, as at the left of the illustration, or a more current hand in letters of small size as at the right, are basically a 'bastard' script."⁶ Bastard script denotes varying styles of written hand characterized by rapidly executed curved and sloping strokes as opposed to established slow formal angular gothic book hands of the period. However, the cursive styles gradually became the rule rather than the exception by the early decades of the 16th Century and it is from this period and lasting approximately four centuries, that flourishing techniques were developed and utilized as an important element of calligraphy.

"Spreading a knowledge of beautiful scripts throughout the civilized world, printed calligraphic manuals became a means of enhancing one of the most personal and basic forms of communication."⁷ Truly, the invention of the printing press and movable type was a major motivating factor in disseminating quantities of books both liturgical and secular. Then too, the basic nature of manuscripts was broader. A well cultivated hand was important not only for governmental and church documents, but now required also in a rapidly expanding area of commercial and economic activity.

⁶Ibid., p. 54.

⁷Ibid., p. 75.

Figure 3. Double page of a mid-15th Century Austrian manuscript writing manual depicting current writing styles of the period. The trend towards a cursive hand is obvious in this work and also in Figure 4. Courtesy of Mr. and Mrs. Philip Hofer.

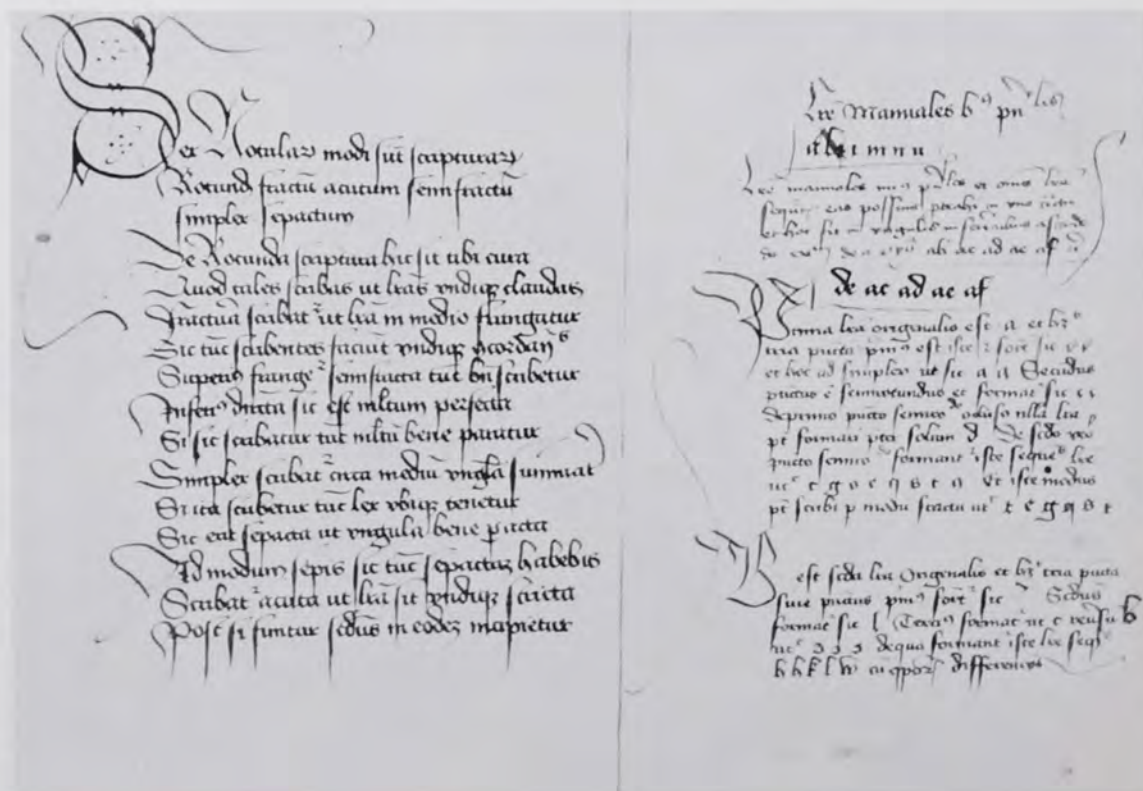




Figure 7. Mennonite Vorschrift, "Huppert Cassel his hand and pen," dated 1769. Ink and water color medium. Format of this example closely follows the German copybook example in Figure 8. It is reasonable to conclude that the Vorschrift composition is basically an academic phenomenon rather than a conceived concept at the folk-cultural level. Courtesy of the Schwenkfelder Library, Pennsburg, Pennsylvania.

a period of eight years the book was issued in fifty-two parts with the number of plates totaling 212. Besides the finely executed roundhand alphabets, numerous flourished figures decorate the plates. Birds, fish, human heads, the quill pen and other ornamental motifs appear throughout. The point in perspective, however, is regardless of where such designs appear, whether in Bickham or Albrecht, in English or continental sources, these designs all bear a great resemblance to one another. These motifs amount to a universal compilation and were popular in all countries. In all probability they were freely adapted from one copy book to another either verbatim or with artist's license.



Figure 8. Plate depicting a Vorschrift composition from the Albrecht copybook of 1764. Ornamental flourishing, angular fraktur-type lettering and connected cursive script are all illustrated in this composition. Pennsylvania Farm Museum Collection.

Among the Pennsylvania Germans it was the schoolmaster rather than a writing master who was responsible for introducing flourishing and roundhand writing into the community. Our major purpose here is to analyze briefly the influence which flourishing techniques had upon Pennsylvania German fraktur manuscripts. To begin, it is probably wise to consider the intentional purpose of these documents within the folk community. Dr. Don Yoder has contributed the most recent commentary concerning the intrinsic value of fraktur to the people by whom and for whom it was produced. "Fraktur flourished for almost a century because it was needed in the culture that produced it. It was a visual,

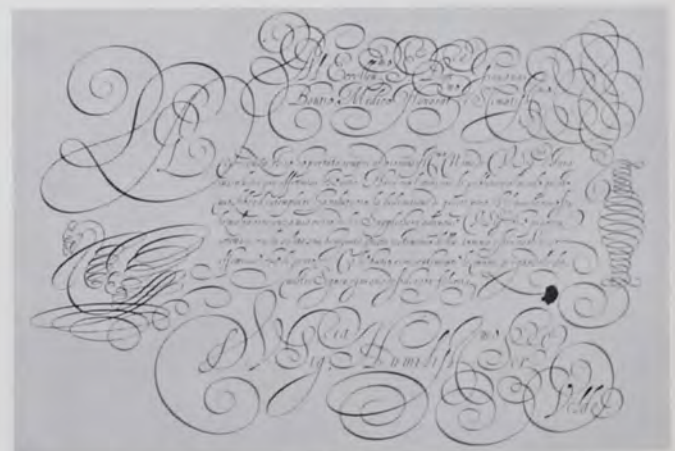


Figure 9. Plate from a Dutch copybook published in Rotterdam in 1605. Besides the superb flourishing, note also the bird motif similar to that in the Cassel Vorschrift, Figure 7. Pennsylvania Farm Museum Collection.

moral, and religious symbol of the individual's relation to the institutions within the folk-culture—the church, the school, and the family—the three institutions which were the individual's triple focus in life.”¹¹

Probably more from an art historian's point of view, Dr. Donald Shelly's earlier statement is in basic agreement with that of Yoder's. “Although Fraktur work took many forms and varied widely in its contents, it

It is only natural, given the basic academic nature of Fraktur as a totality, that its creators would be susceptible to seeking sources from artistic levels above what is normally considered the folk-cultural level, in other words, sources which existed outside of the local community. Particularly in the 18th Century the abundance of copy books advocating script styles and flourished patterns, and which were produced in Ger-

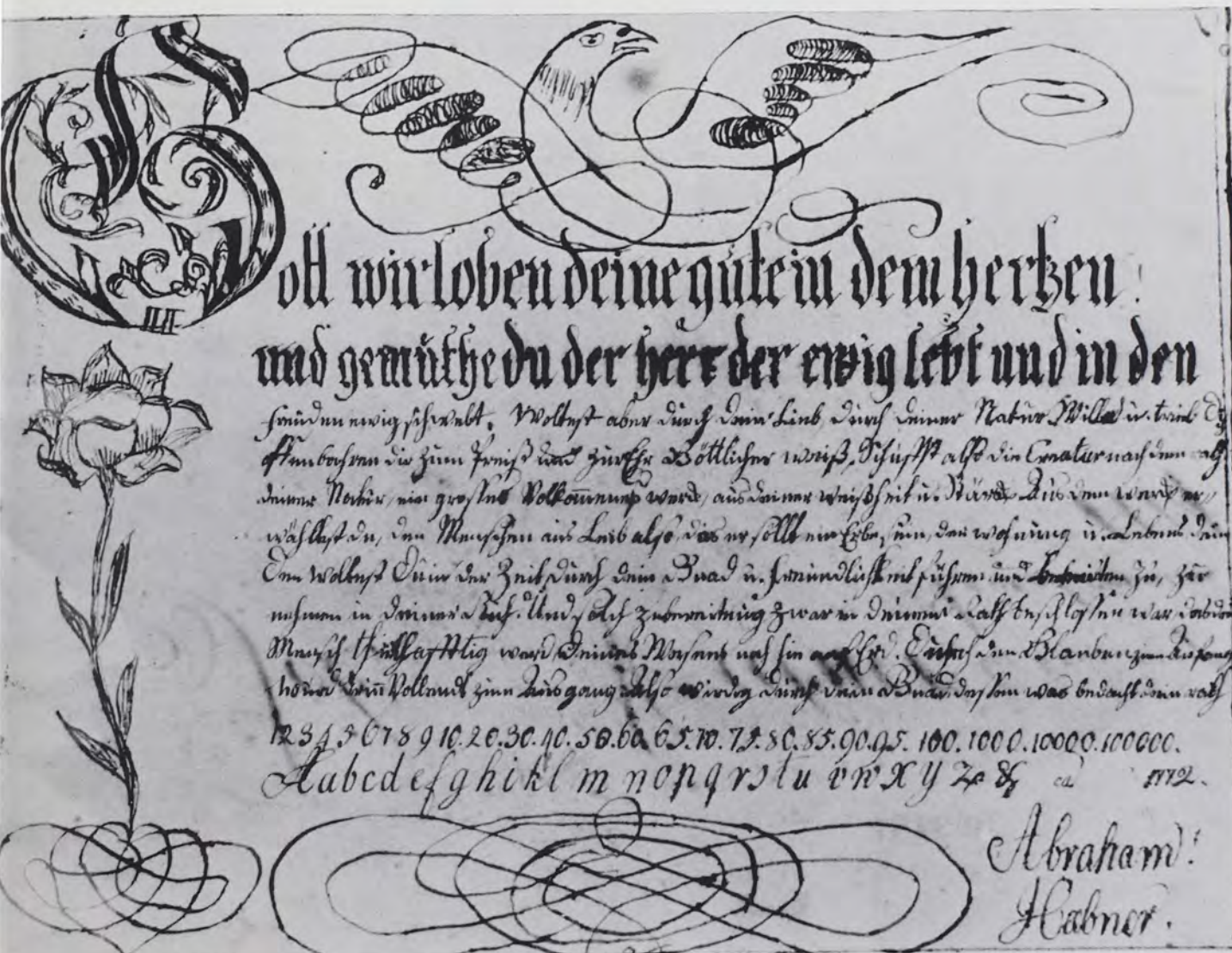


Figure 10. Schwenkfelder Vorschrift signed by Abraham Heebner and dated 1772. This example is probably from Montgomery County, Pennsylvania. The motifs and basic composition bear strong resemblance to Figure 11, a plate from an English copybook published in London in 1795. Conceivably there could have been a common source of design for both examples. Courtesy of the Schwenkfelder Library.

was motivated by three chief aims. These aims, listed according to the frequency with which they appear, were: (1) to preserve a record of birth and baptism, (2) to emphasize a religious truth, and (3) to present an attractive and colorful design.”¹²

¹¹Don Yoder, Vernon S. Gunnion, and Carroll J. Hopf, *Pennsylvania German Fraktur and Color Drawings* (Lancaster, Pennsylvania: Landis Valley Associates, 1969), p. 8.

manic Central Europe, were a direct influence upon Fraktur manuscripts produced in that area, and undoubtedly their value for designs and composition was carried over into Pennsylvania German fraktur, and primarily that produced in the 18th Century.

¹²Donald A. Shelley, *The Fraktur-Writings or Illuminated Manuscripts of the Pennsylvania Germans* (Allentown, Pennsylvania, 1961), The Pennsylvania German Folklore Society, XXIII, 39.



Figure 11. Page from an English copybook published in London by S. Johnson in 1795. Pennsylvania Farm Museum Collection.

Fig. 5, a *Vorschrift* by “Huppert Cassel his hand and pen,” dated 1769, is important in that it is a good example of the unfoldment of the acculturation process. Note a strong similarity in overall design to Fig. 6, a plate from the Ubrecht copy book of 1764. A large flourished first initial leads into two flourished motifs across the top of the page. Immediately below are two graduated lines of *fraktur* lettering in Fig. 6, and three lines in Fig. 5. Beneath the *fraktur* lettering in both examples are several lines executed in German, the script being cursive and connected. From this point the similarity ends; however, the Cassel *vorschrift* is continued in English in the same style of cursive script. The bird motif in the Cassel manuscript bears a strong resemblance to the motif in Fig. 7, a page from a copy book printed over a hundred years earlier in Rotterdam in the Netherlands. I point this out merely to stress again the strong resemblance of flourished motifs appearing in numerous copy books regardless of their origin. Conceivably there could have been a common source, either European or English, for the identical composition of a flourished bird over flourished medal-



Figure 12. Title-page from American copybook *The Penman's Paradise*, published in St. Louis, Missouri, in 1848. Copybooks such as this provided the inspiration through their pictorial plates for many of the 19th Century flourished pictures. Figures 14 and 15 are typical of this work. Pennsylvania Farm Museum Collection.

lion with text in between as appears in Figs. 8 and 9, although in this case, the illustration in Fig. 9 is from an engraved English copy book published in London in 1795. Fig. 8 is a *Vorschrift* created twenty-three years earlier in Southeastern Pennsylvania and signed by Abraham Heebner.

The practice of flourishing did not necessarily die among the Pennsylvania Germans as did the art of *fraktur* illumination. This gradual decline was instigated in part by the abolishment of the parochial schools and the emergence of public schools whose curriculums were designed to instill secular and national values as opposed to perpetuating such traditional cultural forms as the religious *Vorschrift*. In time, there eroded away any bonds between the individual and the old folk-cultural values.



Figure 13. A page from Knapp and Rightmyer's *The Penman's Paradise* illustrating flourished motifs combined with cursive writing in the form of a properly executed receipt of payment. Pennsylvania Farm Museum Collection.

However, even within the public schools there remained a practical need of introducing students to efficient cursive writing techniques and its artistic equivalent—flourishing. Throughout the 19th Century a number of penmanship books were printed and available to the public. These publications could have either been used in the schools or in the home. Generally, the books seem to have found a popular acceptance throughout the country including the Pennsylvania German areas of Pennsylvania. Fig. 12 illustrates a title page from a book of this nature. It consists of fourteen pages depicting roundhand alphabets and numerous ornamental flourished motifs. Wording of the title page amply clarifies the purpose of this publication in addition to reminding the reader that cursive script and ornamental flourishing went hand in hand as far as instruction was concerned. Many of the motifs appearing on the pages are, for all intentional purposes,

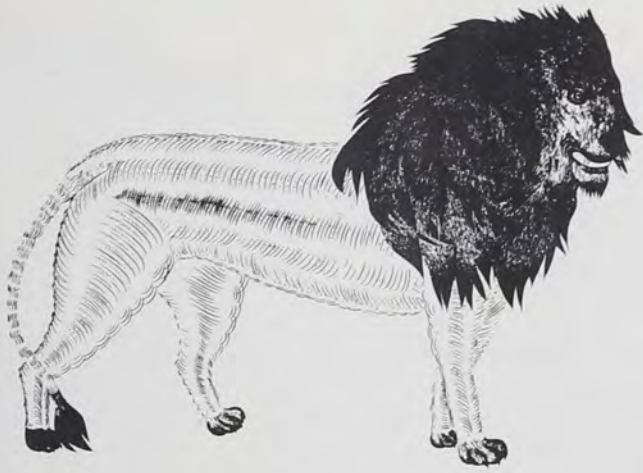


Figure 14. Flourished lion executed by J. M. Scheaffer of Farmersville, Pennsylvania, in 1883. Scheaffer also executed a running deer and eagle with banner. Pennsylvania Farm Museum Collection.

very similar to motifs appearing in the earlier versions of copy books. This then, amounts to an accumulated vocabulary of motifs used over and over and passed on to be reintroduced to succeeding generations. Still, each version or interpretation of these motifs retained a certain amount of integrity in that it possessed characteristics of the period in which it was produced.

For instance, the motifs throughout Knapp and Rightmyer's volume assume a rather gentle romantic or idyllic quality which was particularly characteristic of art and literature in the mid-19th Century. The same, or nearly identical motifs, created a hundred or more years earlier, portray an exuberant classical quality relative to the baroque renaissance movement prevalent in Europe at the time.

Ornamental flourishing had pretty well run its course by the early decades of the 20th Century, although copy books pertaining to the fundamentals of cursive or "Spencerian"¹³ writing continued to be used in schools. As an art form flourishing maintained a respected interim of interest lasting for some four hundred years. While it was not a form of expression conceived at a folk-cultural level, it was used in folk societies, as for example the Pennsylvania Germans, who utilized it in many of their fraktur manuscripts. In its earliest stage flourishing was an outgrowth of higher academic pursuits, but as time progressed it did seem to filter down through the strata of society and found an acceptance as a creative endeavor at the various levels.

¹³Occasionally one will come upon the term "Spencerian" drawing as an identification for a flourished drawing. For the most part this terminology may be considered a part of contemporary nomenclature (however inaccurate it may be at times) to identify objects of early material culture. Platt Rogers Spencer only began to publish his copy books in the 1840's. See Nash, *op. cit.*, p. 23.

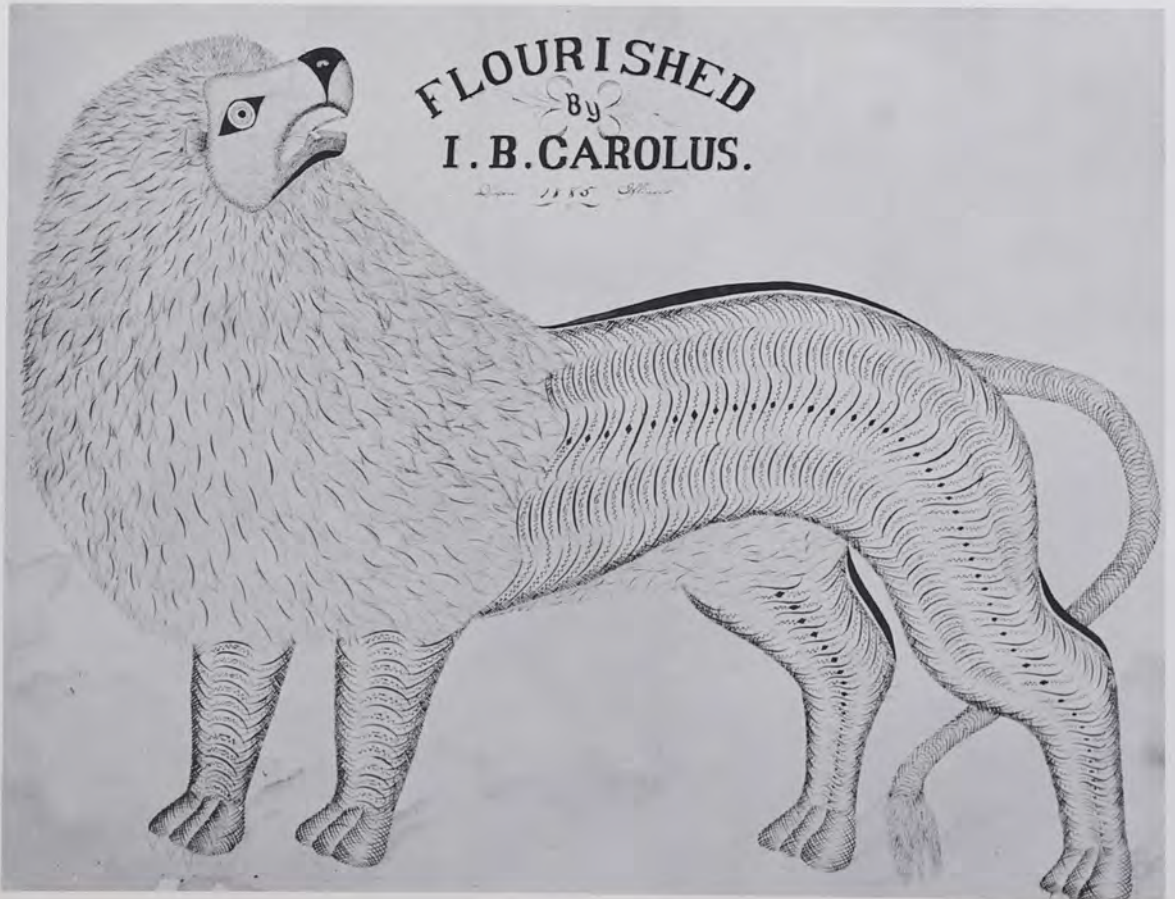


Figure 15. Flourished lion by "I. B. Carolus, Dixon, Illinois," dated 1885. Even though these figures appeared in copybooks, the personal interpretation by each artist reflects individual characteristics of the artist's mental concepts combined with his personal ability to execute the picture. Author's Collection.

Flax Processing In Pennsylvania FROM SEED TO FIBER

By ELLEN J. GEHRET AND ALAN G. KEYSER

*Our flax has it beauties, an elegant green,
When it shoots from the earth enamels the scene,
When broken and moisten'd in filaments fine,
Our midens they draw the flexible line.¹*

One of the most important domestic tasks in rural Pennsylvania prior to 1870 was the cultivation and processing of flax to be ultimately used for clothing and household linens. As early as 1698 there is a report that great quantities of both flax and hemp

¹Mrs. Ferguson, "The Pennsylvania Spinner's Song," *The Perkiomen Region*, XII:2 (1934), 37.

were grown in Pennsylvania,² and at the same time quantities of both flax and hemp were being imported into Pennsylvania from Maryland, Virginia, Rhode Island, New York, New England, and Newfoundland.³ There was a note in the Lancaster newspaper that it was expected that 1788 would be a bumper year for the production of flax, and that the entire crop would be processed into cloth by the farmers of the state.⁴

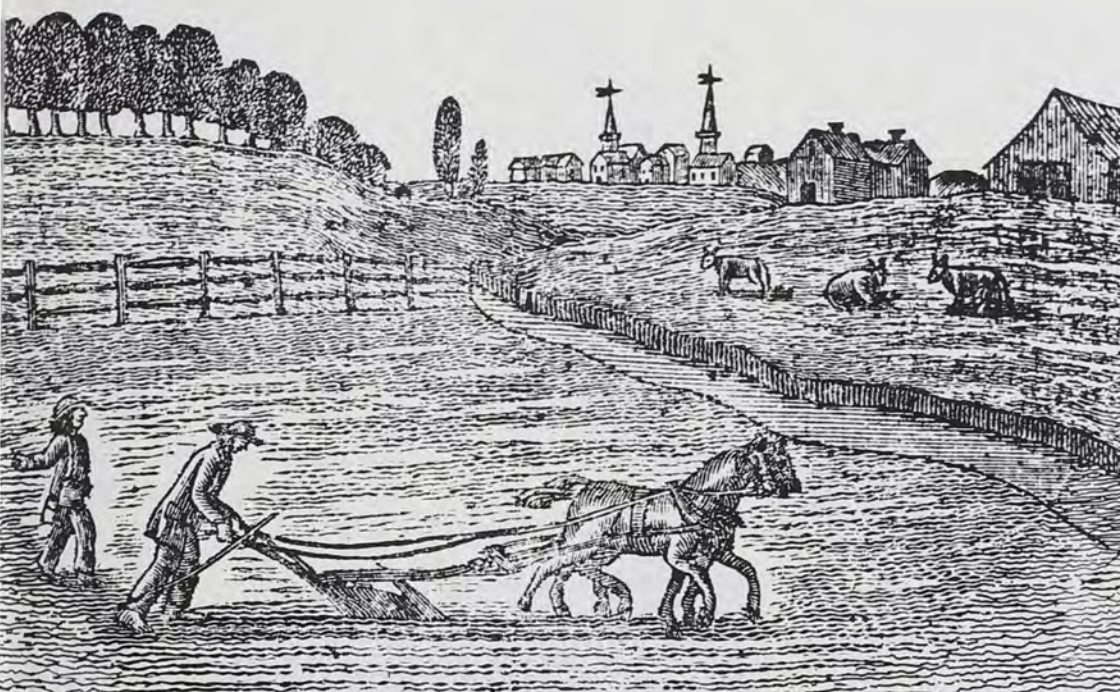
²Gabriel Thomas, *History of Pennsylvania Published in London in 1698* (Harrisburg, Pa., 1935), p. 15.

³Francis C. Rosenberger, "A Treasury of Pennsylvania German Literature," *Intimate Glimpses of the Pennsylvania Germans* (Pennsylvania German Society, 1966), p. 55.

⁴*Neue Unpartheyische Lancaster Zeitung*, April 2, 1788.

Flax scutching frolic in Indiana County, Pennsylvania, in 1860, painted by Linton Park and shown here through the courtesy of the National Gallery of Art, Washington, D.C. Gift of Edgar William and Bernice Chrysler Garbish.





Plowing for flax was done by the same method used for other crops. The woodcut is from the 1801 almanac printed in Lancaster, Pennsylvania, by Johann Albrecht.

It is not the purpose of this paper to pursue the detailed history of flax production but rather to investigate the methods used in the cultivation and preparation of the flax plant for spinning. Other aspects of the flax culture which are left for future investigation are spinning technology, weaving, and the dyeing process.

The sources of information for this study were primarily written rather than oral accounts, since the period in which flax cultivation and processing was actively pursued by the Pennsylvania farm family came to a close just prior to the period remembered by even the oldest living informants.

PREPARATION, SOWING AND CARE OF THE FLAX FIELD

Nearly every farm in early Pennsylvania had a flax patch or as the Pennsylvania Dutch called it, a *flachs schtick*. It was generally located in the meadow "close by the run," in soil which was "moist yet not wet therefore well drained."⁶ Samuel Heller further substantiated this when he related that his grandmother said that flax does not do too well in a heavy soil such as limestone but does best in gravel soil.⁷ Additional information on the proper soils comes from an early technical source which says, "The soils most suitable

for flax, besides the alluvial kind, are deep friable loams, and such as contain a large proportion of vegetable matter in their composition. Strong clays do not answer well, nor soils of a gravelly or dry sandy nature. But whatever be the kind of soil, it ought neither to be in too poor nor too rich a condition; because in the latter case, the flax is apt to grow too luxuriant and to produce a coarse sort, and, in the former case, the plant, from growing too weakly, affords only a small produce."⁸

Thus far only two living informants have come to light who know the location of the flax patch on their ancestral farms—Raymond Kline of Red Hill, Montgomery County, and Harry Stauffer of Farmersville, Lancaster County. It is probably only coincidental, but both men indicated the location of their grandfathers' flax patches and both are on slopes with a northern exposure. Neither of these two patches was too far from the farm buildings. However, flax is a very soil-exhausting crop and requires crop rotation to do well, so it is quite likely that in the two above-mentioned cases flax was sown in the "flax patch" on some kind of a rotational basis.

As far as can be determined the flax field was usually located in one corner of the oats field. This was done because the flax was sown and ripened at about the same time as the oats.⁹ Alexander Marshall in 1879 stated that part of the cornfield not seeded to rye was in the following spring appropriated as follows: "A small portion was seeded to flax, another small portion

⁶Eli Keller, "Flax Culture," *The Perkiomen Region*, IX:3 (1931), p. 78. This excellent dialect poem on the flax process will be hereafter noted as "Keller poem."

⁷Eli Keller, "Flax and Its Utility," *The Pennsylvania-German*, IX:6 (1908), 267. This English language article will hereafter be noted as "Keller Flax Utility."

⁸Interview with Samuel R. Heller of Farmersville, Pennsylvania, October 11, 1970.

⁹Colin Mackenzie, *Five Thousand Receipts in All The Useful and Domestic Arts . . .* (Philadelphia, 1825), p. 559.

with potatoes and the balance to oats.¹⁰ Thus in the many sources examined on the subject of the location of the flax patch all are in complete agreement that regardless of where in Pennsylvania the flax was cultivated it was in one corner of the oats field.

The size of the flax field varied according to the number of people who had to be clothed and bedded by the crop produced, but it is safe to say that there were probably few farms which raised more than three acres of flax per year with any degree of regularity. The average crop for a farm family was about two acres, but one quarter acre was the quantity generally provided by will as the annual supply for a widow.¹¹ Also Johannes Gehman in 1819 hired a maid "for a dollar per week for a half a year and a quarter of flax and a pair of shoes"¹²—here again enough flax for one person. From this it can be surmised that a quarter acre was more than enough to clothe and bed one person for a year.

Once the location of the flax patch had been determined, it was necessary to properly prepare the soil to receive the flax seed.

Large stones have never been of much benefit to the farmer and so we find David Shultze, farmer and surveyor, writing in his diary on April 12, 1782, "Hauled stones from flax land."¹³ Colin Mackenzie reminds us that roots also had to be cleared from the soil,¹⁴ but depending on the farmstead and how long it had been under cultivation, stone and root removal could have been done before as well as after plowing.

Pennsylvania flax land was plowed by horses¹⁵ rather than being dug by hand as was the garden.¹⁶ Account

¹⁰Daniel Mathias Bare, "Looking Eighty Years Backward," *The Pennsylvania Dutchman*, II:17 (1951), 5. Daniel Mathias Bare of Roaring Spring, Pennsylvania, was born in 1834. Other accounts also substantiate this. Johannes Z. Gehman's manuscript diary located in the Eastern Pennsylvania Mennonite Library and Archives, Kulpville, Pa., records nearly every year the sowing of flax seed and oats together. David Shultze, *The Journals and Papers of David Shultze*, ed. Andrew S. Berky (Pennsburg, 1952) also substantiates the sowing of flax and oats at the same time. Henry L. Fisher, *Die Alte Zeite, E'n Centennial Poem in Pennsylvanish Deutsch* (York, 1879), p. 108, states *In e'm eck fon'm hawerschtick war als'n schtickli flax* "In one corner of the oats field was a patch of flax."

¹¹Alexander Marshall, "The Days of Auld Lang Syne," *Pennsylvania Folklife*, XIII:4 (1964), 8.

¹²Russell Wieder Gilbert, "Pennsylvania German Wills," *Pennsylvania German Folklore Society*, XV (1950), 21. Also many other wills personally examined substantiate the widow's quarter acre of flax.

¹³Johannes Z. Gehman's manuscript account book which covers the period 1817 to 1844, p. 14. A copy of the translation by Raymond Hollenbach is in the Eastern Pennsylvania Mennonite Library and Archives at Kulpville, Pa. Gehman was a Mennonite preacher and farmer in Douglass Township, Montgomery County, Pa. He was born in 1793 and died in 1882.

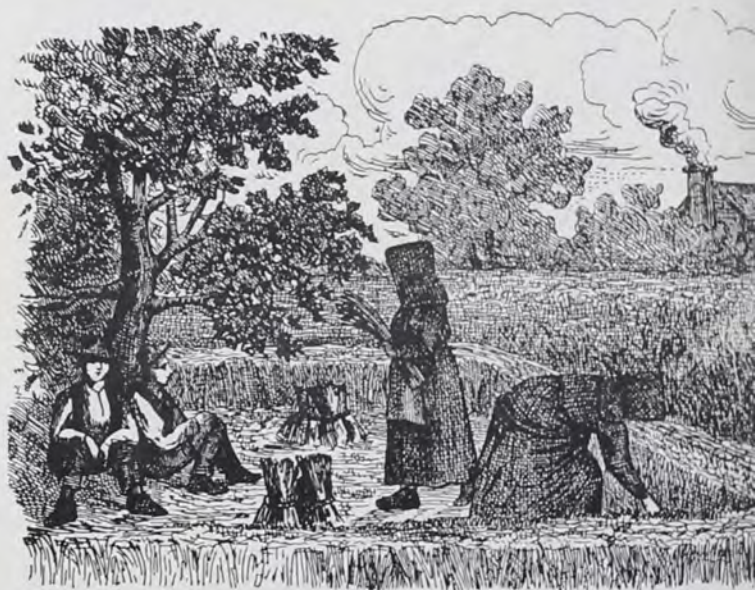
¹⁴Shultze Journal, II, 147. David Shultze was born in Silesia in 1717 and later lived in what is now New Hanover Township, Montgomery County, Pennsylvania, and died in 1797.

¹⁵Mackenzie, p. 559.

¹⁶For further information on horse drawn plows, see Russell S. Baver, "Of Plows and Ploughing," *Pennsylvania Folklife*, X:2 (1959), 39.

books and diaries show that plowing for flax was usually completed in one day because the acreage involved was not that large. On April 25, 1793, Gottschalk Gottschalk, farmer and weaver, wrote, "I plowed and sowed two pieces of ground for Rossina for flax."¹⁷ We do not know the exact size of these two pieces of ground but the total acreage was probably quite small, yet adequate for Gottschalk's servant girl, Rossina. This is the only entry found to date that shows both the plowing and sowing done the same day.

The earliest day of the year recorded for plowing land for flax comes from the diary of Johannes Gehman, Mennonite farmer and preacher, "April 1, 1833, plowed for oats and flax."¹⁸ Gehman was a very methodical farmer in every phase of farm work he did. Each year he specified the exact day he plowed for flax and it



Flax pulling was generally a woman's chore, and in this drawing from H. L. Fisher's Olden Times the girls are doing the work while the boys are keeping cool in the shade. Here the flax patch is in one corner of the grain field, and the bound handfuls of flax are set to dry.

was always during the first two weeks of April. Records continue to indicate that plowing for flax was begun during the first days and weeks of April.¹⁹ However, Colin Mackenzie writing before 1825 in Philadelphia

¹⁷Men and boys generally did the plowing; women were seldom involved. Women did plow the ground occasionally, however. David Shultze in his journal records that "Rosina plowed" (II, 148).

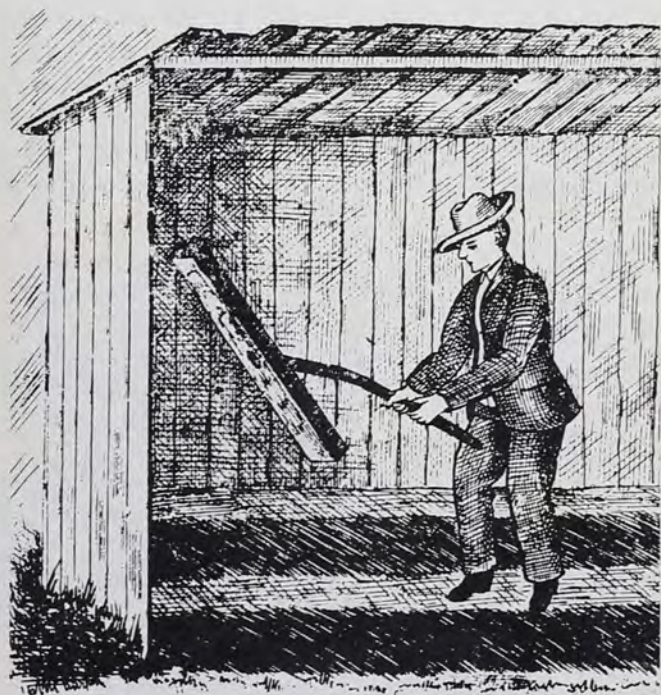
¹⁸Gottschalk Gottschalk's manuscript weaving account book in the Clarence Kulp, Jr., collection, Vernfield, Pa. Gottschalk lived in Frederick Township, Montgomery County, Pa. This book which covers the period 1788 to 1798 was translated into English in February, 1968, by Raymond E. Hollenbach, Royersford, Pa.

¹⁹Gehman probably plowed for flax at an earlier date for on March 19, 1846, he records, "Sowed flax seed."

²⁰Here the Shultze journal, the Gehman diary and the Gottschalk account book all mention plowing for flax in the first two weeks of April.

suggests that "when grass land is intended for flax, it ought to be broke up as early in the season as possible, so that the soil may be duly mellowed by the winter frosts, and in good order for being reduced by the harrow when the seed process is attempted." He continues by saying that if flax is to follow a corn crop, winter frosts are also necessary to render the ground fine enough for planting, therefore this should be the first ground plowed.²⁰ It is suggested here that if flax was a crop planted on a rotation basis, it depended on the rotation plan whether the first plowing was done in the fall or in the beginning of April.

Flax requires nitrogen to give the plant height as do other members of the grass family, so "the richest manure from sheep-stable and chicken-house is spread" on the flax ground.²¹ These two types of manure have a high nitrogen content and therefore caused the flax



It was the man's job to remove the seed bolls by striking the flax with the flax flail. (From Eli Keller's Flax and Its Utility).

to grow quite tall. The height was particularly desirable in flax because the taller the stem, the longer the flax fiber which was used to spin a linen thread.

It was necessary to have the soil broken very fine and the manure evenly distributed before the flax seed was sown, therefore after the ground was manured and plowed it was harrowed several times.

He harrows the ground, makes fine the soil. No weed may there be found. No stone and scarce a clod. In morning early he's on the ground and late at eventide he makes the rounds²²

The spike-toothed harrow which had hand-forged iron spikes set in a wooden frame was used on almost every farmstead and was the common tool used to harrow the flax patch. Once the flax patch was finely worked with the harrow it was ready to receive the seed.

Prior to seeding, the selection of the highest quality seed from a previous year's crop was made, but Johann Krauss indicates in the following recommendations on "To Raise Good Flax Seed" that some farmers purchased imported seed. Here are his suggestions on producing good seed.

It is supposed that the Riga flax seed develops superior qualities by keeping it a long time and sowing it only after six or seven years. Also experience has shown us that old seed produces the best flax and does not degenerate. If, therefore, the householder lets seed of his own production lay long enough, he can sow it instead of the expensive imported flaxseed, and he will find little difference in quality. Also flaxseed as any oil bearing seed, can be improved by drying it in a bakeoven; by experience one is convinced that the flaxseed which has been dried in the bakeoven produces a much longer flax than that which has not been dried, and by this the use of the expensive foreign flaxseed can be entirely eliminated. In order to achieve the proper warmth for drying it has been found that it is best to put the flaxseed in the oven for two hours after the bread has been removed. The flaxseed should be piled four fingers high and should be stirred several times with a rake, and left in the oven until it becomes cold. If the flaxseed is removed and poured together while it is still warm, it will begin to sweat. Therefore it must be left in the bakeoven until it becomes completely cold or the seed can be spread out thinly on the floor and stirred until it is well cooled, and put into bags or barrels to keep for seeding.²³

The method of sowing flax seed according to Henry Kolb, blue dyer,²⁴ is thus, "When one wants to sow flax seed, one takes six steps at a time and takes a big handful of flax seed. One should take small steps." This differs from sowing other grains since when sowing wheat, rye or oats only two regular strides to a handful of seed are required—one step to empty the grain held by the thumb and first two fingers and the second step to empty the rest of the hand.

²⁰Keller poem, p. 78.

²¹Johann Krauss, *Oeconomisches Haus and Kunst-Buch* . . . (Allentown, 1819), p. 46.

²²Henry Kolb's manuscript blue-dyer account book from Skippack, Pa., covering the period of 1813 to 1826, p. 14. The original is in the Goschenhoppen Historians' collection at Green Lane, Pa., and has been edited and translated by Raymond E. Hollenbach.

²³Mackenzie, p. 559.

²⁴Keller poem, p. 78.



A flax flail in the collection of the Goschenhoppen Historians, Inc., Green Lane, Pennsylvania.

For sowing, the seed was probably held in a two bushel tow bag with two corners tied together and slung over the shoulder of the sower so that the mouth of the bag came to his waist. Sometimes, however, seed for sowing was held in a rye straw sower's basket or a one-foot-square, five-inch-deep wooden sower's box. The work of sowing the flax seed was done exclusively by experienced broadcasters, therefore it was a man's job.

Depending on the source consulted, the quantity of flax seed required for one acre of ground varies widely. Colin Mackenzie²⁵ says that when raising flax for seed only, six pecks to the acre are required, but when sowing to raise fiber eight to ten pecks are recommended. The Rev. Eli Keller records, "Three pecks to the acre which yields from six to twelve bushels of seed to the acre and from one to two tons of flax in the rough."²⁶ It is more probable that MacKenzie's figure of eight to ten pecks to the acre is more nearly right than Keller's three pecks to the same area.

The season for sowing flax was according to the practice of Johannes Gehman almost anytime in the first three weeks of April, but in nineteen out of twenty-seven years he sowed his flax from April 10 to 16.²⁷ He

²⁵Mackenzie, p. 559.

²⁶Keller Flax Utility, p. 267.

²⁷Gehman diary.

must have preferred these seven days. David Shultze, on the other hand, a surveyor by occupation and not a farmer, sowed his flax as early as March 28, and as late as May 13.²⁸ One must bear in mind that Shultze took long surveying trips and was probably not always home when the proper conditions for flax seeding occurred.

Covering the flax seed after it was sown was done by using the regular spike-toothed harrow which had been used to work the patch prior to sowing. The method was this. "When the seed was sown, it was once more harrowed, but only lightly, and across the former harrowing."²⁹ Thus the seed was ready to germinate.

Flax seed took about three days to germinate and when the plant became two to five inches high the weeds in the flax patch were removed by hand.³⁰ Weeds not only crowded and inhibited the growth of the flax plant but were troublesome during flax pulling later in July. A great deal of time was lost if, in each pulled handful, the weed and flax had to be separated. Because flax likes coolness and dampness, it was still

²⁸Shultze journal.

²⁹Keller Flax Utility, p. 267.

³⁰Virginia P. Partridge, "Growing Flax Based on 19th Century Practices" (Cooperstown, N.Y., 1966), p. 1.



This old bundle of flax bound with the traditional rye straw seel was threshed but never retted. The twine ties are recent additions. Courtesy of the Schwenkfelder Museum, Pennsburg.

early Spring when the first weeding was necessary. Weeding a one or two-acre field by hand was no small chore and apparently was a job frequently given to the children. It was a menial chore then as it is today which may explain why the job of weeding the flax is usually not mentioned in accounts of daily living. It is generally felt that wearing shoes in the flax patch was much more injurious to the flax plant than bare feet.²¹

Another serious threat to the young flax plant in addition to the common weed were aphids. When aphids appeared one remedy called for dusting the flax with ground or pulverized plaster of Paris repeating every eight days in dry weather.²² Still another enemy of the growing flax stalk was the vine called flax dodder. The flax dodder plant (*Cuscuta Epilinum*), called *flachs dodder* in the Montgomery County dialect,²³ was a plant that grew on top of the flax as a parasite and had bright yellow vines that wrapped themselves around the flax stalk. These vines had to be removed from the flax before they deprived the flax of all its nutrients and the entire flax crop was lost. Now that flax as a crop has disappeared, the flax dodder has become quite rare but several large clumps of it still flourish along the roadside in back of the Perkiomenville Hotel in Montgomery County.

²¹Horace R. Allen, "Agriculture," *The American Home and Farm Cyclopaedia* (Philadelphia, 1888), p. 182.

²²Johann Krauss, p. 202.

²³David E. Lick and Thomas R. Brendle, "Plant Names and Plant Lore Among the Pennsylvania Germans," *The Pennsylvania German Society*, XXXIII (1923), 83.

Once the flax plant began to grow, it grew quickly to its full height. Like other crops, the type of soil, proper nutrients and good weather conditions together influenced the height of each year's flax crop, but it usually ranged from eighteen to thirty-six inches tall.²⁴ Each individual stalk grew straight and tall with branches four to six inches long developing only at the top. These branches had alternate rows of small green leaves²⁵ with the flax blossom at the top end. As the flower began to open, these leaves turned a pale yellow and soon dropped off.

About eight to ten weeks after germination, or during the month of June, the flax patch burst forth into a sea of blue. The small, delicate blue flower opened early in the morning and made the flax patch resemble a large body of water. Flying ducks were known to try to land in this water only to be sorely disappointed. Another story is told of traveling Swabians who came to a "broad field of flax in full bloom. 'The sea!' they cried as they saw the wide expanse of blue flowers and immediately they took off their clothes and waded in to go bathing."²⁶ The flax flower closed as the sun set and waited to open the following morning.

²⁴According to Edwin Miller Fogel, *Beliefs and Superstitions of the Pennsylvania Germans* (Philadelphia, 1915), p. 195, "The length of flax is indicated by the depth of snow on Shrove Tuesday"; p. 227, "The length of icicles on Shrove Tuesday indicates the length of the flax that year"; p. 196, "Flax will grow tall if you show it your buttocks"; p. 227, "Long icicles before New Year indicate long flax next year."

²⁵The belief that "flax leaves laid on a ripe boil will soon produce a hole therein, so one need not open it," comes from Christoph Saur, "*Flachs*," *Der Hoch-Deutsche Americanische Calender auf das Jahr . . . 1767* (Germantown).

²⁶Lick and Brendle, p. 106.



This old cut shows the brechloch with the flax kiln, bundles of retted unbroken flax and the flax brake in operation. (From Eli Keller's *Flax and Its Utility*).

The flax plant remained in bloom for several weeks and gradually the flower turned itself into a round seed vessel about the size of large buckshot. The inside of the seed boll was divided into five equal sections with two seeds in each section but if growing conditions had not been the best the number of seeds per boll was smaller. At first the boll was green and very firm, but as it began to ripen it turned yellow and finally brown and the seeds rattled inside upon shaking. If the flax was not pulled in time, the seed vessel would open itself and the seed crop was lost.

METHODS OF HARVESTING

The flax was considered ripe and ready to be pulled when the seed boll had turned brown and most of the leaves had fallen. This condition was usually achieved at the earliest on July 8,³⁷ just after the grain harvest. The pulling season continued to the end of July and one year David Shultze records August 3rd as a flax pulling date. So the growing season for flax was usually from about the second week in April to the third week in July or just about one hundred days. The ripening of flax was always a carefully watched process.³⁸

Flax was harvested by pulling and not mowing so the entire length of the fiber might be used from the root to the top of the plant. This method of harvesting was rather difficult in dry weather, and the weather was usually dry at this season.³⁹ H. L. Fisher expresses it this way, "*Er schteckt so tight as wax*"—"It sticks as tight as wax."⁴⁰ Generally the pulling was done by the boys and girls⁴¹ of the family. Sometimes just the girls pulled the flax, and the boys sat and watched to keep the devil who lived in the flax patch away from the girls.⁴² At times flax pulling was also an occasion for social gathering where the women of the community were invited to assist in pulling flax.⁴³ The older people were excused from his chore since it was hard on hands and backs.⁴⁴ Concerning this an interesting entry appears in the David Shultze diary on August 3, 1768, "Finished pulling flax. My wife has a back pain."

Team work while pulling flax was carried out this way. The harvesters lined up and each took a three to four-foot-wide swath. However, if one reached across the line no one took offense,⁴⁵ but if anyone lagged behind, the rest pulled the flax around him leaving

³⁷Both Johannes Gehman and David Shultze recorded July 8 as the earliest date either of them pulled flax.

³⁸Keller Flax Utility, p. 268.

³⁹Helen E. D. Acton, "Charles Kirk's Review of a Century," *The Bucks County Historical Society, Papers Read Before The Society and Other Historical Papers*, VII (1937), 95.

⁴⁰H. L. Fisher, p. 108.

⁴¹Keller Flax Utility, p. 268.

⁴²H. L. Fisher, p. 108.

⁴³Alexander Marshall, p. 8.

⁴⁴Keller Flax Utility, p. 268.

⁴⁵Keller Flax Utility, p. 268.

An old belief associates flax and the devil, and here he can be seen escaping from the flax in the smoke during the roasting process prior to braking. (From H. L. Fisher's Olden Times).



a square patch and this was called the "lazy acre."⁴⁶ The procedure used for pulling was to grasp a number of flax stalks at the top just below the seed bolls and pull straight up. Then the dirt was shaken from the roots by rapping them on the ground and care was taken to keep the dirt ends perfectly even. After a handful had been pulled it was bound in the middle with a few strands of flax. The handful, called a "gavel," was usually about three to four inches in diameter.⁴⁷

The flax plant was not completely ripe when it was pulled from the earth. For the flax plant to become fully mature it was necessary for it to remain in the hot sun for several days after pulling. We have found two methods used for ripening the flax. In the first method used, the pulled flax was immediately tied into small bundles and left to stand in the sun to dry, but in the second method used, the pulled flax was spread evenly on the ground to dry and was bundled together several days later. It is important to note that regardless of which procedure was used the flax was handled either by the handful or by the bundle and continued to be handled as such in each step of processing.

The Rev. Eli Keller in his poem describing the flax culture writes, "A handful of flax as thick as an arm

⁴⁶Grier Scheetz, "Flax and Its Culture," *A Collection of Papers Read Before the Bucks County Historical Society*, III (1909), 483. This article will be hereinafter noted as "Scheetz Flax Culture."

⁴⁷Horace Allen, p. 183.



is pulled and gathered, the flax is bound at once, the work as done is laid aside, nor does one linger behind.⁴⁸ Another writer remembered the flax patch about 1867 and how it was pulled up by the roots, tied in bundles and hauled to the barn.⁴⁹ Grier Scheetz also describes these small bundles as the size of the thickness of a man's arm,⁵⁰ but other sources state that it was simply a "handful."⁵¹ Elijah R. Case called these bundles "hands,"⁵² and also indicates, as do the other previously mentioned authors, that the puller tied these "hands" or small bundles as he went along. One person did the pulling and tying simultaneously. After the handfuls were pulled and tied they were thrown on small heaps⁵³ of ten or twelve⁵⁴ and shocked in the same manner as wheat.⁵⁵ The shock or bundle of flax was stood on end to expose the seed boll to the hot sun for several days to ripen.

The bundles are then placed in shocks, like simple Indian huts, Quite lengthy rows, fine and straight with holes to top the shock.⁵⁶

Other yeomen preferred the second method of ripening their flax crop. Daniel Bare states that the flax "was spread out to dry for one to two days and then bound in little sheaves and shocked as we shock wheat—left to dry out well . . ."⁵⁷ Colin Mackenzie has written the best description of this process. When flax is pulled, "the flax should be spread on the ground in bundles about as much as a woman can grasp with both hands, and it should remain so, till the upper part is dry: in fine weather it will be dry in twenty four to forty eight hours. The bundles should be then made up, with the dry part inside, and then set up in stocks of ten bundles each, and stand on the ground till the whole is dry, pods and all; the seed will then be ripe, and the flax in the best state; it may then be stacked, housed, or worked; great care should be taken to keep the root ends even."⁵⁸

David Shultze apparently used this second process for ripening his flax. On July 18, 1752, Shultze finished "picking" his flax and four days later he records in his diary, "Flax bound by myself—70 (bundles) Beforehand about 70 (bundles) The total will be about 150 bundles."⁵⁹ Again in 1759 Shultze records that he "bound the flax—109 bundles,"⁶⁰ three days after he records pulling the flax. A friend of Shultze also ripened his flax the same way because David Shultze writes that on July 31, 1759, he "Bound Stürtzman's flax."⁶¹ Johannes Gehman never mentions in his diary the binding of flax at this point of the processing, only the pulling. Perhaps Gehman pulled, tied and shocked all in one step and therefore had no need to return to the flax patch until it was fully mature and ready to be hauled to the barn which was usually five to six days after pulling.

The bundles of flax were bound in the field with rye straw bands called *seeler* or *doppelte seeler*. Preparations for binding flax were made in the winter long before the flax seed had ever been sown. These preparations consisted of threshing the best and longest rye straw with the flail.⁶²

The flax bound with the *doppelte seeler* was forked onto the wagon, probably the same wagon⁶³ used to bring in both hay and grain during hay making and harvest. "The heads [of the flax plant] were put to the outside, so as not to suffer. The same care was also taken in the barn at unloading."⁶⁴ The flax seed was valuable, therefore much care was taken not to

⁴⁸Keller poem, p. 78.

⁴⁹[H. W. Kriebel], "Reminiscences of the Old Oil Mill," *The Perkiomen Region*, V:1 (1927), 15. Hereafter noted as "Old Oil Mill."

⁵⁰Scheetz Flax Culture, p. 483.

⁵¹Keller Flax Culture, p. 268.

⁵²Elijah R. Case, "Growing, Treating and Drying Flax," *A Collection of Papers Read Before the Bucks County Historical Society*, V (1926), 282.

⁵³Scheetz Flax Culture, p. 483.

⁵⁴Elijah Case, p. 282, and Mackenzie, p. 559.

⁵⁵Elijah Case, p. 282, and Scheetz Flax Culture, p. 483.

⁵⁶Keller poem, p. 81.

⁵⁷Daniel Bare, p. 5.

⁵⁸Mackenzie, p. 559.

⁵⁹Shultze journal, I, 128, 129.

⁶⁰Shultze journal, I, 241.

⁶¹Shultze journal, I, 241.

⁶²Keller poem, p. 80.

⁶³The Shultze journal, I, 241, has the following entry on July 31, 1759. "Bound Stürtzman's flax. Melchior drove the cart (*blöck*)." Here Shultze mentions the use of the cart to haul flax and not the ladder wagon.

⁶⁴Keller Flax Utility, p. 268.

damage the seed when handling the flax. Before threshing it is quite likely that the flax was stacked in rows on the threshing floor with the seed bolls facing the center of the floor.

THRESHING

The removal of the flax seed from the stalk was accomplished in one of several ways. One of the more primitive methods was the following: when once in the barn the flax "was forcibly struck on a large rough stone or plank set at an angle of about thirty degrees, when nearly all the bolls and seed came off. Most of the farmers then ran the bolls through clover hullers"⁶⁵

Another similar method "required a boy or a man and an empty barrel on its side. The man or boy took up these sheaves and pounded the top ends over the barrel until the seeds were all pounded out."⁶⁶

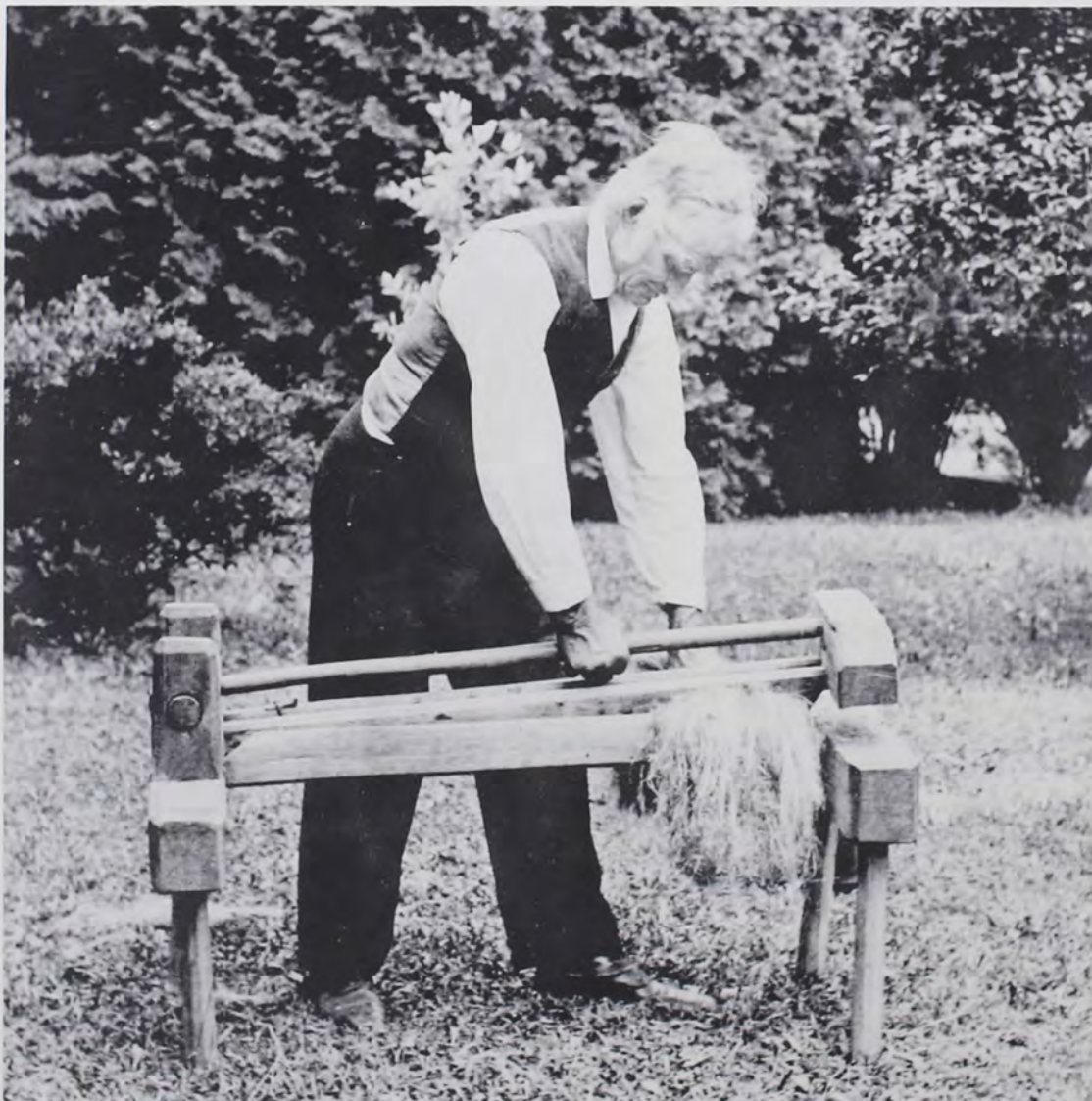
Using a wooden or iron rippling comb to remove the flax seed does not appear to be part of the Penn-

⁶⁵Elijah Case, p. 282.

⁶⁶Daniel Bare, p. 5.

sylvania flax culture. The term "rippling" appears quite frequently in New England references but seldom if ever in the German settlements of southeastern Pennsylvania. Diaries and account books use the term *britsche* which reads "to thresh," and museum and private collections have failed to show a documented Pennsylvania German rippling comb. Those combs that have been found appear to have been brought into the area by foreigners and are not part of the Pennsylvania German culture.

The most commonly followed method is well described by the Rev. Eli Keller where he gives this explanation. "*Flachsbritsche* (batting) was done in the barn on the threshing floor with a home-made bat. The object was to crush the brittle seed-bolls and remove the seed. The bat was a solid piece of scantling, well placed, with a crooked handle. A bright sunny day was chosen and the bundles set out close together in the hot sun. Two or three bundles at a time were laid on along the barn floor with the roots against the boarded side [of the threshing floor,] and thinned to



An old man photographed braking flax toward the close of the 19th Century. Photograph by Dr. H. C. Mercer and shown here through the courtesy of the Mercer Museum, Doylestown, Pennsylvania.

the breadth of a hand in thickness. Several heavy boards were laid along near the roots to keep the flax at its place. Handling the bat had to be practiced so as to strike straight down, and avoid being jarred. The flax was well batted on both sides and shaken out, then straightened at the roots against the side of the barn floor, laid on a band and tied up with special care This was a work for the big boys only and those who fail to see it evidently never had a hand in it."⁶⁷

The Mennonite diarist and farmer from Bally, Johannes Gehman, threshed his flax within one to three days after he brought it home from the field. He also made a somewhat curious entry—on July 16, 1845, he “threshed the flax with the horses.” How this would have been accomplished is still a question.

Survival to the present day was for the flax flail no minor accomplishment. These flails have not been used with any regularity since 1870 and therefore have almost disappeared from the farmstead. Since most people can no longer identify the article nor its nearly forgotten use, flax flails have steadily been relegated to the scrap pile. Dr. Henry Mercer, however, recognized the tool and salvaged quite a few which are on display at the Mercer Museum in Doylestown, Pennsylvania.

The flax flail is composed of two wooden members, one being the club about twenty-six inches long by four and a half inches wide by three inches high, which comes in contact with the flax. The other is an angled

⁶⁷Keller Flax Utility, pp. 268-269.

This type of flax brake was the one most commonly used in Pennsylvania.



handle extending from the top and about twelve to sixteen inches from the front of the club having a length of about thirty inches. The angle of the handle to the club is about sixty degrees.

Cleaning the flax seed was done by Johannes Gehman immediately after the threshing had been completed—usually from the middle of July to the middle of August.⁶⁸ Johann Krauss also apparently followed this practice for on August 11, 1807, he cleaned flax seed.⁶⁹ Generally only one day was required by Gehman to clean the flax seed, but some years two days were required.⁷⁰

Probably the most widely used method for cleaning flax seed was to first winnow the seed in a Dutch fan or fanning mill and then screen or sieve it through wooden sieves with a black ash⁷¹ mesh bottom. This removed all the unthreshed seed bolls. Dutch fans were advertised for sale as early as 1756⁷² in Philadelphia and in 1767 there were offered for sale in Philadelphia “Dutch fans and screens . . . also various wire work for cleaning grain and flax.”⁷³ In areas where fanning mills were not especially known or used, for many years the farmers threw their grain up by shovels and winnowing baskets and let the wind blow away the chaff.⁷⁴

The question now arises in what was the seed stored? The 1803 inventory of Benjamin Johnson of Skippack, lists a drum of flax seed, while the 1777 inventory of Leonhardt Gebhart of Northampton County lists “bushels of flax seed with a bag.” The barrel was probably an oak cask with hickory hoops and the bag a tightly woven homespun tow bag of the type used for other grains on the farm.

FLAX SEED

Johannes Gehman recorded every year the number of bushels of flax seed he gleaned from that year's flax crop, as did many other farmers, because having bushels of flax seed in the barn was like having money in the bank today. Flax seed was considered so valuable that it was very often measured in pecks as well as bushels. Grier Scheetz remembered having one thousand bushels of flax seed on hand at one time

⁶⁸Gehman diary.

⁶⁹John Krauss, “Account Book of John Krauss—1807,” *The Perkiomen Region*, IX:1 (1931), 12.

⁷⁰Gehman diary.

⁷¹Henry C. Mercer, *Tools of the Nation Maker* (Doylestown, Pa., 1897), p. 21.

⁷²H. Frank Eshleman, *Historic Background and Annals of the Swiss and German Pioneer Settlers of South-eastern Pennsylvania . . .* (Lancaster, Pa., 1917), p. 324.

⁷³Eshleman, p. 341. An early fanning mill made by “W. Bunn” and used for many years by the Moyer family of Lower Salford Township, Montgomery County, has been recently purchased by Robert C. Bucher. Included with the fanning mill was a set of fine hand-made wire screens for cleaning flax seed. This process is demonstrated at the Goschenhoppen Folk Festival held each year in August in Upper Montgomery County.

⁷⁴Eshleman, p. 324.



The flachsgnewwel was used as a clamp to hold the handful of flax during the braking process. Courtesy of the Schwenkfelder Museum, Pennsburg.

which seems to be the exception rather than the rule, but he failed to explain or give the circumstances which enable one man to accumulate such a quantity of flax seed.⁷⁵ The largest amount of flax seed cleaned in a year recorded by Gehman was twenty-six and a half bushels in August, 1839, and the least amount of flax seed Gehman cleaned was four and a half bushels in 1834 and again in 1854.⁷⁶ Each year the yield differed.

After the farmer removed what seed he needed for the next year's flax crop and other home uses, there were several choices as to what could be done with the remainder of the flax seed. Farmers were able to use their flax seed as bargaining power at the local

⁷⁵Grier Scheetz, "Flax Seed Mills," *A Collection of Papers Read Before The Bucks County Historical Society*, IV (1917), 725. This article will be referred to as "Scheetz Flax Seed Mills."

⁷⁶Gehman diary.

store as the Stetler Store Ledgers indicate.⁷⁷ Many, many bushels of flax seed were either purchased or taken in trade at this small store in the village of Frederick, Montgomery County, during the month of August for many years in the 19th Century. The price of flax seed per bushel in Lancaster in 1818 was \$1.85 and in Frederick flax seed was \$1.55 per bushel in 1839.⁷⁸

There were other Pennsylvania German farmers who preferred to take their flax seed directly to Philadelphia as did David Shultze who records in his diary, "Drove to Philadelphia with twenty bushels wheat and eight measures of flax seed."⁷⁹ Heinrich Bower also chose to sell his seven bushels of flax seed in Philadelphia where he received seven shillings, six pence for it in 1759.⁸⁰ Flax seed was an important export item being shipped to many parts of the world from the Philadelphia harbor in both the 18th and early 19th Century. There were, however, strict rules regulating the cleaning and packing of flax seed before it could leave the harbor. It was packed either in a small cask holding three and a half bushels or a larger cask containing seven bushels of flax seed. Each cask was to be branded with the name of the person who cleaned the seed and each cask had to be made following specific regulations and of sound oak, or the penalty was many shillings per cask.⁸¹

There were still other farmers who loaded their excess flax seed on farm wagons and hauled it to a nearby oil mill as did Johannes Gehman on October 24, 1835, when he wrote in his diary, "Took one load of seed flax to the mill." Flax was a staple in the community not only for clothing and household linens but also because its seed supported the oil mill industry. There were many oil mills scattered along the waterways in southeastern Pennsylvania, but in order to operate they needed a plentiful supply of flax seed. Every ten days the Deetz oil mill near Tylersport in Montgomery County, sent its eight-horse team and conestoga throughout Bucks and Montgomery Counties to buy the great quantities of flax seed that the storekeepers and merchants had accumulated from the local yeomen.⁸² The wagon carried one hundred and fifty bushels of flax seed in each load.⁸³ This was just over four tons since each bushel weighed fifty-six pounds.⁸⁴ Another oil miller recalls, "The miller's

⁷⁷Stetler store manuscript account book from Frederick Township, Montgomery County, covering the period 1839 to 1840, in the possession of A. G. Keyser.

⁷⁸Margaret R. Paulus, "Flaxseed—Root of Homespun," *The Pennsylvania Dutchman*, II:19 (1951), 22. And also the Stetler store account book.

⁷⁹Shultze journal, I, p. 130.

⁸⁰Shultze journal, I, p. 247.

⁸¹James Mease, M.D., *Picture of Philadelphia* (Philadelphia, 1831), p. 62.

⁸²Scheetz Flax Seed Mills, p. 725.

⁸³Scheetz Flax Seed Mills, p. 725.

⁸⁴1930 Legal Weight Chart published by the Reading Eagle.



An old man photographed scutching flax at the close of the 19th Century. Courtesy of the Mercer Museum, Doylestown.

conestoga wagon drawn by four lusty horses rumbled and ground its way through Milford Square, Quakertown, Elephant to Erwinna near the Delaware River, where a hundred bushels of flax seed would be bagged and brought back, a two day's task with early and late hours."⁸⁵

Israel Kriebel, one of the oil millers in the Perkiomen region, purchased 1762½ bushels of flax seed in 1834 which came to him in one hundred and ten lots. Thirteen of these lots were over fifty bushels each and sixty-seven lots were under ten bushels each. His expenses for flax seed and labor that same year totalled \$2828.82, and his income received from the sale of oil and linseed meal was \$3678.63.⁸⁶

The technology employed in an early Pennsylvania oil mill was quite involved and many of the milling

details have been lost, but nonetheless, oil milling was an important aspect of the Pennsylvania German culture and economy. Basically the flax seed was crushed and the fine oil was extracted—universally known as linseed oil—and what was left was oil cake from which cake meal for the feeding of cattle was made. According to Grier Scheetz this oil cake contained twenty-four to thirty-three per cent of the protein compounds making it far more valuable than grain or pulse for the feeding of cattle. He continues by saying that it was usually fed by placing a certain amount of cake meal in a barrel, filling it with water and pouring it over the cut feed or fodder.⁸⁷ Eli Keller stated that what little oil was left in the cake meal seemed to enter the very bones and marrow of the cattle, with their horns, hoofs and the hair on their hide becoming smooth and glossy.⁸⁸

⁸⁵"Old Oil Mill," p. 15.

⁸⁶[H. W. Kriebel], "A Change in the Farm Industry," *The Perkiomen Region*, IX:1 (1931), 24.

⁸⁷Scheetz *Flax Seed Mill*, p. 726.

⁸⁸Keller *Flax Culture*, p. 273.

As time progressed into the 19th Century and the flax culture began its downward trend, the supply of flax seed was no longer plentiful for the oil miller. For a short time flax seed was brought in carload lots from Chicago to Pennsylvania,⁸⁹ but soon the mills were forced to close or sell. "Change and decay had their way as always."⁹⁰

The innumerable medicinal uses of both flax seed and linseed oil are worldwide. Linseed oil mixed with lime water is good remedy for scalds and burns and taken internally linseed oil is a gentle laxative.⁹¹ Linseed oil can be used on furniture with or without an added pigment and it is an important medium when making paint. The long flat seed of the flax plant has mucilaginous qualities which make it valuable when dirt or dust get into the eye—the farmers used it frequently during threshing season for sore eyes. The flax seed when boiled with sweet milk is an excellent emollient poultice for all inflammations.⁹²



Double-edged scutching knives of this kind were commonly used throughout most of Pennsylvania.

Many medicinal recipes were handed down orally from one generation to the next and were never written down and hence have been lost to the historian. However, there were some who jotted such notes at random in the diary, recipe book, or in the family Bible as they were collected from a friendly neighbor or a visiting relative. One such example is found in the diary of David Shultze. "For constipation or obstruction: cook flax seed pretty well. Put it in a pan and place the pan under a stool that has a hole in the middle. Direct the patient to sit on the stool and place a cloth around his body in such a way as to permit the vapor to reach the body. Prescribed by Benneville and Ludwig Pitting, Sr."⁹³

⁸⁹"Old Oil Mill," p. 15.

⁹⁰"Old Oil Mill," p. 15.

⁹¹Keller Flax Utility, p. 272.

⁹²Keller Flax Utility, p. 272.

⁹³Shultze journal, II, p. 31.

It was common for printers to publish all kinds of medicinal as well as culinary recipes in their almanacs, some of which are quite interesting to us today. The Pennsylvania Germans depended heavily upon the almanac in their yearly schedule of farm work, and they probably used it more often than the Bible. Christopher Sauer in his almanac suggested an excellent plaster that erased all pain of boils, softened them and brought them to maturity: "Take one ounce of each flax seed, fenugreek and powdered marsh mallow root, boil them in milk until it becomes a thick paste, then add a quarter ounce oil of camomile and a quarter ounce oil of dill. Smear it between two cloths, warm it on a heated plate and lay it on the boil." "Flax seed boiled in water and drunk, or a loin bath prepared from it will cause the discharge of a dead fetus." "Linseed oil serves man and beast well, is soothing and softening. Linseed oil heated in a pan and slices of rotten apples fried therein and applied to the small of the back as hot as the patient can stand it is very helpful for severe back pain, side stitches or any other painful conditions which come from falling or any internal damage. Sweetened with sugar candy it is also good for coughing, sore throat and other painful maladies and soreness of the chest."⁹⁴

The flax seed, cake meal and linseed oil are mentioned only briefly here because our primary interest in this paper is the flax fiber, however, each of these flax products could and should be the subject of more research. They are each important, useful and necessary commodities that give the flax plant an added dimension.

RETTING

After threshing, the flax was subjected to the process known as retting or rotting. This was necessary because the "flax straw consists of two parts, the shives, or [as it] is frequently called shoove, shove, boon and hurl, and the fibre or inner bark, all nicely adhered by a natural mucilage. Rotting simply dissolves the mucilage which separates the wood portion and the fibre."⁹⁵ Pennsylvania farmers did as other American farmers and used the two methods of retting, however, probably close to ninety per cent or more followed the dew retting process, and not the oft described water retting. There were advocates of both methods who claimed each method would produce the best, finest and most desirable fiber.⁹⁶

⁹⁴Christoph Saur, *Der Hoch Deutsche Americanische Kalender auf das Jahr . . . 1767* (Germantown).

⁹⁵Horace Allen, p. 184.

⁹⁶Mackenzie, p. 559, says about water retting, "Standing pools for many reasons, are the most proper for the purpose, occasioning the flax to have a better colour to be sooner ready for the grass, and even to be of superior quality in every respect." On the other side of the discussion Elijah Chase, p. 542, says, "Dew retting . . . produces a finer and silkier fiber than water retting."

Water retting or steeping was performed in this manner. A platform of poles, rails or boards was built and sunk with stones to the bottom of a pool of soft water. Stakes were driven in on each side of the sunken platform. Then the beets or sheaves of flax were put into the water in a reclining upright position and weights were placed on top to hold the flax down. In warm weather it was left in about ten days but progress checks were made daily after the seventh day. It was considered better to give too little water than too much. The flax was removed from the water and spread out on the grass at a depth of about one half inch to finish the process slowly.⁹⁷

Dew retting was the method followed by farmer Gehman and the one described by Eli Keller and Alexander Marshall. From one day to five weeks⁹⁸ after threshing had been performed the rye straw bound bundles of flax were loaded on the ladder wagon with no particular care being given to loading the root end one direction or the other, since there was nothing to crush or damage.⁹⁹ The wagon was then taken to the meadow where the second cutting of hay had just been made.¹⁰⁰ A dry part of the meadow area at some distance from the buildings was used so that neither chickens, pigs, nor cattle would accidentally wander into the retting flax.¹⁰¹ The bundles were thrown off the wagon to the right and to the left, judging the distance according to the area to be covered by each bundle.¹⁰² The flax was then spread out in long thin straight rows. Spreading was a time consuming and back breaking task in which most of the family probably had a part. Care had to be taken that the flax was spread about one half inch thick so that uniform retting would take place, also the butts had to be kept even in this process as well as in all the processes up to this point.¹⁰³ After lying a week to ten days the grass began to grow up through the flax, so the flax had to be lifted out of the grass. This was effected by starting at the outside row and taking a wooden hay rake or a long smooth wooden pole and sliding the handle or pole under the flax perpendicular to the stems then flipping the stalks in this section so the butt ends would be pointing in the direction opposite their former position. This way the bottom side would be exposed to the sunlight. The turning process was repeated throughout the entire retting period. In dew

retting the alternating effect of the sun, dew, and rain produced the desired result—separation of the boon and fiber.

Weather determined the period of time required for retting, but it was usually not fewer than three nor more than five weeks.¹⁰⁴ "The test of this retting process was, to take a small bunch of flax and break it with the hands; if the filaments separated freely and easily from the boon, the work was done."¹⁰⁵ When the retting process was complete, the rye straw bands¹⁰⁶ to tie the flax were again taken from the barn to the meadow, and "the flax was then easily and quickly gathered, tied up, and hauled back to the barn, or some good dry shed, ready for the process of braking."¹⁰⁷ Not all flax was braked the same season it was retted for on March 11, 1812, the estate of George Trumbour of Mainland, Montgomery County, was inventoried and there was listed "192 bundles of flax (unbroke)."

BRAKING

Whether the flax stalk had been dew retted in the meadow or rotted in a pond of water, it was dried very brittle before it could be successfully broken on the flax brake. In order to do this, the flax stalk was heated over an open fire which had to be carefully guarded.¹⁰⁸

The Pennsylvania Dutch term *brechloch* refers to the area on the farm where the smoking or drying and braking of the flax was done. Thus far no English term has been found for this location which was usually in the meadow "away from the buildings and not ex-

¹⁰⁴Gehman diary—"August 31, 1837, spread flax for retting (rain)." "October 2, 1837, brought in flax from retting."

¹⁰⁵Keller Flax Utility, p. 269.

¹⁰⁶Keller poem, p. 83.

¹⁰⁷Keller Flax Utility, p. 269.

¹⁰⁸Keller Flax Utility, p. 269.

⁹⁷The information on water retting was drawn from MacKenzie, p. 559, and Horace Allen, p. 184.

⁹⁸Gehman diary for the years 1831, 1832, 1837 and 1842.

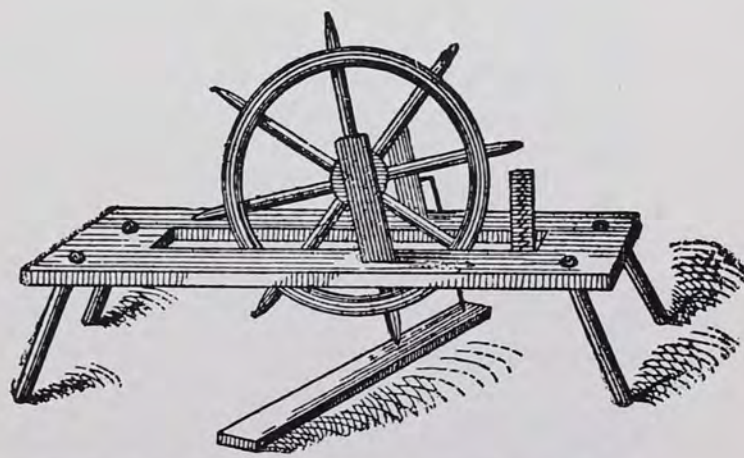
⁹⁹Keller poem, p. 82.

¹⁰⁰Gehman's diary for 1832—"August 27, mowed. August 28, mowed a little; August 30, mowed, brought home three loads of aftermath; August 31, mowed and brought home three loads of aftermath. September 1, two loads of aftermath. September 3, spread flax."

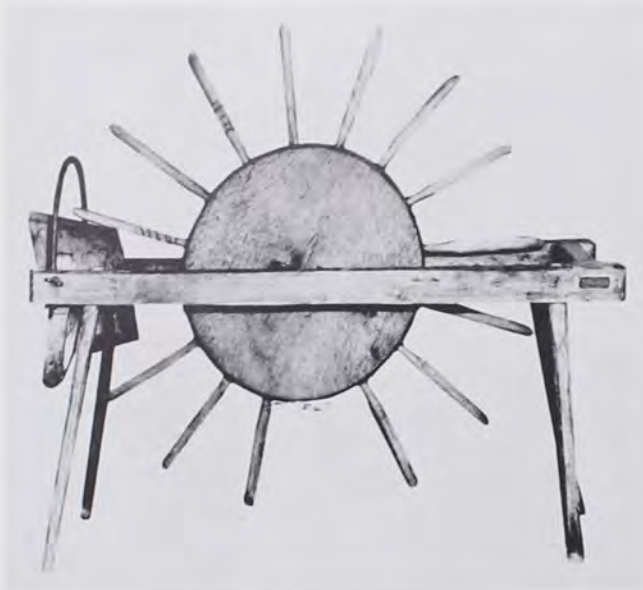
¹⁰¹Keller poem, p. 82.

¹⁰²Keller poem, p. 82.

¹⁰³Horace Allen, p. 184.



The work of flax swingling was eased and sped up greatly by the use of a scutching wheel. From H. L. Fisher's Olden Times.



Scutching wheel from the collection of the Historical Society of Berks County, Reading, Pennsylvania.

posed to the wind."¹⁰⁹ Here stood permanently the drying frame or flax oven and at braking time the bundles of flax and the flax brake. Daniel Bare described such a place as follows: "Farmers usually had a rough fireplace constructed in some out of the way corner and several poles or lath were laid over it five feet above the ground on which the flax was placed and spread out to dry before braking it."¹¹⁰ Alexander Marshall, writing in 1879, also remembered this fire being out of doors and drying the flax before braking it. Marshall states that "forks were erected [in the ground] and cross sticks on which flax was laid and turned to dry on both sides by the farmer's wife."¹¹¹ In 1907 it was reported that many so-called flax kilns were still in existence in the upper end of Bucks County.¹¹² These kilns consisted of a wall about five feet high, six feet long and having wings that extended to form the letter "E" which generally faced the midday sun. Across this wall were two or more green poles on which a thin layer of flax was placed with the flax being turned quite often to insure its dryness.¹¹³

In the early fall, all the old stumps and roots on the farm were gathered and split to be used for drying the flax because they gave heat with very little flame. The fire needed constant attention for it was sad when a man burned "a bed of flax," then his comrades would berate him for his carelessness.¹¹⁴

¹⁰⁹Keller Flax Utility, p. 269.

¹¹⁰Daniel Bare, p. 5.

¹¹¹Alexander Marshall, p. 8.

¹¹²Scheetz Flax Culture, p. 484.

¹¹³Scheetz Flax Culture, p. 484.

¹¹⁴Scheetz Flax Culture, p. 484.

An interesting flax oven used for drying or roasting flax on the Samuel J. Shuster farm, Alexandria Township, Hunterdon County, New Jersey, is worthy of note. The German culture was certainly not limited to the state of Pennsylvania, nor was the German flax culture. Many Germans settled just across the Delaware River in New Jersey, and the flax processing techniques used on the Shuster farm could easily have been used on the Pennsylvania side of the river. The Shuster flax oven had a horizontal flue about fifteen feet long, eighteen inches wide and twelve inches high, built on an upward incline against the side of a bank. It was constructed of two parallel loose stone walls with a roof of flat stones that were made tight by covering them with earth. At the upper end, the flue entered a wooden box or frame about six feet long with a rectangular shaped opening that measured about two and a half feet by four feet on the inside. On the inner rim of this wooden box about eight inches below the top were several poles on which the flax was laid to be dried. The advantage of this type of flax oven was that a wild wood fire was built in the lower stone oven and the smoke and heat, minus the sparks, traveled into the wooden box to heat and dry the flax. It took about fifteen minutes to dry each lot of flax that was placed in the dryer. During this fifteen minutes of drying, the previous lot of dried flax was broken on the nearby flax brake keeping the operation continuous.¹¹⁵

One of the best descriptions of the flax-drying process is found in the lengthy Pennsylvania Dutch poem about the flax culture written by the Rev. Eli Keller. A short portion of the translation by H. W. Kriebel follows:

In the early morn before the smile of day,
fire is carried and started in the roasting
hearth along the creek. Flames rise high
and free. Strong winds do not beat thereon
and that is also fortunate

There lie stumps and an axe, and more than a
dozen bundles of flax. A flax brake is
there. Standing up next to the fire are
forks, and rods lie on top of them. Thus
must the preparation be.

He roasts the flax in proper form, that it
may brake nicer and easier—thus the work
comes easy. Of the fire he takes good care,
that it by no means flames up and raises the
heat too high

At eventide he kills the fire, binds flax
quite tight, slowly bears it to the barn,
glad the time for rest has come.¹¹⁶

This drying process was quite a smoky job and the great clouds of smoke were an added problem to the

¹¹⁵Elijah Case, pp. 282-284.

¹¹⁶Keller poem, p. 78.

man who was braking the flax nearby. There was a folk belief among the Pennsylvania Germans that the devil took residence in the flax and hid there so that he could bother the girls. However, when the flax was dried over the smoky heat, the devil could be seen leaving his flaxen den in the black smoke billowing towards the sky. The Dutchmen did not take any chances, however. If that devil had not been smoked out during the drying process, they planned to pinch him out or tear him to shreds when they scutched and hackled the flax.¹¹⁷

When the flax was quite dry and brittle it was removed from the drying frame and immediately broken. The braking crushed and broke the inner woody boon of the flax plant which had to be removed to free the flax fibers located in the bark of the plant.

In flax-processing braking was the worst job "of all, and only strong men could do it well."¹¹⁸ The method of braking flax was fairly standard throughout Pennsylvania as was the design of the flax brake. The flax "braking was done by handfuls. Two sticks¹¹⁹ of strong wood were tied together at the ends with a strong rope or leather strap, about nine inches apart; with these the flax near its roots was firmly held together by the left hand; whilst the right hand operated the brake at a lively rate The top end of the handful being well broken and knocked out on the brake, the other end, though the harder, could be managed more easily. About one half of the weight was thus knocked to the winds—the good part nicely straightened out and slightly twisted so as to keep by itself—then laid out on two [straw] bands for binding up."¹²⁰ In his Pennsylvania Dutch poem, Keller indicated that the broken flax was laid on *glatte schtange*—smooth rods—and not on rye straw bands as he indicates in his English prose. Perhaps both methods were used.

According to his diary Johannes Gehman usually braked his flax in the month of October, but in 1831 he started on September 28, and in 1867 he did not finish braking until November 16. Gehman usually took several days to complete this chore.¹²¹ The work day for flax braking commenced about day-break, and continued until sunset,¹²² and "at evening the fire was

¹¹⁷H. L. Fisher, p. 108.

¹¹⁸Keller Flax Utility, p. 270.

¹¹⁹Mercer, p. 30, lists one of these tools in his collection at the Bucks County Historical Society and describes it as "two twigs as thick as your middle finger, a foot long, tied together at one end of each by sixteen inches of stout string. One of these *flachsgnewel* can be seen at the Schwenkfelder Museum in Pennsburg. On this example the wooden sticks are joined with a leather strap.

¹²⁰Keller Flax Utility, p. 270.

¹²¹Gehman diary, "October 11, 1833, braked flax twenty nine bundles. October 12, braked twenty three bundles of flax. October 14, braked thirty three bundles of flax of which twenty belonged to father." Keller states that one man could brake about a dozen flax-bundles per day, so there must have been two and three men braking on the days where Gehman records twenty-three to thirty-three bundles per day.

¹²²Keller Flax Utility, p. 270.

carefully extinguished an about a dozen flax bundles were carried by the weary and dusty man in one large double-bound bundle to the barn."¹²²

There were in most communities men whose occupation was day-laboring, and in the flax-braking season they braked for a living. One man—"Old Remmig was the flax braker and sheep shearer" for his whole community.¹²³ David Shultze "Had a flax-braker: Joseph. The week before had Abraham Wisler."¹²⁴ John Smith broke flax for Henry Wismer for one day for two shillings and six pence in 1775.¹²⁵ Daniel Kraut broke flax for two days at three shillings and nine pence per day for Abraham Overholt in about 1810. The wage per day was greater than that paid for threshing with a flail and equal to the wage for loading manure or mowing with a scythe.¹²⁷

The flax brake was made of white oak wood well seasoned and consisted of two beds¹²⁸ of four foot long tapered knives which when the top bed was lifted and lowered on its wooden hinge fit nicely between the bottom bed to knives. The author who said, "A picture is worth a thousand words," probably had the flax brake in mind when he made this statement, because a better concept of what this instrument was can be had by looking at the accompanying illustrations than by reading any description of this peculiar looking tool. The flax brake was made by the local cabinet makers and carpenters. Probably very few were ever made by the farmers themselves, because all the brakes examined showed in their construction a superior knowledge of wood-working. Abraham Rittenhouse, a carpenter of Germantown, made two flax brakes, one in 1755 and one in 1767.¹²⁹ Rittenhouse also made tables, plows, harrows and butter boxes as well as doing millwright work and general carpentry.

Listed in the inventory of George Trumbour of Lower Salford Township in Montgomery County among the things at the barn is "a flax brake \$1.50." From this inventory entry and the fact that the braking took place outside it can be surmised that the proper place for storage of the flax brake and *flachs gnewel* was somewhere in the barn or other outbuildings, and not in the house.

¹²³Keller Flax Utility, p. 270.

¹²⁴Henry Haverstick Rank, *The Life of Rev. Benjamin Bausman* (1912), p. 23.

¹²⁵Shultze journal, I, 110.

¹²⁶Henry Wismer manuscript weaver's account book belonging to Clara Weiss, Frederick, Pa. This book was kept by Henry Wismer of Bedminster Township, Bucks County, and covers the years 1768 to 1800.

¹²⁷Abraham Overholt manuscript cabinetmaker's account book belonging to Robert C. Bucher, Schwenksville, Pa., p. 63. Overholt lived in Bedminster Township, Bucks County, and kept this account book from 1790 to 1833.

¹²⁸Keller Flax Utility, p. 269.

¹²⁹Abraham Rittenhouse manuscript carpenter's account book covering the period 1755-1799, pp. 35 and 43. Rittenhouse lived in either Roxborough or Germantown.

SCUTCHING

The object of the next step in the long involved processing of the flax fiber is to remove every particle of the broken stem or boon from the fiber itself.

Scutching, scoutching, swingling or flaxswingling—whatever you choose to call it, did not involve as much laborious work as braking the flax and for that reason the job was often times assigned to the younger boys and girls of the family.¹³⁰ There were situations when the scutching could have been done by one person but it was the type of work that easily adapted to a frolic where many hands made light work.

Soon as the flax braking is ended the scutching takes its turn. This the lads and lassies do as they sing and whistle.¹³¹

On October 31, 1782, and again on September 19, 1786, David Shultze noted in his diary that the children swung flax although by this time Shultze's children were adults.¹³² There were times, however, when women were hired to swingle flax. Two such examples are found in the Gottschalk Gottschalk weaver's account book and read as follows: "1789 Elizabeth Wacker swingled flax one day." "Susan Paul swingled flax for one day," for which Gottschalk paid one shilling three pence. Another weaver Henry Wismer paid five shillings to T. and P. Maclann together for swingling flax one day.¹³³

Old, well worn clothing was worn by all the participants as this was quite a dirty dusty job, and the scutchers' faces especially around the eyes assumed a strange appearance.¹³⁴

It was usually at this point when the man's work with the flax-processing was considered finished and that of the women and children began, but there was sometimes a small overlap of duties and the man of the house helped with the scutching. David Shultze swung flax in November, 1780, October, 1782, and again in November, 1790, when he was an elderly man.¹³⁵ Johannes Gehman also scutched flax during the month of October, 1844. The season for scutching was in the fall immediately following the braking process according to both the Shultze and Gehman records. If the weather was too windy and cold, scutching was done in a shed or vacant stable.¹³⁶

The tools needed were a smooth upright, perpendicular board called a swinglestock or swingleblock¹³⁷ which measured about ten inches wide, was waist high and was nailed at the lower end to a heavy block to keep it steady and firm.¹³⁸ The upper end of it was



Hackling was generally done by the women of the household in either a shed or the attic of the house. (Drawing from Fisher's Olden Times).

shaved almost to an edge and rounded off so that the left hand holding the flax could rest against it.¹³⁹ The other tool needed was a swingling or scutching knife. It was a half inch board, three inches wide by eighteen inches long with one end drawn into a handle with a smooth double edge, rounded in every part.¹⁴⁰

In the search for Pennsylvania flax equipment it was disappointing not to be able to find a swinglestock. The written description above and a few paintings and woodcuts are the only sources of information to date that shed light on the physical appearance of this tool.

The scutching knives present a brighter picture, however. Examples of Pennsylvania German flax scutching knives are available in museum and private collections throughout the southeastern section of this state and are remarkably similar to each other. In the more than thirty scutching knives that were examined and measured it was found that the hardwoods used to make them include hickory, cherry, oak, apple and

¹³⁰Keller Flax Utility, p. 270.

¹³¹Keller poem, p. 84.

¹³²Shultze journal, II, 163, 194.

¹³³Henry Wismer account book.

¹³⁴Keller Flax Utility, p. 270.

¹³⁵Shultze journal, II, 133, 162, 226.

¹³⁶Keller Flax Utility, p. 270.

¹³⁷Keller Flax Utility, p. 270, and Alexander Marshall, p. 8.

¹³⁸Alexander Marshall, p. 8.

¹³⁹Keller Flax Utility, p. 270. A description in Horace Allen, p. 184, says the swinglestock had a "notch near the top in which the flax was placed while scutching" instead of holding it so the flax rested over the top of the board. Thus far no reference to using a swinglestock of this type on a Pennsylvania Dutch farm has been found.

¹⁴⁰Alexander Marshall, p. 8.

walnut with the majority being made of hickory. Only one knife had any form of identification on it which was carved into the wood, "BB 1822."¹⁴¹ All other knives were without name, initials, date, color, or painted decoration. Two types of scutching knives have been found which do not appear to be from the Pennsylvania German flax culture, but may be from the British Isles tradition. Both types have only one sharpened or tapered edge. The one style has a long straight blade and the other has a sixteen inch pointed and curved blade. The Pennsylvania German scutching knife has two tapered cutting edges on the blade section of the knife. Of the scutching knives measured the shortest was sixteen and a half inches and the longest had a length of twenty seven and five eighths inches. The handle varied from three and three quarters of an inch to six and a quarter inches in length so, of course, there were variations in blade length. Regardless of the wood used or the variation in handle size, this flax tool retained its shape and use well into the 19th Century in Pennsylvania.

The bundle of broken, limp flax that had been tied together when the braking process was completed was now brought to the scutching area and opened. The scutcher would take a handful of the broken flax with his left hand and hold it over the upright end of the swinglestock and hit it with the sharp edge of the scutching knife that he held in his right hand. When the one end was finished, the handful of flax was turned so the entire stalk was scutched and every particle of starw removed. If for some reason a family did not have or use a swinglestock, they held the flax to be scutched over the back of a kitchen chair and proceeded to use the scutching knife as described.¹⁴² Slow-

ly the broken stems fell off exposing the rich gloss of the flax fiber, and the shive or handful of scutched flax was somewhat twisted together and laid aside.¹⁴³ When all the shives had been swingled, they were bound together¹⁴⁴ and carried to the attic where they were piled along the wall¹⁴⁵ to wait until the women began to hackle as the individual fibers were still stuck together in narrow ribbons and were not able to be spun.

When the work was completed there was, in addition to the shives of scutched flax, quite a sizeable amount of flax hurds. These hurds or hards are defined by Samuel Johnson as "the refuse of flax"¹⁴⁶ which consisted of the broken stems removed from the flax fiber during swingling. "According to the experience of one farmer the flax hurds serve well in the planting of young fruit trees. When setting young trees, the waste from scutching and hackling of flax is laid around the trunk to the ends of the roots. This greatly promotes the growth of the trees, chokes grass and its roots and keeps the soil loose. It can even be used to achieve best results with old diseased trees."¹⁴⁷ Johannes Gehman "hauled three loads of flax stubble into the cowpen" as bedding. True to form, the Pennsylvania Dutchman never wasted anything!

Pennsylvania German wills show quite a variety of everyday items that held value above pounds and shillings. The mother became the chief beneficiary of the estate as it was she who was to continue and maintain the unity of the family. Most German wills provide acreage or poundage of flax for the widow assuming the flax would be processed for her, and other times the widow inherited a definite amount of processed

¹⁴¹Keller poem, p. 85.

¹⁴²Keller Flax Utility, p. 270.

¹⁴³Keller poem, p. 85.

¹⁴⁴Samuel Johnson, *Dictionary of the English Language* (Philadelphia, 1805).

¹⁴⁵Johann Krauss, p. 193.

¹⁴¹This knife is at the Mercer Museum, Doylestown, Pa.

¹⁴²Interview with Harry F. Stauffer of Farmersville, Pa., and John B. Brendel, Reinholds, Pa., on October 11, 1970.



The coarse and fine flax hackles were usually fastened to a four-legged bench when in use. Courtesy of the Historical Society of Berks County, Reading.

fibers (flax, hemp, and wool) as a yearly grant during her lifetime. In Union County, 1822, the husband willed to his wife that "she shall have yearly a quarter of flax land sown on my plantation and to be broke and swingled by the person whom I shall give and bequeath my plantation."¹⁴⁸ Another gentleman in Northumberland County, 1791, instructed his son to provide the mother with thirty pounds of swingled flax every year.¹⁴⁹ In the 1751 will of Jacob Pannebecker, yeoman of Perkiomen Township, Philadelphia County,¹⁵⁰ and in the 1772 inventory of Frederick Kern, Rockhill Township, Bucks County¹⁵¹ are listed "swingle flax," as well as "flax and seed," and a "parsil of flax," but the amounts are not specified. In Lancaster County, 1789, the eldest daughter rather than the mother was bequeathed varied poundage of swingled flax, tow and hemp.¹⁵² The husband saw to it that his wife was provided for in every way and in need of nothing including swingled flax.

With the onset of the Industrial Revolution a machine was developed that came to be used on the farm during the 19th Century that made scutching the flax easier and finished the job in less time. Grier Scheetz described it as a "wheel as large as a wagon wheel with four to five knives of wood fixed into the edge and worked by a treadle . . ."¹⁵³ "This swinging of hemp and flax occurs at many places with one singular machine. In about a four foot diameter the holding wheel is held with four swings. It is moved with the foot, more or less. One can with this machine sling sixteen to twenty pounds of flax in one day."¹⁵⁴ Such a device was sold at the public sale of Johannes Eurich in Berks County, 1825, for the sum of \$4.00 and was called a *schwingmühl* or scutching mill.¹⁵⁵ Several examples of this flax tool have survived the ravages of progress, but few, if any, are in original condition. The number of knives mounted on the wheel varies from four to fourteen. Some of these knives appear to be original to the machine, but others are obvious replacements. Interestingly enough, these knives retained their shape, design and double cutting edge from the hand-operated scutching knife when they were mounted on the scutching wheel. When in operation, the wheel revolved in one direction only so there was no need for a double-edged knife unless, of course, the knives



Most flax hackles originally had a wooden cover. Here the cover is shown with the old tow wad in the lid to protect the iron spikes. Courtesy of the Goschenhoppen Historians Museum, Green Lane.

were removed periodically and reversed. Of the scutching wheels measured for this study, most were originally foot-powered but the treadle and footman are now missing. Water power was eventually applied to the scutching wheel and it was not long until commercial scutching was performed at the mill. In Berks County at the Mensch grist and saw mill, an old badly decayed swingle machine was found during the 1860's which had formerly been of great service to the community.¹⁵⁶ In the Powder Valley in Lehigh County were other such factories erected especially for cleaning flax by water power.¹⁵⁷ Undoubtedly, such mills eased the work load of the farmer for many years as he prepared the flax fiber for spinning.

HACKLING

The normal season for hackling or heckling flax followed immediately after the scutching had been finished¹⁵⁸—the beginning of November. The sooner the hackling was completed the sooner the spinning could be begun.

Hatcheling or hackling "was generally done by a lady and done on the garret of the dwelling-house."¹⁵⁹ The woman of the house at times had hired help to assist with the chore of hackling as is brought out in

¹⁴⁸Russell Gilbert, p. 22.

¹⁴⁹Russell Gilbert, p. 30.

¹⁵⁰Ralph L. Johnson and David H. Bergey, "Genealogical Landmarks and Milestones of the Lower Perkiomen Country," *The Perkiomen Region*, XII; 2, 3 (1934), 172.

¹⁵¹Ralph Beaver Strassburger, *The Strassburger Family and Allied Families of Pennsylvania* (Gwynedd Valley, Pa., 1922), p. 264.

¹⁵²Russell Gilbert, p. 22.

¹⁵³Scheetz Flax Culture, p. 485.

¹⁵⁴Ira D. Landis, "As Others See Us—1823 Style," *Menonite Research Journal*, III:2 (April, 1962), 21.

¹⁵⁵Manuscript sale bill of Johannes Eurich, Bern Township, Berks County, 1825, owned by A. G. Keyser.

¹⁵⁶Keller Flax Utility, p. 267.

¹⁵⁷Keller Flax Utility, pp. 266-267.

¹⁵⁸William Z. Gottschalk manuscript weaver's account book from Schwenksville, Pa., in the collection of Clarence Kulp, Jr., Vernfield, Pa. November 12, 1835, "Sara Gottschalk hacked flax one day 25¢." Gottschalk Gottschalk account book states, "November 16, 1792, hackled flax for Rosina." Also this statement from the Shultze journal, II, 164, confirms the hackling season, "November 6, 1782, the flax hatcheling was finished seventy pounds."

¹⁵⁹Keller Flax Utility, p. 271.

this entry in an old account book, "Barbara Meyer hackled flax four days."¹⁶⁰ The tools used for hackling were one inch thick boards, three to three and a half inches wide and twelve to fifteen inches long with a bed of three inch long hand-forged iron spikes. These spikes were highly polished and always quite sharp, therefore each hackle was provided with a wooden box cover which had a tow wad in the top to act as a cushion. Very often there was some punched folk art decoration on the tin covering on the side and very often a name or initials and a date. The earliest date found so far is 1739 and the most recent is 1834. Most farms had two of these iron spiked combs—one a coarse grade and the other a fine grade. Some farms however had three. Several double hackles have come to light which contain an eight inch by three inch bed of widely set spikes and a similar bed of closely set spikes—the coarse and fine hackles all in one.¹⁶¹ The spacing of the spikes in the fine hackle was usually ten or eleven in five inches and the coarse hatchel had six to seven spikes in five inches.

The coarse and the fine hatchel were fastened by wing nuts to a four legged bench which stood about two feet high and was about four feet long.

The handful of flax from scutching was taken by a seated woman¹⁶² and held in about the middle and drawn through the coarse hackle until all the coarse tow had been removed from one end. The handful was turned and the other end drawn through. This coarse tow was used for starting fire with tinder boxes or flint and steel, and for spinning coarse tow fabric for feed bags and wagon covers. The handful of flax which had passed through the coarse hackle was then passed through the fine hackle in the same manner. The combings or fine tow from this process were rolled into little hat-like bundles and set in long rows on the floor along the attic wall.¹⁶³ The bundles about four inches in diameter and thirteen inches high were formed by taking a thinly spread wad of tow twenty seven inches by twenty three inches and folding the top and bottom edges to the middle to form a thirteen inch wide mass. The wad is then rolled, starting at



Flax hackle with lid in place. Goschenhoppen Historians Museum, Green Lane.

¹⁶⁰Abraham Gehman's manuscript farm account book, p. 33, covering the period 1804 to 1819, now owned by Abram Gehman, Bally, Pa., was translated by Raymond E. Hollenbach in 1971. This account book was kept by the father of Johannes Z. Gehman. Also a bit of lore related by Eugene K. Kerr about his grandmother Keyser concerns a hired girl going to a neighbor to hackle flax. "My grammy Keyser used to go to the neighbors to hackle flax and carried her flax hackle in her folded arms. On departing for the neighbors in the morning she was warned that if a large black cat were to appear she should take her flax hackle and strike a certain oak tree and say, 'Doh iss der lein baam.'—Here is the line tree. So as she was walking a large black cat appeared. The cat was so big that its tail came to grammy Keyser's elbow. The cat walked along with her and when she reached the special oak tree she struck the tree with the hackle and said, 'Doh iss der lein baam,' and the cat disappeared."

the long end, into a roll four inches in diameter. These tow rolls were sometimes placed in a wooden barrel or a bag¹⁶⁴ and stored in the garret until spun into fine tow yarn which was later woven and made into work clothing and bed casings. The fiber remaining in the hackler's hands was flax ready to be spun into fine linen.

¹⁶¹Quite a few inventories of 18th Century farms list only one hackle. Could this possibly have been a double hackle with both grades in one tool?

¹⁶²Keller Flax Utility, p. 271.

¹⁶³Keller poem, p. 85.

¹⁶⁴A barrel and a bag of tow rolls were purchased by Ellen Gehret in 1969, in the Oley Valley, Berks County, Pa.

The longest, finest and softest flax fiber was called "line" and a handful was doubled up and twisted together like a screw which was henceforth called a "strick". The old stricks are twisted very tightly and evenly and are quite neat with very few fibers out of place. There must have been a definite "trick of the trade" when making this strick to get the small end as tight as the larger end and not have it untwist during future handling and storage. Those of us who have recently tried to reproduce an old flax strick know that experience must be the best teacher.

When hackling was over, there were dozens of stricks to be stored for future spinning. They were sometimes placed individually in wooden barrels¹⁶⁵ and kept in the attic as such, but other times a cord was passed through the small pointed end of from four to forty stricks forming a rather large and heavy bundle. The bundles of stricks were then hung along the exposed rafters in the attic.¹⁶⁶ A more mouse-proof method was to store the bundles of stricks in a wooden box especially made for this purpose. Such a box with its original blue paint was used by a Kauffman family in the Oley Valley, Berks County, during the 19th Century and it is still in the possession of their descendants.¹⁶⁷

If for some reason a surplus of unspun flax fiber happened to accumulate on a farm, the excess could always be sold to a paper mill as was the case for Abraham Gehman where he records, "Joneson at the paper mill received twenty nine and a half pounds flax at one shilling per pound."¹⁶⁸ This unspun flax

¹⁶⁵A barrel of flax stricks was purchased from the same family in the Oley Valley which had the quantity of tow rolls mentioned above.

¹⁶⁶Keller Flax Utility, p. 271.

¹⁶⁷The box is made of pine and measures about twenty inches long, twenty inches wide and twelve inches deep with a hinged lid and hasp to keep it closed. Inside is a large bundle containing sixty-six stricks of flax tied with cotton fabric tape.

¹⁶⁸Abraham Gehman account book, p. 49.

fiber as well as old linen rags was used to produce high quality linen paper.

Several interesting uses for the unspun flax and tow fiber are given by John Z. Harner and are here recounted:

For our pop or water guns we cut an elder bush, the kind that bears the famous wine or jelly elderberry. The cane is similar to bamboo and normally about as thick as an ordinary broom handle with about a three eighths inch diameter pith. We cut out a section of elder between the joints. Then we whittled a piece of white pine wood down to a diameter slightly smaller than the bore of the elder. By forcing this through the center of the elder, we pushed the pith out at the other end, all in one, white, limber piece. We always left a handle at one end of the whittled stick or ramrod as a stop. The other end we left about one half inch shorter than our elder gun barrel when the ramrod was inserted up to the handle.

We chewed a bunch of flax into a wad and forced it all the way through the barrel where the ramrod, being short, would not push it all the way out at the other end. Then we chewed the second wad and stuffed it in, in like manner. By forcing this through the barrel, the air would be compressed until the pressure became so great that the first wad popped out with a considerable bang and to quite a long range. One disadvantage was that you always had to watch where the ammunition landed so as to be able to recover it, or you had to be chewing new ammunition all the time. Wet paper was almost as good.

We used the same method for our water guns except that we wrapped flax around the end of the ramrod to make it fit tight so no water could escape alongside the wrapping while it was inserted. Instead of the flax or paper wads, we whittled a tight-fitting white pine plug for the end. After fitting the plug we split it in half, lengthwise, cut a tiny groove in the center of each half, placed the halves together and forced



Many hackles had a date and initials but few had as elaborate folk decoration as this. Courtesy of the Mercer Museum, Doylestown.

the plug tightly into the end of the barrel. By inserting the flax-wrapped, tight-fitting ramrod into the barrel, full length, placing the gun point in a basin of water and slowly withdrawing the ramrod, we drew the water in through the tiny hole in the plug; and by pushing the ramrod back in, we shot the water out of the plug end. The faster we pressed the ramrod in, the farther the squirt!¹⁶⁹

In addition to these uses Harry Stauffer, Samuel Heller, and John Z. Harner all gave the following use. The old wooden pumps contained a bottom check valve or bottom bucket which had a half inch groove turned into the outside of the body into which a gasket of tow saturated with melted tallow was wound. The bucket was then dropped into its seat and pounded in place with a wooden stamper on a rope.¹⁷⁰

BLEACHING

During the process used to transform the flax plant into a spinnable fiber there was no deliberate attempt to change the color of the fiber either by dyeing or bleaching,¹⁷¹ as these procedures were usually reserved for spun thread or woven fabric.

There apparently were occasions, however, when it was desirable to bleach the raw flax fiber before it was spun to make it white and as soft as silk. The following is a recipe to whiten flax and hemp taken directly from the 1769 almanac of Christoph Saur, Germantown.

Take one or one hundred pounds—as much as you wish to prepare, and tie it together loosely in handfuls. Then take a barrel and enter as many pints of cold water as you have pounds of flax and as many handfuls of flour. Stir the flour until

¹⁶⁹John Z. Harner, *Seed Time to Harvest*, as told to Alliene Saeger Dechant (Kutztown, Pa., 1957), pp. 99-100.

¹⁷⁰Interview with Harry F. Stauffer and Samuel R. Heller of Farmersville, Pa., and J. Z. Harner, p. 33.

¹⁷¹There are theories that suggest that the system of retting the flax stalk had some influence on the shade of the natural flax fiber. Old examples of flax sometimes show a marked difference in natural color but we are not prepared to explain why.

the mixture looks like milk. Further take very hot water and more flour so the sauce always remains as thin as good milk. After this has all been stirred so there are no lumps, take ale brewers yeast and add it to the gravy. When this is cool enough to keep the hand in it, then lay the handfuls of tied flax spread out in the barrel one bundle next to the other until the entire quantity to be processed has been entered. There must be a hand's breadth of sauce over the flax, and the flax must be weighted slightly so it can not float. After the flax has been in the sauce for two days it must be turned and left in for another day; thereupon remove a bundle of flax, rinse it clean in water and let it dry. If it is white and soft enough then take it all out; if not let it remain in the sauce for again as long as it has been in. After this wash it all out with clean water, let it dry and finally scrape it with a knife-shaped instrument while kneeling, then pass it through four grades of hackles so that it is newly scraped each time until it becomes as fine as one wants to process it for use.¹⁷²

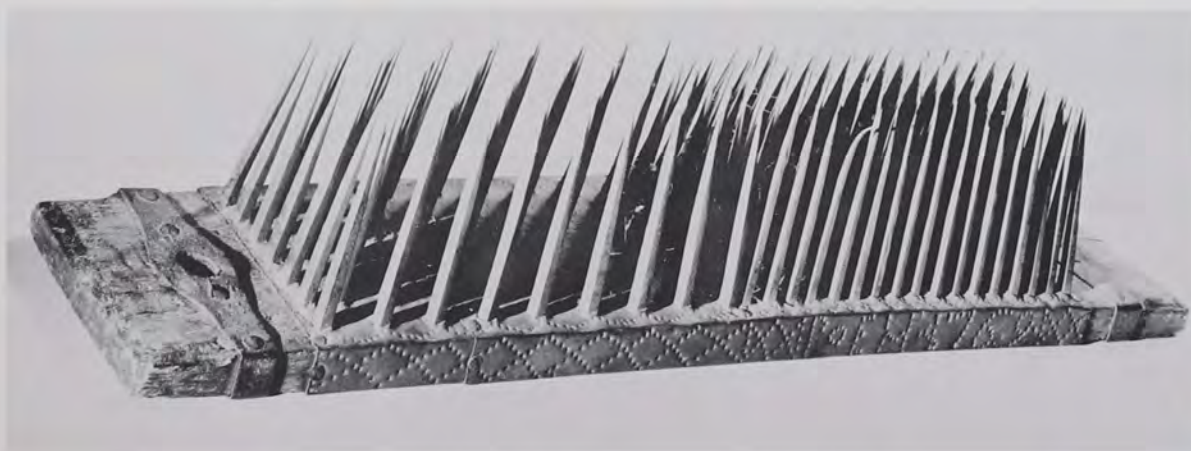
It is felt that bleaching the raw, unspun flax fiber was probably not practiced with much frequency on the farmstead but was done more often in a mill when the occasion arose. It is nonetheless an interesting step in processing flax and one that merits attention.

After the flax plant had been processed to the refined fiber state it was then ready to be put on the distaff for spinning. From the spinning wheel it was wound into hanks, bleached and/or dyed or used in its natural fiber color by the weaver, knitter, needleworker, and seamstress.

Flax, formerly one of the most useful crops of the Pennsylvania farm, has now totally disappeared from the fields and all that remains is a bit of history and a few legends.¹⁷³ The beginning of the end for flax came in 1793 with the invention of the cotton gin.

¹⁷²Christoph Saur, *Der Hoch Deutsche Americanische Kalender auf das Jahr . . . 1769*.

¹⁷³Lick and Brendle, p. 104.



This unusual hackle combines both the coarse and fine hackle in one tool.



Two tow bundles ready for spinning.

By 1840 cotton goods brought into Pennsylvania were so cheap that farmers gradually began to use less linen and more cotton cloth in their daily life. The decline of the flax culture was gradual to the beginning of the Civil War. The shortage of cotton produced by the war revived the flax production somewhat, but the culture came to an abrupt close in 1870.

GLOSSARY OF PENNSYLVANIA DUTCH FLAX TERMS

Almost no attempt has thus far been made to compile a glossary of Pennsylvania Dutch terms dealing with the flax culture, and since a number of the sources of information on flax are in the dialect we are here including a glossary of dialect flax terms. For the most part the terms included here refer only to those steps in the flax process which have been covered in this study.

Generally the German sound values have been used in our system of orthography. Also included, if possible, are the genders and plurals of the nouns and the perfect participles of the verbs.

Baschd (f): The outer husk of the flax stalk. (Keller poem, p. 80).

Blettche (n) (pl. *Blettcher*): Leaf (of the flax plant). (Keller poem, p. 79).

Bliettche (n) (pl. *Bliettcher*): Flower (of the flax plant). (Keller poem, p. 79).

Boll (f): 1. Boll of the flax plant. (Lambert, p. 31).
2. Flax before it is broken. (Lambert, p. 31).

Bollche (n): Boll of the flax plant. (Keller poem, p. 80).

Bollhoke (m): Hooks (boon) remaining in the flax after scutching. (Keller Flax Utility, p. 271).

Bollwaerrick (n): Tow of the first hackling. (Lambert, p. 31).

Brechaagel (f) (pl. *Brechaagele*): 1. Particle of boon separated in the process of braking. (Lambert, p. 32). 2. Particle of boon in the tow fiber or fabric. (Boonastiel (1904), p. 6).

Brechloch (n): Area or hollow—sometimes a quarry-hole—where the flax was roasted and broken. (Lambert, p. 32).

Britsch (f): Flax flail or bat used to beat flax seed from the boll and stem. (Lambert, p. 32).

Bundel (m) (pl. *Bindel*): Bundle (of flax). (Keller, p. 82).

Dock (f): Strick of flax. (Lambert, p. 42).

Docke (pp. *Gedockt*): To put flax into stricks. (Lambert, p. 42).

Dodder (m): 1. Dodder. (Lambert, p. 42). 2. False flax. (Lambert, p. 42).

Drickle (pp. *Gedrickelt*): To dry flax prior to braking. (Lick and Brendle, p. 105).



A single flax strick ready for storage prior to spinning showing the tight even twist.

- Flachs* (m): 1. Flax. (Lambert, p. 56). 2. Flax fiber.
- Flachsbaue* (n): Flax culture. (Lambert, p. 56).
- Flachsblum* (f): (pl. *Flachsblumme*) 1. Flax bud. 2. Flax flower. (Beam, p. 35).
- Flachsbrech* (f): Flax brake. (Lambert, p. 56).
- Flachsbreche* (pp. *Flachsgebroke*): To brake flax. (Keller, p. 83).
- Flachsbritsch* (f): Scutching knife. (John B. Brendel, 10-11-70).
- Flachsbritsche* (pp. *Flachsgebritscht*): To thresh or bat flax. (Keller, p. 81).
- Flachsdarr* (f): Flax kiln, or arrangement consisting of forked wooden poles and wooden rods on which flax was dried. (Lambert, p. 56).
- Flachsdodder* (m): Dodder. (Lambert, p. 56).
- Flachse*: Of flax. Lambert, p. 56).
- Flachsfeld* (n) (pl. *Flachsfelder*): Flax field. (Beam, p. 35).
- Flachsgnewwel* (m): An instrument to hold the flax while braking, consisting of two sticks one foot long bound together at one end of each stick by sixteen inches of stout cord or leather. (Mercer, p. 30).
- Flachshechel* (f): Flax hackle. (Lambert, p. 56).
- Flachshechle* (pp. *Flachshechelt*): To hackle flax. (Keller, p. 82).
- Flachsetze*: To ret flax. (Keller, p. 82).

- Flachsroppe*: To pull flax. (Keller, p. 80).
- Flachsschmoke*: To roast or dry flax on a *flachsdarr*. (*Shdivvel Knecht* 9-9-71).
- Flachsschtick* (n): Flax patch or field. (Keller, p. 78).
- Flachsschtuhl* (m): Chair used in scutching flax instead of a swinglestock. (John B. Brendle 10-11-70).
- Flachsschwing* (f): Scutching knife. (Lambert, p. 56).
- Flachsschwinge*: To scutch flax. (Keller poem, p. 84).
- Flachssieb* (f): Flax seive. (Mercer, p. 21).
- Flachsseide* (m): Dodder. (Lambert, p. 56).
- Flachssome* (m): Flax seed. (Lambert, p. 56).
- Flachssume* (m): Flax seed. (Lambert, p. 56).
- Gnewwel, Knewwel* or *Knewel* (m): The pointed hickory stick used for twisting the straw band which binds the flax bundle. (Lambert, p. 68).
- Gnewwle*: To twist tightly using a *gnewwel*. Lambert, p. 68).
- Halm* (m) (pl. *Halme*): Stem (of flax plant). (Keller poem, p. 79).
- Hechel* (f): Hackle. (Lambert, p. 78).
- Hechle* (pp. *Kechelt*): To hackle. (Lambert, p. 78).
- Knewel* m): A strick of flax. (Fisher, p. 109).
- Olich* (m): Linseed oil. (Lambert, p. 116).
- Olichfass* (n): Hogshead which held seventy gallons of linseed oil. (Beam, p. 76).
- Olichkuche* (m): The compacted mass left after pressing the oil from the flax seed. (Lambert, p. 116).
- Olichmehl* (n): *Olichkuche* ground for cattle feed. (Lambert, p. 116).
- Olichmiehl* (f): Oil mill. (Beam, p. 76).
- Olichsack* (m): A coarse bag in which the warm crushed mass of flax seed was put for pressing linseed oil. (Lambert, p. 116).
- Olichschlaage*: The step in producing linseed oil where the ground heated flax seed is pounded between heavy wooden blocks. (Lambert, p. 116).
- Olichschleeger* (m): Linseed oil mill worker. (Beam, p. 76).
- Olichschtempel* (m): The stone used in crushing flax seed in making linseed oil. (Lambert, p. 116).
- Olichschtenner* (m): Vat at the oil mill for holding flax seed. (Lambert, p. 116).
- Retze*: To ret flax. (Lick and Brendle, p. 105).
- Roppe*: (pp. *Geroppt*) To pull flax. (Lick and Brendle, p. 105).
- Schack* (m): Shock (of flax). (Keller poem, p. 81).
- Schtock* (m): Swinglestock. (Keller poem, p. 84).
- Schwengel* (m): Scutching knife. (Lambert, p. 147).
- Schwenkmesser* (n): Scutching knife. (Mercer, p. 11).
- Schwinge* (pp. *Gschwunge*): To scutch. (Lambert, p. 148).
- Schwingmesser* (n): Scutching knife. (Lambert, p. 148).
- Schwingmiehl* (f): Scutching wheel. (Lambert, p. 148).
- Schwingraad* (m): Scutching wheel. (Lambert, p. 148).
- Schwingschtock* (m): Swinglestock. (Fisher, p. 108).
- Schwingwaerrick* (n): Tow (from scutching?) (Lambert, p. 148).
- Tock* (f): 1. Strick of flax. (Lambert, p. 42). 2. Twisted handful of flax after scutching. (Keller poem, p. 85).

Uff der retz duh (Uff der retz geduh): To put the flax out to ret. (Gehman Diary).

Waerjel (n) (pl. *Waergle*): 1. Handful of finished flax fiber. (Lambert, p. 172). 2. Handful of pulled flax before threshing. (Keller poem, p. 82).

Waerrick (n): Tow. (Lambert, p. 172).

Waerricke: Of tow. Lambert, p. 172).

Wickel (m): Hat like bundles of tow for spinning. (Keller poem p. 85).

Wild flachs (m): Cultivated flax which has escaped and is found growing along roads and in waste places. (Lick and Brendle, p. 106).

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A bundle of stricks hanging from a rafter in the attic to keep it mouse-free until the flax is required for spinning. Courtesy of the Goschenhoppen Historians Museum, Green Lane.

Pennsylvania German Astronomy and Astrology III: Comets and Meteors

By LOUIS WINKLER
*Department of Astronomy
The Pennsylvania State University*

COMET ASTRONOMY

A comet is a conglomeration of interplanetary material confined to a relatively small volume which orbits the sun. The orbit is generally a highly elliptical one with a period of a number of years. When the conglomeration of material approaches the sun it begins

to glow and form a tail which increases in size and brightness the closer it gets to the sun (see Photograph 1). The angular extent of the tail can be a number of degrees in the sky. The comet may be visible to the unaided eye for a number of days and can be seen often from nearly all parts of the world.

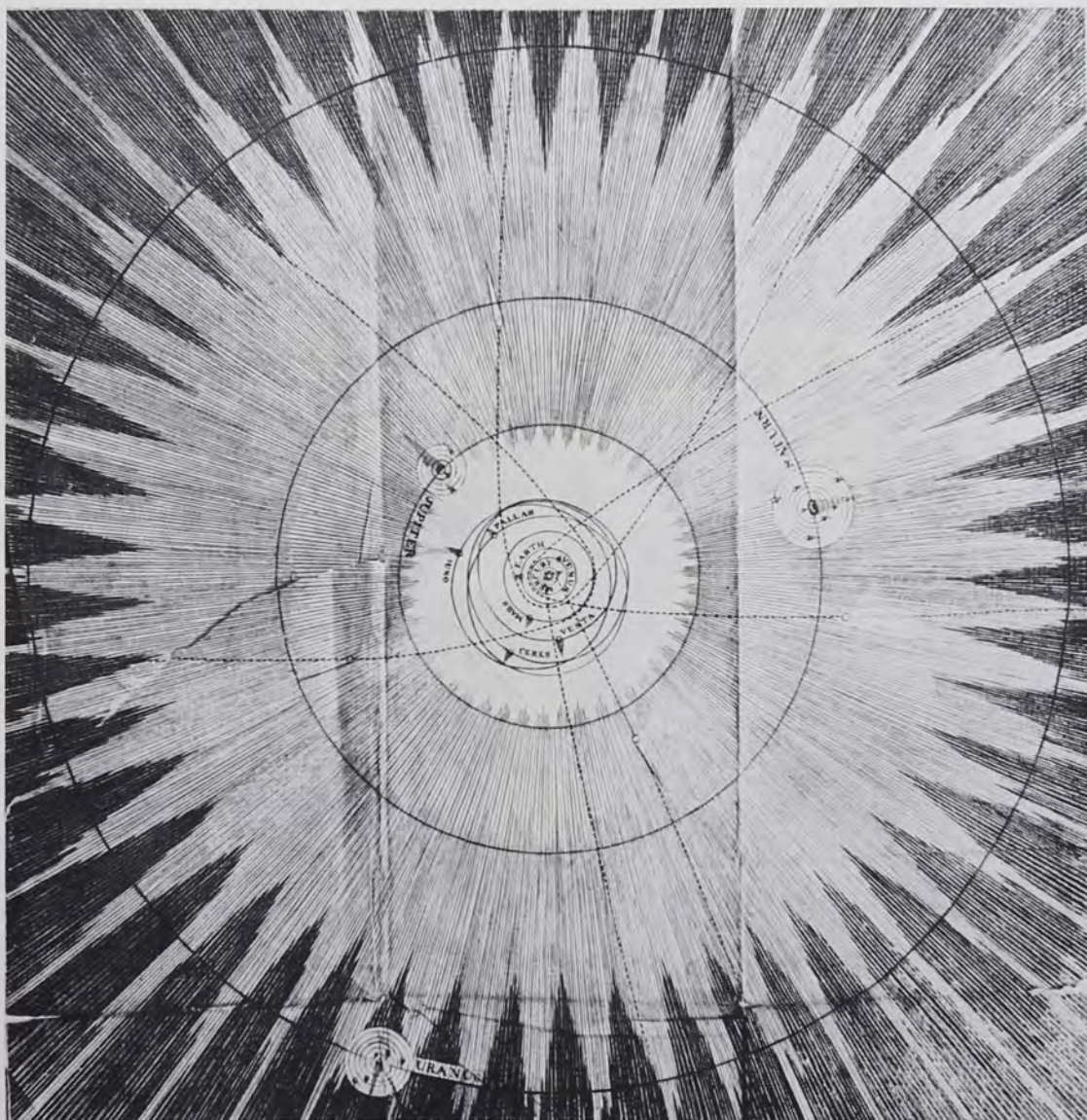


Photo 3. Egelmann's schematization of the solar system. From his astronomical work of 1830.

über

Cometen.

(Mit einer Abbildung.)

Cometen (Haarsterne). Es heißen Cometen, welche uns nur zu gewissen Zeiten erscheinen, gewöhnlich ein Schwand Licht zeigen, in eine Art von Komet eingekleidet sind, und meistens einen langen schweifigen Schweif nach sich ziehen; der jedesmal von der Sonne absteigt ist. Dieser Schweif gab Veranlassung zu der griechischen Benennung. Die Cometen haben nicht gleich den Planetenbahnen, auf die Örtigen der Himmelskugel einbestimmt; sondern sie beschreiben vielmehr die Höhen der Planetenbahnen unter allen Himmelsarten, und nach allen Richtungen. Einige sind rechtlich, andere wirklich rückwärts. In den von der Sonne entfernten Theilen der Bahn ist über die Bewegung sehr langsam; in der Nähe der Sonne aber mehr, so daß alle Bewegungen schnell sind. Sie haben zu ungleichen Zeiten, und bewegen sich zum Theil in sehr langen elliptischen Bahnen um die Sonne. Man hat bereits von mehr als hundert Cometen die meisten Bahnen um die Sonne mit den dazu gehörigen Elementen berechnet, und die Zeit der Wiederkehr meistens dieser Cometen lange Jahre vorher bestimmt. Die Cometen von 1456, 1811, 1807, 1862, und 1799, sind zum Beispiel ein und derselbe, der seine Laufbahn in 76 Jahren zurücklegt, und im Jahr 1833 wieder sichtbar sein wird. Der Enke'sche Comet verläßt seinen Umlauf um die Sonne in etwa 3½ Jahren, und ist nun schon seit demmal 1796, 1799, 1801, 1805, 1818, 1825, 1829, von den Astronomen beobachtet worden. Er war auch im Dezember 1833 während seiner Schiefer von der Sonne, in Südamerika sichtbar. Er hat mit der Bahn des Jupiters übereinstimmt, und durchstreift in einem Jahr dreier unserer Erdbahnen nicht weniger als sechzigmal. — Wahrnehmlich sind viele Cometen schon erschienen, ohne bemerkt worden zu sein. Durch Fernrohre beobachtet, erscheint der Kopf des Cometen als ein dichter Kern, der um sich her einen weichen Dunstkreis hat. Der Schweif ist allmählig leuchtend, und so klein, daß man die halbezeitlich sich verändernde Richtung durch ihn sehen kann. Im besten Falle hält man sie für bloße Lufterscheinungen; erst mit Teleskop zu Werke, und verjünglich für Planeten, helfen durch spätere Astronomen und endlich durch Laplace die zur Weltkommenheit ausgebildete Theorie der Cometenbahnen durch alle früheren Erscheinungen Cometen bestätigt werden ist, hat man sie für feste Körper angesehen. Auch hat die neuere Theorie dieser Himmelskörper ihren geordneten Anlauf zum Fortschritt, irgend ein Comet könnte sich einstmals der Erde so nähern, daß er sie aus ihrer Bahn schickere, ihr den Welt raube, oder sonstige Unheil der Art verursache.

Ein Cometa und vierzig Cometen sind im vorigen Jahrhundert auf der Erde sichtbar gewesen, von welchen keiner zum ersten Male erschienen ist. Wenn man ein taufend Jahre annimmt, als die im Durchschnitt durchschnittlich Zeit ihres Umlaufs um die Sonne, so ist es demnach möglich, daß sich 1400 innerhalb des Raumes der Erdbahn befinden. Da aber der Planet Uranus jährlich weiter als die Erde von der Sonne entfernt ist, so kann die ungefähre Zahl von 11,200,000 Cometen innerhalb des Oranges unseres Sonnensystems ihren Umlauf haben. Gewissenlos groß, als die Anzahl dieser Körper nach solchen unvollständigen Berechnungen scheinen mag, ist sie dennoch gering im Verhältnis zur Masse der Sterne; denn die Anzahl der Sterne im Bereich der Erde, die in einem Zeitraum von nur fünfzig Millionen im Durchmesser eines Sternes veränderbar, auf 116,000!

Das erste, wodurch sich die Cometen ausfallen von allen übrigen Körpern des Himmels unterscheiden, ist über die Zeit ihrer Erscheinung. Während jene eine regelmäßige Periode haben, erscheinen diese gewöhnlich un-

As the comet recedes from the sun the tail and glowing nucleus diminish in size and brightness until they are no longer visible.

Until the early part of the 18th Century their periodic nature was unknown so that each and every comet's apparition was a surprise. Because some of the comets were very prominent celestial objects in the sky they were viewed with awe. Further, apparitions were very often correlated with major dire events on earth and thus blamed for the events. Whenever a bright comet would appear, the imaginations of people were captured. Lurid and fantastic descriptions of the object were common in ancient and medieval times.

The most famous of all comets is Halley's, which was named after the Englishman who first recognized the periodic nature of the comet and predicted its appearance in 1759 and 1834. The scientific merit of this comet is extraordinary since the prediction of its apparition signifies a theoretical triumph. The comet also made a particularly deep impression on the minds of men because of its conspicuous appearance.

REACTIONS TO COMETS

Comet apparitions played a prominent role in the astronomical and astrological lives of the Pennsylvania Germans. A great variety of descriptive information is found on these objects, particularly in almanacs (discussed in Article I of this series). Almanacs were the best popular source of general astronomy, and comets were the most popular astronomical object in these almanac sources. Whenever a comet was visible, the best source of information was the newspapers because of the short time of response between writing and publishing the material. Numerous other interesting sources, particularly those giving personal reactions, exist also.

Scholarly discussions by David Rittenhouse, C. F. Egelmann, and E. L. Walz (discussed in Article I of

Figure 1. Carl Friedrich Egelmann's article on comets. From the 1833 issue of Der Pennsylvanische Anti-Freimaurer Kalender (The Pennsylvania Anti-Masonic Almanac).

Figure 2. Egelmann's "Poem on the Heavenly Bodies," an admonition against fear of comets, based on the thought that after all the Creator controls the comet's movements. From Der Pennsylvanische Anti-Freimaurer Kalender (1833).

oder Wintermonat, hat 30 Tage.

<p>Monats Viertel mit ihren mathematischen Witterungen.</p> <p>Leitet Viertel ist den 1ten, um 7 Uhr 50 min. Morgens; schönes Wetter. Reinend ist den 11ten, um 12 Uhr 55 min. Nachmittags; trüb mit Regen. Erstes Viertel ist den 15ten, um 3 Uhr 2 min. Morgens; kalt mit Schneegestöber. Vollmond ist den 27ten, um 2 Uhr 19 min. Morgens; heile.</p> <p>Mathematische Witterung für jeden Tag. Den 1, 2 trüb, 3, 4 kühl, 5, 6, 7 heiter, 8 Dummer, 9, 10 trüb mit Regen, 12, 13, 14 veränderlich, 15, 16, 17 unangenehm kalt, 18, 19 kalter nordwest Wind, 20, 21 Regen, 22, 23 sehr, 24 veränderlich, 25 Schnee oder Regen, 26 trüb, 27, 28 veränderlich, 29 trüb mit Schnee, 30 kalt.</p> <p>Sturten. Herz, jagern, Post, Eric, Columbia, 4 Pitt, 9 Quaintingen, 11 Cranford, Northampton, Northumberland, Lancaster, 11 Westmore, Dauphin, Wilkes, Greene, 18 Schuylers, Centre, York, Westmoreland, Berks, 25</p> <p>Gedicht über die Himmelskörper, gegen Cometen-Furcht.</p> <p>Nach der Philosophie: Wie groß ist des Allmächtigen Will.</p> <p>Es schließt umhüllt mit Licht und Freude, Im fernem blauen Aethergrund Ein einig schwebendes Schicksal Und macht den großen Schöpfer Fund; Die Sonne scheint in seinem Pralle Nur immer auf sein mächt'ges Wort, Und strahlt als leb im weiten Kreis Des großen guten Schöpfers Fort.</p> <p>Nicht taufend Sonnen in der Höhe, Dem Aether bis zum Äther-Oben— Noch was ich ist, und ich Im unbegränzten Himmelsraum— Sich klar, in unerschütterlicher Und rühmet laut bei Tag und Nacht; Wie ihres Schöpfers Bild und Wille, Aus Liebe sie hervorbringt.</p> <p>Die Erde flücht in sanfter Demme Den Weg, den ihr der Schöpfer weis, Während rings um unsern Sonnen, Wo sie sich kein Tag vertheil.</p>	<p>Wacht eine Furcht den neuen Morgen, Verzagt dem Schöpfer ihre Wahn, Verläßt unglück bangt Werten, Cometen-Furcht und toben Wahn.</p> <p>Wagt ist der Herrscher in der Ferne, Furcht und verzagt überfall; Er hält noch fest die Schickselne Und schilt auch unsern Gebenfall; Nichts kann die weise Deutung führen, In der er seine Sterne hat, Er läßt uns seinen Demer leben Und hält uns doch in seiner Hand.</p> <p>Es hat noch nie der Welt, Weisheit, In seinem Reich' Etwas verlohren; Er sieht den Naben ihre Schwelle Und läßt die Welt nicht untergeh'n; Er hat die Schwerekraft abgemogen, Dem Anfang bis in Ewigkeit; Ein Jetha nicht in seinen Tagen Und weicht seinen Finger leicht.</p> <p>Wacht, wenn der Abend-Schatten fällt Und nicht den neuen Morgen Der Abend nach Berg und Thal erstreckt Und wankt der Erde sanfte Ruh' Und spricht aus heiligen Himmelsbüchern, Im hohen Klang, im sanften Ton: Aus Ohngestalt und reiner Liebe Schuf mich der Herr, den Erdenstein.</p> <p>Nach raufst für uns der Naben Glanz, Nach scheint für uns der Naben Licht, Nach macht er uns're Nacht hell, Wenn er uns heiligt Himmelslicht, Wer wolle zu noch langlich sagen! In seinen Armen will ich ruhen, Er wird auch die Cometen jagern, Doch sie uns keinen Schaden thun.</p> <p>Nach unser Schöpfer schreut die Kreise Ist der Cometen ganzer Herr, Auf ihrer langen Himmelsreise, Wie einem jeden einzeln vor, Herr Welt! Ich halt meine Hand, Und halt' auf dich verzwangend; Ich, halt' mich thun bis an mein Ende, Ob sie die Welt, Herr! dich ich will.</p> <p>Wacht ich denn nicht nicht länger leben Auf diesen schönen Erdenrund, Wird sich mein Geist zu Dir erheben, Im fernem Himmelsgrund, Und Du wirst mich zu nicht vergessen, Du bist mein Vater dort wie hier, Denn läßt Du mich den Cometen weissen, Und ich bin Dein dank für und für.</p> <p style="text-align: right;">C. F. Egelmann.</p>
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Figure 3. The Egelmann engraving of the comets 1805 and 1812. From Der Pennsylvanische Anti-Freimaurer Kalender (1833).

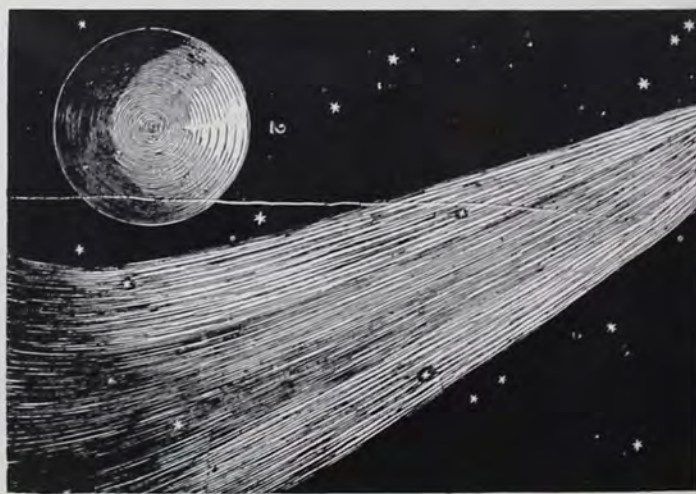




Photo 1. Halley's Comet on May 4, 1909, with its tail 7° - 8° long (Yerkes Observatory photograph, University of Chicago)

this series) were the most noteworthy. One of the first scholarly astronomical articles appearing in Pennsylvania German almanacs was that by the world famous astronomer Rittenhouse. His account appeared in the 1779 issue of *Der Gantz Neue Verbesserte Nord-Amerikanische Calender*, twenty years after the confirmation of the periodicity of Halley's comet. The scholarly contributions of Egelmann and Walz, interestingly enough, were much more closely correlated to the apparition of Halley's comet which came in their lifetime in 1835. Egelmann not only discussed comets in the 1833 issue of *Der Pennsylvanische Anti-Freimaurer Calender*, but he was inspired to contribute a poem as well as a Fraktur drawing of the comet of 1812. A portion of the article, the poem and Fraktur are shown in Figures 1-3. Walz's discussion of comets was quite long for the known material in those days and appeared in his astronomical text of 1835.¹

¹*Allgemeine Beschreibung der Welt oder kurzgefasste Darstellung Wissenwürdigsten aus der Sternkunde, Naturgeschichte und Erdbeschreibung* (Lebanon, Pennsylvania, 1835).

While the 1759 and 1834 apparitions of Halley's comet were probably the most important on a world wide basis in the 18th and 19th Centuries, they were not the most significant to the Pennsylvania Germans. Although the comet received the due scientific recognition, the reaction of the populus appears to be more extensive for two other comets. These were the comets of 1743 and 1769, the latter being noteworthy because of its long tail.

Among the noteworthy personal reactions to the comet of 1743 was the rather unusual Ephrata print which appeared in 1745. This twelve-page publication was entirely devoted to the comet and its meaning. Its cumbersome title can be translated into English as "Earnest Awakening-Voice Composed into a hymn concerning the long standing and Great Comet which showed itself for the first time in the X Month of the year 1743 and stood visible for 10 weeks. Sent in by a Friend and at his request put into print at Ephrata MDCCXLV." Portions of the text are reproduced in Figures 4-6 with the permission of Juniata College.

A particularly technical account of the Comet of 1743 was given in a manuscript by Christopher Witt. He was a physician by profession and Pietist by philosophy. He was known as a *Hexenmeister* among the Pennsylvania Germans and cast many horoscopes. In the opinion of this writer he was more involved in both astronomy and astrology than any other early Pennsylvania German. His account of the comet is as follows:

His atmosphere or tail is not long, but directing itself to the S.E.; his motion but slow, making to the N.W. He rises about $\frac{3}{4}$ past 10 in the morning in the E.N.E., and passes our Meridian $\frac{3}{4}$ after 5 P.M. in latitude 15.30 N.; and sets $\frac{3}{4}$ after nine in W.N.W. His latitude with respect to the ecliptic is 21 D.30 m. His longitude from Aries 14 D.30 m.²

Interest in the Comet of 1769 appeared in a different fashion. Daniel Schumacher,³ an independent clergyman and amateur astronomer, was impressed by this

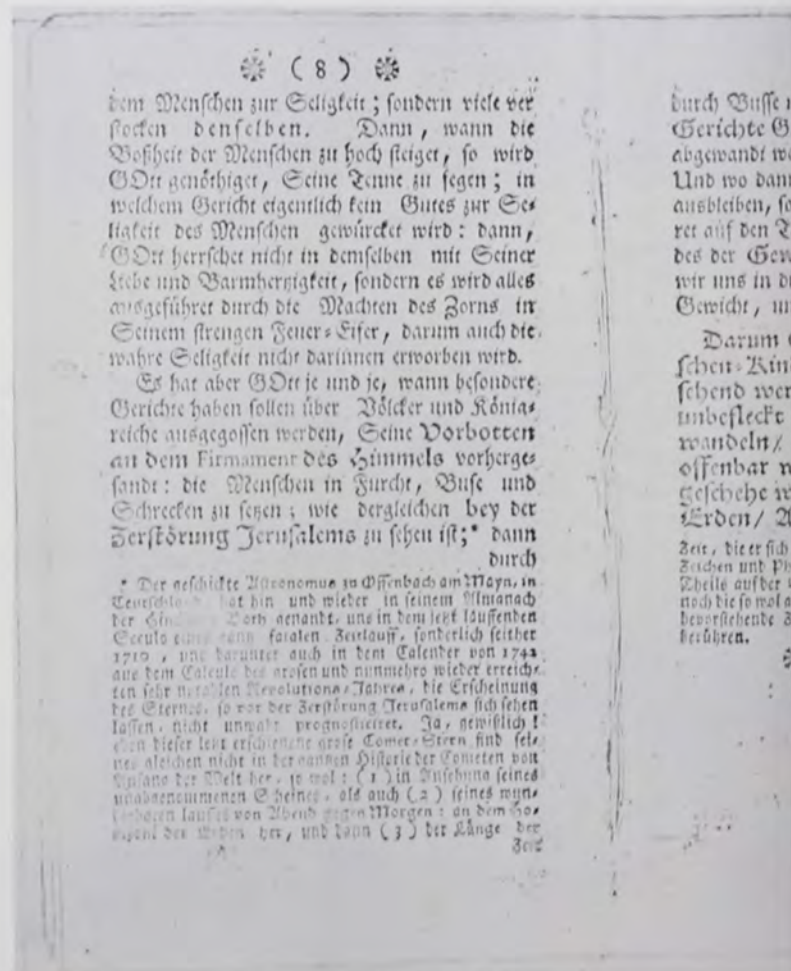
²Julius F. Sachse, *The German Pietists of Provincial Pennsylvania* (Philadelphia: P. C. Stockhausen, 1895), p. 418.

³His biography is given in Frederick S. Weiser, "Daniel Schumacher's Baptismal Register," *Publications of the Pennsylvania German Society*, I (1968), 185-208.

comet enough to make a stylized Fraktur drawing of it (see Figure 7, reproduced with the permission of the Pennsylvania German Society). This celestial object was also the subject of two manuscripts which were each copied from different sources. David Shulze, a Pennsburg surveyor, copied his material in 1796 (sic) from a long hymn supposedly written for another comet. John Krauss, another Pennsburg surveyor, copied material written on the Comet of 1769.

Shulze's interest in the comet of 1769 was great enough to warrant five entries in his diary from August 1769 through November 1769. His entries anticipate the unaided eye apparition and traced its motion relative to the background of celestial objects in a knowledgeable fashion.

The dire implications of comets are well established in the Pennsylvania German society too. In the unusual Ephrata imprint just mentioned a number of dismal entries are found as follows: "... comet is come to announce war, plague, famine, etc., here in America" and "Let then the star (meaning comet) a warning be else comes an evil END."



Figures 4, 5, 6. Titlepage and sample pages from the Ephrata Cloister's admonitory pamphlet on the comet of 1743. Courtesy Juniata College Library.

It appears that Shulze, mentioned previously, associated death with the Comet of 1769. He copied his material on the comet only months before his death at 80 years of age. Schumacher writes below his picture of the Comet of 1769: "You men are asking one another what this star (meaning comet) means, whether God will punish you. Ach, only repent in good time."

Evidently some of the dire interpretations still persist in relatively recent Pennsylvania German circles. In Fogel's collection of oral traditions the following is included: "Comets announce the approach of wars, seditions, changes of Kingdom and the like".⁴

METEOR ASTRONOMY

A meteor is a short-lived streak of light seen in the night sky (see Photograph 2). The streak is caused by a small particle of matter from interplanetary space which enters the atmosphere at a very high speed and excites the atoms in the atmosphere to emit light. The particle in the atmosphere is called a meteoroid and if

⁴Edwin M. Fogel, *Beliefs and Superstitions of the Pennsylvania Germans* (Philadelphia: Americana Germanica Press, 1915), No. 430.

it doesn't burn up completely on its way into the atmosphere it strikes the surface of the earth as a meteorite.

The scientific world took a long time to recognize that meteorites were actually samples of material from outer space. In 1790 the prestigious Paris Academy viewed the idea that meteors fell from the sky as "superstition unworthy of these enlightened times". Meteors and meteorites have been associated only since about 1800 and from their names it can be seen that their origin was thought to be in our atmosphere or *meteorological* in nature.

While some meteors are faint and short-lived others are bright and can persist for seconds at a time. When meteors come in very large numbers per day over a number of days a meteor shower is said to exist. Several prominent showers occur every year at about the same time because the particles producing the shower orbit about the sun in a fixed orientation in space, as does the earth, and thus interact with the earth's path at a fixed position. Accordingly the showers appear to emanate from the same part of the

mögen die Form
ern und Ländern
Nunne zu sehen.
ichte in dieser Zeit
schen alles gepah
Darum ist bey
Derlust/ welchen
hen, von grossen
igen.
ne den Men
n! aufdaß sie
nen: rein und
Welt hindurch
REICH bald
dein WJLE
also auch auf
ominden Wunders
eils an den Wassern
nicht zu oedenen
egenwärtige und noch
e Prophezeungen zu

* (14) *

Und falle in Demut GOTT zu Fuß
Durch eine wahre Herzens-Buß,
Wie's Sündern thut gebühren!


15.

Thut Buß fein bald! wie Nimde!
Jonk 3, v. 5.
Mit Fasten, Baren, Schreyen!
Zerstiehet in einer Thränen-See:
So mögte GOTT geruehen
Die Strafe, so uns treffen sollte,
Und wandeln sie in Gnuß und Hulde,
Wie Nimde geschehen.

16.

O ziehe die Trauer-Kleider an!
Setze Luch in Staub und Aschen!
So wird der HERR uns sehen an,
Gnad, Hülf, erscheinen lassen.
Jhr Armen/ Reichen/ Groß und Klein!
Den Stern laßt euch ein Warnung seyn!
Sonst folge ein böses

E N D E



* (15) *

Nachrede.

So ist es nun freylich, geliebter Leser!
Nicht ohne, wann man erwäget die ge-
genwärtige Zeit und ihre Zeichen: so findet
man die Tage Noah, da alles Fleisch vor
GOTT seinen Weg verderbet hat, und eine
fleischliche Sicherheit und Friede einge-
risfen ist. Es muß GOTT endlich aufwachen, und
dem Verderben steuren durch Gewalt und
durch den Arm Seiner Macht. Daß, das
Böse ist zu selbständig böse worden: daß dem
Schaden nicht wohl mehr zu helfen ist. GOTT
hat sich mit Seiner Langmut fast ans Ende ge-
schafft; dann, es sind fast alle heilsame Gna-
den-Mittel unzulänglich worden: dieweil
der Freye Wille in der Sünde, selbstmächtig
worden, und also in seinem Reich erhaben bleibet.
So liegt demnach die Sünde nicht mehr
freytlig/ sondern ist eine ausgentahete Sach
worden: Trotz GOTT und allen Seinen
Zeugnüssen. Dieweil dann das Gute ein
freyes Wesen ist, so in keinem Zwang noch
Gewalt bestehet; die Sünde aber sich des freyen
Willens des Menschen bemächtiget: daß er,
durch derselben Macht, ein selbst-mächtiger
GOTT worden/ so kan demnach der
wahre GOTT wenig oder Nichts an ihm aus-
richten: dieweil es wider Seine Malesität ist:
Seine Macht und Hoheit an dem Menschen
zu gebrauchen; Angesehen die Sünde, oder

sky every year. A meteor shower gets its name from the stellar constellation from which it appears to emanate. Two of the most famous meteor showers are the Perseids and Leonids, the former appearing to emanate from Perseus and the latter from Leo. The date of peak activity for the Perseids and Leonids are around August 11 and November 16, respectively.

One of the interesting factors of meteors is that they are physically associated with comets. The particles which produce meteors very often are actually debris trailing and preceding a comet. The relationship between meteors and comets or even the annual nature of some showers was not established until the latter part of the 19th Century. Of course meteors and comets also have the feature in common that they are spectacular and for the most part were unpredictable.

REACTIONS TO LEONIDS

One particular shower in the early history of the Pennsylvania Germans appears to be far more impressive than any other. This is the Leonids of 1833. While the Leonids are an annual phenomenon, as we have mentioned, this shower has the additional unique property that it is extraordinarily impressive every 33 years, 1833 being one of those years. An engraving of the spectacle taken from the 1854 issue of *Der Illustrirte Calender* is shown in Figure 8.

Many of the previously described aspects of the 1833 Leonids can be found in the early Pennsylvania literature. Every newspaper examined by this writer published immediately after November 13, 1833, had an account of the display.

One of the folktales in the collection of Brendle and Troxell includes an account of the 1833 Leonids. According to the record book of the Egypt Reformed Church, "A Singular Phenomenon happened on the 13th of November 1833: the stars fell from Heaven as the saying was".⁵ Since many people view a meteor as a star which has fallen off the star-studded vault,



Figure 7. Pastor Schumacher's fraktur of the comet of 1769. Courtesy Pennsylvania German Folklore Society.



Photo 2. A meteor seen against star-cloud in the constellation Scutum (Yerkes Observatory photograph, University of Chicago).

meteors are sometimes called falling stars. The folktale indicates that this phenomenon disturbed some people greatly even to the point of expecting the end of the world.

Even a relatively modern Pennsylvania German writer, P. C. Croll, refers to the great impression the November 13, 1833, Leonids made on the minds of people. He refers to the event as one "which our parents, or forebearers, have told us in childhood". Croll's sense of emotional reaction to the event is captured somewhat in his description: "The most wonderful shower of shooting stars which has ever been recorded is that of November 13, 1833, the whole firmament over all the United States being then for hours in fiery commotion. No celestial phenomenon has ever occurred in this country, since its first settlement, which was viewed with such admiration by one class in the community or with so much dread and alarm by another. From two o'clock until broad daylight, the sky being perfectly serene of dazzling brilliant luminosities was kept up in the whole heavens."⁶

⁵Thomas R. Brendle and William S. Troxell, *Pennsylvania German Folktales, Legends, Once-Upon-A-Time Stories, Maxims, and Sayings* (Norristown, Pennsylvania, 1944), p. 206.

⁶Philip C. Croll, *Annals of the Oley Valley* (Reading, Pennsylvania: Reading Eagle Press, 1926), p. 59.

Die Sternschnuppen.

Es ist in der neuesten Zeit ein wichtiger Zweifel hinsichtlich der Sternschnuppen aufgetaucht, den wir nicht unerwähnt lassen. Zu diesem Zweifel hat die Benutzung der elektrischen Telegraphen geführt. Es wird nämlich wieder, wie vor 50 und mehr Jahren, behauptet, daß die Sternschnuppen keine kosmischen Körper, sondern nur örtliche Erscheinungen seien. Zur Entscheidung der Frage, ob es wirklich an zwei nur wenige Meilen von einander entfernten Orten viele örtliche, lokale Sternschnuppen gebe, brachte Edward Deiss in Wachen am 18. Okt. 1851 den elektrischen Telegraphen zwischen Wachen und Herbesthal, zwei Meilen von Wachen entfernt, in Anwendung. Es ergab sich jedoch, daß man in Wachen 20 Sternschnuppen gesehen, die in Herbesthal nicht wahrgenommen wurden, und daß man am letzten Orte 12 Sternschnuppen beobachtet hatte, die zu Wachen nicht gesehen worden waren. Diese Beobachtung deutet aber nach der Ansicht des Hrn. Professor Deiss dennoch nicht darauf hin, daß die Sternschnuppen Licht-Erscheinungen sind, welche in den unteren Schichten der Erdatmosphäre vor sich sinnen und deshalb örtlich wären. Vielmehr glaubt dieser rühmlich bekannte Sternschnuppen-Beobachter, daß diese Erscheinungen dunkle Körper sind, die durch irgend welche äußere Einwirkung nur an einem

kleinen Punkte ihres äußeren Umfanges, etwa von einer hervorragenden Spitze, in Entzündung gebracht werden, wodurch verursacht würde, daß die Lichterscheinung, welche an einem Orte wahrgenommen wird, an einem andern bloß wenige Meilen entfernten Orte gar nicht oder nicht in derselben Ausdehnung gesehen werde. Die Erfahrung ist in der Folgezeit werden den wichtigen Regenstaub jedenfalls zu einer sichern Entscheidung bringen lassen.

Auf die Erfahrung, daß vom 10. bis zum 14. Nov. die Sternschnuppen in ungewöhnlicher Anzahl jährlich erschienen, leitete der umgeherrte Sternschnuppen-Schwarm, den Olmsiedt und Palmer in Nordamerika Nachts vom 12. bis 13. November 1833 beobachteten. Während neun Stunden fielen damals am Niagara-Fall, woselbst die Illustration darstellt, nach Krage's Schätzung diese wie Schneeflocken zusammengerührten, den Himmel durchziehenden Sternschnuppen in einer Anzahl von wenigstens 21,000. Auf eine ähnliche, alljährlich um den 10ten August wiederkehrende Erscheinung haben zuerst Benzenberg, Olbers und Quetelet hingewiesen; diese August-Erscheinung ist unter dem Namen der „Ström des heilig. Laurentius“ bekannt. Außer diesen beiden Hauptvorkommen hat man noch andere Tage des Jahres erkannt, an welchen Sternschnuppen in ungewöhnlicher Menge sich zeigen.



Sternschnuppen am Niagara-Fall 1833 den 12. November Nachts.

Die Ringe und Höfe um Sonne und Mond.

Nicht selten bemerkt man um Sonne und Mond, häufiger um letztern, helle Kreise und Ringe. Umgeben diese den Himmelskörper unmittelbar, so nennt man sie Höfe, Halo's, sind sie durch eine Luftschicht davon getrennt, so heißen sie Ringe. Auch um größere Sterne werden die ersten zuweilen bemerkt. Sie sind gewöhnlich farblos; öfters fielen jedoch die Höfe und Ringe in ihrer Begrenzung nach außen auch leicht in einigen Farben des Regenbogens. Es ist keinem Zweifel unterworfen, daß sie durch Dünste in den niederen Gegenden der Atmosphäre, theils durch Beugung, theils durch wirkliche Brechung und Zurückwerfung des Lichts veranlaßt werden.

Die Höfe besitzen nicht immer denselben Durchmesser; sie verbreiten sich gewöhnlich einige Grade um den Himmelskörper und erscheinen in der Regel um so kleiner, je höher der Beobachter aufsteigt, und verschwinden ganz, wenn er sich über die Dünste erhebt. So sieht man zuweilen in Thälern Höfe, während man auf benachbarten Bergen keine mehr bemerkt.

Die Ringe um Sonne und Mond werden zuweilen schon bemerkt, wenn der Himmel noch blau und nur mit einem feinen blauen Dunste belegt ist. Der Durchmesser ihres scheinbaren Abmaßes vom Himmelskörper beträgt oft 22° bis 23°, seltener 45° oft bemerkt man auch einige sich umschließende Kreise, welche jedoch selten vollständig erscheinen.

Dieses Jahr ist seit Christi Geburt nach Dionysius das 1854te.

Zeit Erschaffung der Welt nach Calvisius . . .	das 5803te	Zeit Entdeckung von Amerika . . .	das 363te
Zeit Leiden und Sterben Christi . . .	1821	Zeit Erklärung der Unabhängigkeit der V. St. . .	79
Zeit Jerusalem's Zerstörung . . .	1781	Zeit Erfindung der Fernröhre . . .	245
Zeit Erfindung des Geschüzes und Pulvers . . .	472	Zeit Erfindung der Pendeluhren . . .	197
Zeit Erfindung der Buchdruckerkunst . . .	412	Zeit Einführung der Schußplatten . . .	59

Figure 8. The Leonids of 1833. From Der Illustrierte Calender (1854).

Another valuable account of the 1833 Leonids comes from the autobiography of a Schuylkill County farmer, Daniel Deibert (1802-1890).⁷ In reviewing what he terms the "natural wonders" that he witnessed during his lifetime, he writes that when he was young, there was "a dark spot on the sun, through the whole summer. The summer was very cool. It had frost every month. Through haymaking and harvest, men had to keep their coats on. It gave very little good grain". This is of course a reference to the "year without a summer"—1816. Of the Leonids he writes:

The next [natural wonder] was in the year 1833, November 12th, from midnight till morning, fiery flakes fell from heaven, the same as large snowflakes. It made a red shining. The farmers' teams which went out to cross the Broad Mountain, had trouble with their horses, they were afraid. In South Carolina it was more severe. A slaveholder, who had a number of slaves, was wakened up by them; they thought the world was on fire. This miracle we can also read about in a book bearing the title "The Coming Wonders".⁸

The last of Deibert's "wonders" was a "red ball" that "passed through the air, just before sunset, in harvest time. Just a little before the slave war broke out. This ball shone like the full moon; it move from west to

east. It was a remarkable affair". Undoubtedly other such accounts are hidden in the memoirs of Pennsylvania Germans of the 18th and 19th Centuries.

1833 LEONIDS AND 1835 HALLEY

While the Leonids are not associated physically with Halley's comet, the 1833 Leonids display and the 1835 apparition of Halley's comet were two spectacles which occurred in a relatively short span of time. While the comet was expected, the shower was not fully anticipated. However the two appear to have greatly stimulated both the astronomical and astrological thought of the Pennsylvania Germans in the 1830's. This finding was a result of a detailed study made by this writer concerning the astronomical and astrological thought of the Pennsylvania Germans before the Civil War. During the 1830's there was a sharp rise in the number of astronomical articles in almanacs and astronomical texts. This is another example in the history of mankind where spectacular astronomical events have stimulated the intellectual and emotional response of man.

⁸The reference here is to a curious volume of "fulfillment" of Biblical "prophecies" in the 19th Century, *Die kommenden Wunder der letzten sieben Jahre, oder die buchstabliche Erfüllung der Offenbarung Johannis und der Weissagungen der Propheten zwischen den Jahren 1867 und 1875* . . . Frei nach dem Englischen des Rev. M. Baxter (Philadelphia: I. Kohler, 1869).—EDITOR.

⁷Daniel Deibert, *Life and Experience of Daniel Deibert, from his youth to his old age* (Schuylkill Haven, Pennsylvania: G. F. Dengler, Printer, 1884).

Rural Economics In Central Pennsylvania, 1850-1867

By MAC E. BARRICK

Vast amounts of primary source material useful for the study of 18th and 19th Century folklife in Pennsylvania lie untouched in readily accessible locations. Local historical societies and libraries have in their collections stacks of journals, diaries, letters, and account books, many of them uncatalogued for lack of funds or clerical assistance, which would shed valuable light on various aspects of farm and home life during the past two centuries.¹ The Cumberland County Historical Society and Hamilton Library Association of

¹A model study of one type of such material was published recently by Eleanor Fein Reishtein: "Minutes of the West Grove Housekeepers Association as Source Material for Folklife Studies," *Pennsylvania Folklife*, XXI:1 (Autumn, 1971), 16-25.



Mt. Zion Evangelical Lutheran Church
Jennerstown, Pennsylvania

Carlisle, Pennsylvania, has an extensive collection of account books (some dating from the 18th Century) from local business establishments and individuals. Among these is a book compiled by the Reverend Daniel Stock, a Lutheran minister at several rural churches in the area during the 1860's.

From entries in the account book, it is apparent that Stock was a farmer near New Oxford before entering the ministry about 1859-60. The early pages of the book record monies due him for various tasks performed by one David Nary:

	\$	cts
May 29th AD 1850 due me to pasturing		
per month	1	00
December 6th the cow being in pasture		
6 months and 9 days	6	31
To Cradling oats by the job.	3	00
" 2 days mowing.	1	00
Mrs. Nary to partly two days raking hay	0	50
Jesse to one month hireling	1	00
to hoeing 6 rows of potatoes		6¼
to one day raking hay		25
to another day		18¾
to riding the horse for ploughing corn		18
Another half day nearly		6¼
to hauling in hay from 3 o'clock		
till night		10
to Spreading manure one day		50
Jesse " " " "		25
Mr. Nary due me to a piece of grass =	3	50
Jesse to 3 days husking Corn		37½
Another page records his transactions with Isaac Miller, a tanner:		
	\$	cts
June 4th. Due to one load of bark	1	98
Due <i>him</i> for leather	3	26
Dec. 19th. Due me for a Calf-skin		
weighing 12 lbs. 1 oz.		96
May 21 Due <i>me</i> for a load of bark.	3	00
June 25 Due " to a Calf skin		
weighing 12¾ lb		1 02
Reading Stock's account book destroys any illusions one might have about 19th Century farm life as being an idyllic world in which neighbor helped neighbor without regard for monetary returns. Witness his dealings with a Mrs. McMaster (apparently a widow):		
	\$	cts
July 28 Due <i>her</i> to ½ day raking hay	18	¾
due <i>her</i> to 1 day		
hoeing Corn		37½
due <i>her</i> to 1 day raking grain		37½

	due her to 1/4 day raking hay	9 3/4
	due her to 1/2 day raking hay	18 3/4
	due her to 1/2 day raking hay	18 3/4
Oct. 8th	due me to 1 cord of wood	2 00
	due her to 1/2 day raking oats	18 3/4
	due her to 2 days raking oats	75
	due her Son Lewis 3/4 day raking oats	44
	due me to 1/2 gallon of vinegar	10
	due me to 1 load of wood	75
	due me to 2 loads of railpieces	1 00
	due her to 2 days cutting off corn	75
	to 1 1/2 day cutting off corn	56
	due me to apples & cider	2 50
	due her to husking Corn	1 00

A subsequent entry—"Moses Trostle./ Due me to 5 Shad 13 cts a piece—65 / Due him to a blow horn= 31 / due me to the loan of a horse 3 days—1 12 1/2"—recalls the practice that peddlers had of hauling fish around the county announcing their arrival with the raucous bleat of a tin horn. Other peddlers and even mailmen used these horns as well.²

For December, 1853, Stock records the expenses of building a house, though no indication is made as to its location:

	Labour for the house	\$	cts
Dec 3rd	to hauling 1 load of boards	2	00
" 5	To dragging logs 2 1/2 day \$1.50 cts per day	3	75
	to hauling Saw logs 2 days 1.50 cts. per day	3	00
	To hauling 14000 bricks at one dol. per thousand	14	00
	To work and haul at shindl wood	1	87 1/2
	To work and making sawlogs and others	2	50
	To hauling ground out of the sellar 5 days	5	00
	To cuting and hauling scaffing poles—	1	75
	To Sellar diging =	3	00
	To hauling sand 3 days =	5	00
May 12th AD 1855	To sawing for a yard around the house	4	87
	To ten pounds of nails for Said yard		55

²See Ella M. Snowberger, *Recollections of Bygone Days in the Cove*, III (1935), 45; John Gould, *Farmer Takes a Wife* (New York, 1946), pp. 112-113. J. Russell Barrick, Carlisle, recalls the practice in western Cumberland County before 1919: "Dad used t' have an old fish-horn. He went around over the country selling fish, lake herring, ya know, with all the bones. They'd ship them up from Baltimore, on the railroad, and he'd go down and get 'em, an' haul 'em around, an' he'd leave a hundred here an' a hundred there, an' what he'd have left over he'd bring home an' we'd scrape and scrape, an' then they'd salt 'em down. We'd have salted fish all winter, bones an'all. He got a cent apiece for them, so you can just figure how much the ones that caught 'em got, with hauling and everything" (June 1969).

To gates and hitches —	1	98
To 11 1/2 days labour in making said yard	7	38
To building one hogpen	4	62
	61	27

We built the house in the Summer of—1854. It being finished in September of the same year.

William Stock December 7th AD 1853

		\$	cts
Dec. 7th A.D. 1854	3927 feet of lumber	6	67 61
Jan. 21s	4000 Bricks 5 dollars per thousand	20	00
Jan. "	3050 Shindles at \$2.50 per thousand	7	62 1/2
March 17	to Sellar Castings 4 of them	2	50
May 24	to casting Spikes 25 lbs at 10 cts per lb	2	50
May 24th	to mason's work —	30	00
August 15	to plasterers work —	26	00
September 1st	to Carpenter's work	119	50
" "	to Painter's work	30	
May 12 1854	to oils & Paints	3	47
May 16 "	To Lime	8	46
Sep 8th	to Nails, glass, locks, hitches, Screws	26	47
" "	to latches nails Spikes &c	4	87
" "	For sawing logs, &c	18	67
Dec 28th A.D. 1855	To 15 bushels of hair 15 cets per bus.	2	25
	To tin Spouting for said house	15	75
		383	67

This list of materials and costs is of considerable interest since it provides an index to the availability and utilization of manufactured nail, paints, hair for plastering, and other items. The mention of the price paid for bricks is noteworthy. The decade of the 1850's was a peak period for building with brick in South-Central Pennsylvania, but the brick-makers usually travelled to the building site to burn bricks from available local clay, which is found abundantly as a subsurface in areas with limestone soil. The fact that the bricks for the Stock house were bought and hauled to the site suggests that the house was built in a shale area. But how does one explain the purchase of only 4000 bricks, but a payment for hauling 14000?

Farm prices and wages were low in ante-bellum Pennsylvania. According to Stock's accounts for 1851-1854, apples sold for 12 1/2¢ a bushel and cider for \$1.25 a barrel; wheat averaged \$1.80 a bushel and corn 75¢; bacon brought 10¢ a pound, butter ranged from 12 1/2¢ to 18¢ a pound, and eggs from 7 to 8¢ a dozen. Laborers received varying amounts per day, depending on the job—mowing, 75¢; cradling grain,



Christ's (Lutheran) Church, New Bloomfield, Perry County, Pennsylvania

\$1.50; threshing, 50¢; and breaking flax, 50¢. Boys and women received proportionately less for these tasks.

The figures in Stock's book reveal nothing about his motives for entering the ministry; the first hint of his decision comes on a page headed "Expenses of AD 1859":

		\$	cts
June 25	to one pair of pants	1	69
" "	to text books	1	37½
" "	to repairing a watch and key		87
June 26	to Hacenbach's "Dogmengaschichte" 2 volumes ³	3	60
" "	to one load of wood	2	50
June 27	to medicine		06
" "	to writing paper and lead pencil		06
" "	to mending Shoes		75

A later page notes that he "arrived and commenced labours in the Martinsburg Charge [Blair County, Pennsylvania], October 11th, AD 1860." His expenses in Martinsburg through the end of 1860 (for tin ware, stove pipe, stationery, clothing, groceries, oats and straw) ran to \$72.75. His salary from the three churches in the circuit varied, apparently according to the generosity of the individual congregations, amounting to a total of \$213.51 for 1861 and \$283.08 for 1862. The payment of fixed salaries to pastors of rural churches in Central Pennsylvania occurs only in relatively recent times.⁴ Some members of the con-

³Probably Karl Rudolph Hagenbach, *Lehrbuch der Dogmengeschichte* (Leipzig, 1840-1841).

⁴Until as late as the 1930's, some of the more remote Winebrennerian Churches (Churches of God) still relied on free-will or "love" offerings to pay the preacher. The author recalls that in the 1950's, guest evangelists for the annual Revivals in the Churches of God and Holiness churches were still paid in this way, usually being given the Sunday night offering, since that was the night of the largest crowd; such offerings frequently amounted to several hundred dollars.

gregations gave him personal gifts of meat, produce and other items. The pragmatic nature of the man is shown in his listing these items with the inclusion of the equivalent value of these gifts in cash:

Presents received from the people of the Martinsburg Charge

		\$	cts
	From Simon Brumbaugh		
	3 chickens & one bag of oats	\$1	12½
	Daniel Barley to Meat & other things		62
	Christian Souders to one bag of apples & other things		1 25
Oct. 31st	Daniel Barley to 14 lbs of meat at 7 cts per lb.		98
Dec. 4th	Daniel Barley to 25 lbs of beef at 6 cts per lb	1	50
" "	Daniel Barley Jr. to 4 lbs of sausages		50
" "	Mr. Eichholtz to 4 pots		24
Dec. 15th	Mrs. Breneman to 2 ½ lbs of sausages		31
	Mrs. Nicholas Barley to 3 ½ lbs of sausages		39
Dec. 28th	George Fetter to One Crock of applebutter		37
Jan 1st 1861	John Totter to 3 ½ lbs of sausages		37
" "	Misses Ferrey to 1 crock of applebutter		37
" "	Christian Souder to 2 bus. of oats & 1 bush. apples		87
" "	Daniel Barley to one Turkey & Butter	1	00
March "	Mr. Croft to Eggs, Milk, Potatoes & Chicken		50
August 31st	Daniel Barley to 14 lbs of beef at 6 cts per lb		84

Stock moved to Carlisle in the fall of 1864 to serve a pastorate consisting of two rural churches, the Sulphur Springs congregation (now St. Matthew's United Church of Christ, Carlisle Springs) and the Frankford Congregation (the Salem Stone Church, six miles northwest of Carlisle).⁵ The initial expenses of establishing a residence on South East Street in Carlisle were high. He lists a cookstove and tinware purchased for \$7.25, a desk and book case for \$3.50, furniture for \$77.50, tubs, baskets, window blinds, buckets, etc., for \$4.07, and "one rocking Chair & Jug— \$1.40." Living costs for the first year amounted to \$384.82. For the same period he received a total of \$399.80 from the two churches, the amount being paid to him in cash installments of varying size by the church deacons. The parishioners continued to ply him with gifts of fresh meat and produce, all of them duly recorded in the account book with the cash value indicated. They gave him sweet potatoes, turnips, applebutter, dried fruit, oats, potatoes, vinegar, butter, tallow, chickens, and sausages; everyone gave him sausages, over one hundred pounds of them one year, and seventy-one pounds the next. One S. Grissinger provided him with "Rye Whisky" valued at \$1.80, presumably for medicinal purposes. The value Stock set on these donated items averaged \$76.75 per year; if added to his receipts and expenditures for the years in Carlisle, it yields a total of slightly less than \$500 per year for income and expenses.

The Reverend Daniel Stock remained as pastor to the two churches near Carlisle for three synodal years, but there is no indication what became of him subsequently. The last entry in the book is dated April 1, 1867, but all of the pages are carefully completed and totalled. Perhaps at this point he changed to a different account book, though the present one still had many blank pages. Perhaps he stopped keeping accounts, though this seems highly unlikely, considering the care he exercised previously in these matters.

In contrast to the pictures of black-coated hell-fire preachers conjured up by movies and novels about Civil War America, the Reverend Daniel Stock was apparently an earthy, practical man concerned with the daily problems of living in a rural world. True, the account book gives no idea what his sermons were like, and these may indeed have been fiery and impassioned.⁶ That he was a typical Pennsylvania farmer can be seen from items for which he spent money and from some superstitious remedies and beliefs that he records on the last flyleaf and end-paper of the book:⁷

⁵A brief history of this church, *Salem Stone Church, 150 Years of Service*, by R. F. Lee Wolf, was privately published in 1970.

⁶For a picture of another 19th Century preacher and his sermons, see Charles Coleman Sellers, *Lorenzo Dow, The Bearer of the Word* (New York, 1928).

Certain cure for the swinny

You must take the horse towards sunrise and get a stone that can't be easily removed and speak— Out of the bone into the flesh—out of the flesh into the skin—out of the skin into the forest.

Cure for the Bots

Take your hand and rub from the tip of the ears to the end of the backbone. Mentioning the horse's name and make use of the following words: — you've nine bots three are white and three are red in ten minutes they are all dead. Repeat this three times.

Cure for the titter worm

Take beef gall and hogs lard, and boil in an egg shell in hot ashes and then rub the effected part.

A Felon

Our Lord ploughing a burying ground he ploughed three furrows, caught three Worms. the one is white the other red, and the third the death of all other worms. † † †

Receipt for Hoarseness of Cough

Take one handful of wild-cherry bark, same of Hoarhound. One half of Rattleweed, boil this in one quart of water to a pint. Drain then add 1/2 pts of honey or sugar. Take table spoon full every 3 hours.

To make a fruit tree bear fruit

Bore a hole with a half-inch auger into the heart towards sunrise: then put Sulphur in & knock a pin on it.

Time for cutting wood that it will be of the greatest durability.

1. Cut all kinds of Oak wood & Chestnut in the month of August, in the Forenoon, & in the dark of the moon that is after Full Moon.
2. Hickory. Pine Maple, or any kind of white wood in the Month of August, in the forenoon: And between New Moon and the full of the Moon in the sign of Virgin.

His concerns here seem more secular than spiritual, but then an account book is an unlikely place for a man to record his innermost thoughts about life and death.

Perusal of 19th Century account books is nonetheless enlightening to folklife scholars and laymen alike. Living in the 20th Century makes us unappreciative of life in former times. Entries in these books remind us that farmers of the mid-19th Century survived without electricity and gasoline engines. These books also suggest that present-day historians and novelists exaggerate the importance of "great events," such as the Civil War, in the daily lives of the people. The only indication in Stock's records that a war was in progress is that prices of such items as sugar and coffee are high and that notations appear for amounts paid for bounty taxes.⁸

⁷For a brief discussion of these remedies, see "Folk Beliefs of a Pennsylvania Preacher," *Keystone Folklore Quarterly*, X (1965), 191-193.

⁸For July, 1864, he records: "To county & state tax for 1865—3.53; To Borough & Bounty tax for 1865—13.40; Paid School Tax for the year 1865—4.67."

Palatine Emigrants to America from the Oppenheim Area, 1742-1749

By FRIEDRICH KREBS

Translated and Edited by Don Yoder

[The following emigrant list is translated from the article entitled "Amerika-Auswanderer aus dem Oberamt Oppenheim 1742-49," in *Hessische Familienkunde*, XXV (1968), columns 342-345. The towns and villages mentioned can be found on the map South of the City of Mainz, in the area known today as Rheinhessen, part of the present German state of Rheinland-Pfalz.—EDITOR.]

The protocols of the former Electoral Palatine Oberamt of Oppenheim, deposited in the City Archives at Oppenheim on the Rhine, contain some names of em-

igrants from the first half of the 18th Century. They specify, however, only the permission to emigrate, not the emigration itself. Most of those who intended to emigrate and who received permission, did in fact emigrate.¹ There were some who in spite of permission received did not manage to emigrate at the time, as the example of Wendel Runckel of Oberingelheim shows. In view of the scarcity of documentation for

¹As usual in this series of articles, the names have been checked against the Philadelphia ship lists as given in Strassburger-Hinke, *Pennsylvania German Pioneers* (Norristown, Pennsylvania, 1934).



Oppenheim, from Merian's Topographia Germaniae (16

18th Century emigration, a source as important as the Oppenheim Protocols should not be neglected.

The former Electoral Palatine Oberamt of Oppenheim consisted of the city of Oppenheim, the market town of Nierstein, and the villages of Dexheim, Schwabsburg, Ober- and Niederingelheim, Daxweiler, Sauerschwabenheim, Grosswinternheim, Wackernheim, Freiweinheim, Bubenheim, Elsheim, Stackeden, and Essenheim. The very numerous emigrants from Essenheim are not included here, since they have already been published.²

EMIGRANTS FROM THE YEAR 1742

1. The Electoral Palatine government granted its subjects in Stackeden *Lorentz Bläss*, *Peter Westerberger*, *Johann Kiehl*, *Friedrich Mengel*, and *Johannes Daum* the permission to emigrate to Pennsylvania, "where they already have relatives living" [*all wo sie schon*

²Friedrich Krebs and Milton Rubincam, *Emigrants from the Palatinate to the American Colonies in the 18th Century* (Norristown, Pennsylvania, 1953).



Freunde wohnen haben], and handed over to them the manumission certificates. *Lorentz Place*, *Johannes Kühl*, *Johannes Domie*, *Frietz Mengel*, and *Peter Wasenburger* landed at Philadelphia on the Ship *Loyal Judith*, September 3, 1742 (Strassburger-Hinke, List 93A-C). In List A Bläss is listed as 44 years of age, Westerberger as 30, Kiehl as 29, Mengel as 48, and Daum as 40.

2. With a rescript dated April 17, 1742, *Friedrich Pfeil*, *Johann Lehn*, and *Jacob Winterheimer*, from Grosswinternheim, received permission to emigrate and landed at Philadelphia on the Ship *Loyal Judith*, September 3, 1742 (Strassburger-Hinke, List 93 A-C). In List A Pfeil is described as 50 years of age, Lehn as 40, and Winterheimer as 40.

3. According to a report from Oberingelheim dating from 1742, four subjects there, *Philips Odernheimer*, *Peter Weitzel*, *Ulrich Strassburger*, and the widow of *Nicolas Dörr*, are said to have "sent their grown sons to the New Land, a few weeks ago, and with the knowledge of the entire village gave each one of them 100 florins and various victuals for the trip. These sons were still subject to vassal duties and were even incorporated into the last conscription of young men" [*vor einigen Wochen ihre erwachsene und in Homagialpflichten stehende auch der letzt eingeschickten Conscription der jungen Mannschaft einverleibte Söhne ins neue Landt geschicket und jedem mit Wissen des ganzen Orths 100 fl nebst verschiedenen Victualien mit auff die Reiss gegeben*]. The village mayor of Oberingelheim had on this account to answer for them. Of the sons of the inhabitants named above, *Johannes Odernheimer*, *Johann Paul Weytzel*, *Johann Henrich Dörr*, and *Johann Andreas Strassburger* can be found as passengers on the emigrant ship *Loyal Judith*, arriving at Philadelphia, September 3, 1742 (Strassburger-Hinke, List 93 A-C).³ List A gives Odernheimer's age as 22, Weitzel 26, Dörr 23, and Strassburger 25.

EMIGRANTS FROM THE YEAR 1743

4. On February 25, 1743, *Philips Hardt* of Niederingelheim received permission to emigrate upon payment of the tithe (tenth penny). He landed at Philadelphia on the Ship *Loyal Judith*, September 2, 1743 (Strassburger-Hinke, List 97A-C). List A gives his age as 50.

5. On the same day also *Nicolaus Runckel* and *Nicolaus Keller* of Wackernheim received permission to emigrate. They too appear in the ship lists on the *Loyal Judith*, September 2, 1743 (Strassburger-Hinke, List 97A-C). List A gives Runckel's age as 27, Keller's as 28.

³The last-named, who came to America the second time in October 1769 on the Ship *Minerva* (Strassburger-Hinke, List 276 C), was an ancestor of Ralph Beaver Strassburger, later president of the Pennsylvania German Society and responsible for publishing *Pennsylvania German Pioneers* edited by William J. Hinke.

EMIGRANTS FROM THE YEAR 1748

6. *Friedrich Ploz (Plotz)* and *Adam Imhäusser (Immenhauser)* from Stackeden on February 3, 1748, received permission to leave for the "Island of Pennsylvania" [*Insul Pinsylvaniam*], on payment of 15 and 10 florins respectively for buying out their vassalage and payment of the tithe (tenth penny). They landed at Philadelphia on the Ship *Hampshire* on September 7, 1748 (Strassburger-Hinke, List 118 A-C). List A gives Ploz's age as 36, Imhäusser's as 25.

7. *Franz Graff (Grove)* with wife and two children, *Bartel Krämer* with wife and five children, *Adam Weiss* with his wife, all of Grosswinternheim, and *Wilhelm Laymeister* with wife and children from Schwabenheim, were permitted to emigrate on payment of the tithe (tenth penny), on March 9, 1748. On the same date the propertyless residents (*Beisassen*) *Wolfgang Wolf* and *Hostermann* (?) of Grosswinternheim, were manumitted gratis. They landed at Philadelphia—*Frantz Grove*, *Johann Wilhelm Leymeister*, *Wolfgang Wulff*, *Hans Jacob Ostermann*, and *Johann Adam Weiss*—on the Ship *Hampshire*, September 7, 1748 (Strassburger-Hinke, List 118 A-C). List A gives Graff's age as 54, Laymeister's as 58, Wolf's as 36, and Ostermann's as 28.

8. *Johann Bischoff* from Grosswinternheim, who because of debt had to sell his property and was not in condition to support himself, was granted permission to emigrate on March 29, 1748. He landed at Philadelphia with the aforementioned, on the Ship *Hampshire*, September 7, 1748 (Strassburger-Hinke, List 118 A-C). List A gives his age as 34.

9. *Johann Jacob Runckel* and *Friedrich Hammer*, from Wackernheim, were granted permission to emigrate on May 14, 1748. They had to pay 40 and 10 florins respectively for the permission. They landed at Philadelphia on the Ship *Hampshire*, September 7, 1748 (Strassburger-Hinke, List 118 A-C). List A gives Runckel's age as 27, Hammer's as 35.

10. *Christian Ramb* from Elsheim had to pay 43 florins for permission to emigrate, but could not be identified in the ship lists.

EMIGRANTS FROM THE YEAR 1749

11. *Philipp Haber* from Stackeden with wife and three children paid 54 florins for manumission on March 21, 1749, and 54 florins for the tithe (tenth penny). He landed at Philadelphia on the Ship *Isaac*, September 27, 1749 (Strassburger-Hinke, List 38 C).

12. *Nicolaus Reisinger* from Niederingelheim received permission to emigrate on April 16, 1749, on payment of the tithe (tenth penny), and arrived at Philadelphia on the Ship *Dragon*, September 26, 1749 (Strassburger-Hinke, List 137 C).

13. *Adam Dörr*, *Anton Oster*, and *Wendel Runckel* of Oberingelheim received permission to emigrate on

April 29, 1749, Dörr after payment of the tithe (tenth penny), Oster and Runckel gratis, since all three were "without property and of bad conduct" [*ohne Vermögen und schlechten Wandels*]. Dörr landed at Philadelphia on the Ship *St. Andrew*, September 9, 1749 (Strassburger-Hinke, List 128 C), Oster on the Ship *Dragon*, September 26, 1749 (Strassburger-Hinke, List 137 C). Runckel on the contrary did not emigrate and stayed in Oberingelheim, although the Oberamt was in favor of his removal, since he was "dissolute and poor" [*liederlich und arm*].*

14. *Friedrich Bohr* from Wackernheim had to pay a supplementary tax of 10 florins, received the permission to emigrate on May 14, 1749, and landed at Philadelphia on the Ship *St. Andrew*, September 9, 1749 (Strassburger-Hinke, List 128 C).

15. *Christian Meckel* from Elsheim, with wife and three children, was permitted to emigrate in return for a supplementary tax of 26 florins. Yet the inheritance of his eldest son, who stayed behind, was first to be secured and established as bearing interest. *Christian Meckel* landed at Philadelphia on the Ship *Isaac*, September 27, 1749 (Strassburger-Hinke, List 138 C).

16. *Philipp Merz*, locksmith in Nierstein, paid the tithe (tenth penny), receiving permission to emigrate on April 29, 1749, and landed at Philadelphia on the Ship *Edinburgh*, September 15, 1749 (Strassburger-Hinke, List 132 C).

17. *Ulrich Jordan (Jordte)*, a Mennonite (*Wiedertäufer*) from the Haxthäuserhof near Ingelheim, likewise paid the tithe (tenth penny), and landed at Philadelphia on the Ship *St. Andrew*, September 9, 1749 (Strassburger-Hinke, List 128 C).

18. *Catharina Pfeiffer*, widow, Roman Catholic, from Essenheim, went "secretly" to Pennsylvania, without permission of the authorities, on account of which her assets which remained behind were laid under attachment.

19. *Johann Rooss* and *Abraham Schweickart* from Niederingelheim likewise went "secretly" to the New Land, and their property was confiscated too. One *Johanes Ross* arrived at Philadelphia on the Ship *Dragon*, September 26, 1749; the name following his in the ship list is *Friedrich Schweickhart* (Strassburger-Hinke, List 137 C).

*The Reverend John William Runkel (1749-1832), distinguished German Reformed minister who served, among others, the Carlisle, Lebanon, Frederick, Gettysburg, and New York charges, was born at Oberingelheim, April 28, 1749, son of Wendel and Julia Ann (Wertzel) Runkel. Wendel Runkel emigrated with his family in 1764, arriving at Philadelphia on the Ship *Richmond*, October 20, 1764 (Strassburger-Hinke, List 247 C). The son died at Gettysburg, November 5, 1832. He kept a copious journal of his life and ministry which is now unfortunately lost. It was used to prepare the biography in Henry Harbaugh, *The Fathers of the German Reformed Church in Europe and America*, second edition, II (1872), 284-308.—EDITOR.



FRUIT HARVESTING AND PRESERVATION:



Folk-Cultural Questionnaire No. 27

Every Pennsylvania farm in the earlier periods of our development included all the types of agriculture associated with subsistence farming. The family farmed not primarily as a business but for its own support, raising the vast bulk of its own food, and furnishing the majority of the materials used for clothing its members. In the line of foods, fruit was an important item. This questionnaire is designed to gather material from our readers and informants on the place of fruit and fruit foods in Pennsylvania rural life.

1. Orchard Fruits. *What types of orchard fruits did your family grow on its farms? Was there a memorable time before orchards as such existed, when farmers had simply a few fruit trees planted at various places on the farm? How did farmers protect their trees against insects in the days before mass spraying? Were there beliefs in magical protection of trees, such as hanging pieces of iron on them on March 17th or other days? How was the almanac used in relation to fruit trees?*

2. Apple Varieties. *What were the favorite apple varieties grown in your neighborhood? Describe your own favorites and list their advantages and uses. Are any of these now rare or no longer available? Did any of the apple varieties have local names (examples, Tulpehocken, Reinert, Good Mary, or others)?*

3. Other Orchard Trees. *What were the chief varieties of peaches, cherries, pears, plums, quinces, and other orchard trees that were common in earlier periods? Did any of these have local names? Did any farmers grow other rarer fruit trees, such as persimmons? Did your farm or neighborhood contain wild cherry trees, or crabapples? If so, were these used at all in the farm economy?*

4. Grapes and Grape Arbors. *A special farm fruit was the grape. What varieties did your farm include? Where was the grape arbor placed in relation to the house and garden? Were wild grapes available on the farm? If so, how were they made use of?*

5. Fruit Harvesting. *How was fruit harvested? Who usually did the picking? What kinds of containers were used? Where was the whole fruit stored? Were fruit cellars generally used? How common was the method of burying fruit over the winter? If you are familiar with it, describe the process.*

6. Preservation of Fruits: Drying. *One of the earliest methods of preserving fruits was drying. Describe the methods and equipment used in drying fruits in your family and neighborhood. Where and how were the dried fruits then stored? How were they used during the winter?*

7. Preservation of Fruits: Preserving. *Describe the types of fruit preserves, jams, jellies, butters, and other such concoctions made by your family and neighbors. We especially seek information on the Pennsylvania specialty called applebutter (Pennsylvania German Lattwaerrick). How was it made and what was put into it as flavoring? How long could it last? How was applebutter stored? How were the other preserved versions of fruits stored? Descriptions of "schnitzing" and applebutter parties are particularly requested. When and where were these held?*

8. Preservation of Fruits: Canning. *Describe the earlier methods of canning fruits used on Pennsylvania farms. Were there any methods which differed from the usual ones today? Where and how were the canned fruits stored for the winter?*

9. Preservation of Fruits: Wine, Cordial, and Cider Making. *Some Pennsylvania farmers made local wines. (For some reason wine-making from grapes, which was so much a part of the Rhineland background of many Pennsylvania German families, did not develop to any large extent here. What do you think were the reasons for this?) When wines were made from fruits, what fruits were used? Were such specialties as "quince cordial" known in your family? How was cider made? How was it preserved and stored for winter use? What are applejack, hard cider, cider royal?*

10. Lore of Fruit Harvesting and Preservation. *There are a great many stories and jokes in circulation about certain Pennsylvania food specialties, especially "schnitz" and applebutter. Write these down for us, also any sayings, proverbs, songs or other lore which involve references to fruits or their preservation.*

Send your replies to:

Dr. Don Yoder
College Hall Box 36
University of Pennsylvania
Philadelphia, Pennsylvania 19104





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