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OWEN THOMAS, A DENBIGHSHIRE BEEKEEPER AND SKEPMAKER IN THE EIGHTEENTH CENTURY

by

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Owen Thomas, a Denbighshire Beekeeper and Skepmaker in the Eighteenth Century

by WILLIAM LINNARD and EVA CRANE

For a long period in the middle of the eighteenth century, Owen Thomas, a Denbighshire beekeeper and skepmaker, kept a record of his personal accounts, local and family events, prices of products at local markets, weather conditions, and various other notes and items of interest. All this information was carefully written down in colloquial Welsh in a couple of notebooks, which provide a rare insight into the life of a rural cottager craftsman in his community in eighteenth-century Denbighshire. Complete transcripts of the original Welsh have already been published, but to the best of our knowledge no English version or extracts have appeared, and in view of this the following account has been prepared for the *Transactions*.

1. Owen Thomas's life

Owen Thomas married Elisabeth Prichard on 6 October, 1729. The young couple lived first at 'Tu yn y Caue' in Talybryn as tenants of William Prichard of Plas Coch, and in 1739 they moved to Llechryd Ucha. In 1741 they went to Llechryd Isa as tenants of Foulk Edwards, and then in 1745 to Siambar Wen as tenants of Gabriel Thomas. Finally, on 4 May 1767 they again moved, this time to Henllan, to a

¹ NLW Ms. 21580, 21581 B.

² National Library of Wales Journal (1969-70), XVI, 43-60, 148-162, 381-393.

house just below the church, as tenants of John Jones of Henllan. Owen and Elisabeth Thomas raised a family of nine children, all of whom went out to work as labourers or servants, until the boys established themselves in mills, and the girls married.

It is not clear what Owen's main occupation was, but he was certainly a skilled maker of lipwork (coiled straw basketry), and as youngsters, his sons learned the craft from their father and some of them later helped him in this work. However, despite income from this skilled craft, employed in the making of bee skeps, and also of other lipwork items such as seed-baskets and chairs, the family had rather a struggle to make ends meet. The mother and children regularly went out gleaning wheat, barley and oats in the period 1749-74. Burning bracken and selling the ash was another source of family income in 1756-64. Potatoes too were grown, and some sold.

Owen and Elisabeth Thomas were married for over forty years. Owen died in 1776, close to seventy years of age, and working almost to the end. He was buried in Henllan churchyard on 16 December of that year.

2. Records of skep making

Owen Thomas's skilled craft of binding straw into rolls and coiling it into the form of a receptacle has been widely practised for many centuries. In Britain the straw used is usually unbruised wheat straw, preferably of a winter-sown variety, while binding material is traditionally winter-harvested split bramble. The wheat straw is passed through a short length of cow-horn or leather girth to standardize the diameter of the roll, and a bone or metal awl is used to push the binding through. Lipwork is used for a range of other utensils besides bee skeps, such as animal feeding baskets, seed lips, bushel measures, and armchairs. Other materials such as rye straw, reeds and grasses were also used in lipwork.

The price of straw was obviously of vital importance to Owen Thomas, it being his main raw material, and in his notebooks he sometimes recorded prices in some of the local markets such as Holywell. Llanrwst and Denbigh in March and April. In the period from 1740 to 1763 the prices ranged from 2s. to 3s. 6d. a thrave for wheat straw,

and 1s. to 2s. a thrave for oats and barley straw. The thrave was normally 24 sheaves.

During the last thirty years of his life, and probably for long before that, one of Owen Thomas's occupations was skep-making. He must have worked away in his cottage in just the same manner as Benjamin Evans of Pen-uwch in Cardiganshire, one of the last traditional exponents of lipwork in Wales, two centuries later.³ Details of Owen Thomas's skep production are summarized in Table I.

TABLE I

Owen Thomas's skep production, 1745-1774

Year	No. of skeps	Year	No. of skeps
1745	96	1760	132
1746	50	1761	168
1747	59	1762	56
1748	98	1763	89
1749	67	1764	132
1750	147	1765	151
1751	80	1766	193
1752	59	1767	138
1753		1768	141
1754	105	1 76 9	104
1755	104	1 77 0	77
1756	2	1771	110
1757	33	1772	44
1758	69	1773	83
1759	128	1774	120

The figure for 1767 includes 24 skeps made by his son Evan and 42 made by his son Harri; Evan also made 8 of the skeps in 1768; and Evan made 1 and Harri 13 of the skeps in 1769.

We do not know why so few skeps were produced in 1756, but that was the year when Owen Thomas and his family started burning bracken as a business.

Annual production of skeps fluctuated widely between the extremes of 2 and 193. The total number of skeps made over the thirty years

³ J. G. Jenkins, 'A Cardiganshire lip-worker', Folk Life (1965), III 88-89.

was 2920, this giving an average of 97 per annum. Unfortunately, there are no details of the skeps themselves, nor of the prices Owen Thomas obtained for them.

3. Beekeeping methods, and honey and wax yields

Though his notebooks do not provide full details of the household economy, the records of beekeeping and skepmaking have several points of interest. Owen Thomas kept his bees in skeps, as was done in many other parts of Europe until movable-frame hives came into use in the second half of the nineteenth century. Skep beekeepers of the period commonly killed the bees in some of the skeps at the end of each summer, to take the honey — often the lightest skeps (in which bees were least likely to survive the winter), and the heaviest (with most honey). Skeps of medium weight were overwintered, and swarms that issued from them during the next summer were housed in empty skeps from which the honey combs had been harvested.

It was possible to harvest honey from a skep without killing the bees by 'driving' them; a rhythmic thumping on the side of the upturned skep induced the bees to move from their own skep to another placed above it. The driving of bees from one skep to another had been practised for at least 200 years before Owen Thomas's time; it was referred to in the various editions of Thomas Tusser's *Five Hundreth Points of Good Husbandrie*. Fig. 1 provides a more recent illustration (see also Cover Picture). Owen Thomas records that he drove bees on 14 July 1759, on 3 and 7 July 1772, and on 29 June and 5 August 1774 (see Section 4 below).

The most likely explanation of his operations in June 1760, when he 'lifted the old hive on top of a new hive', is that he was using (at any rate for the new hive) a skep with a flat top and a central hole large enough to allow bees to come and go (see Fig. 2); the hole was often in a wooden insert. A smaller skep, a 'cap', could then be used as a 'honey chamber' above the main skep; provided the queen (and therefore the brood) was always in the lower chamber, the cap could be

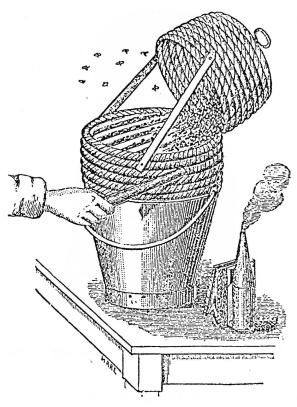
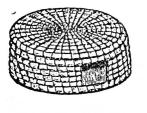


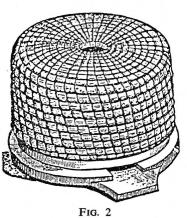
Fig. 1

'Driving' bees from one skep to another to collect honey without killing bees.

removed full of honey combs at the end of the season, and the bees driven out of it. The honey combs could then be carried undamaged to the house, and the colony was preserved on its own combs, in its own hive, for winter.

Between 1764 and 1774 Owen Thomas recorded the number of his skeps that were occupied by bees, and the amounts of honey and beeswax obtained from them. These data are entered in Table II with metric equivalents added on the right. 'Old' hives were those overwintered from the year before. He commonly overwintered two or three hives.





Flat-topped Welsh skep or straw hive with smaller 'cap' or 'super' above.

TABLE II

Owen Thomas's beekeeping production, 1764 to 1774

r ear	ivo. oia	Honey	yıeıa	beeswax	yıeıa
	hives	quarts	kg	lb oz	kg
1764	2	23	37	5 8	2.5
1765	3	12	19	3	1.4
1766	1	none		none	
1767	4	9	14	2 12	1.3
1768	3	2	3	3 15	1.8
1769	2	7	11	2 8	1.1
1770	2	8	13	3	1.4
1771	?	none		none	
1772	2	12	19	4 2	1.9
1773	2	17	27	4	1.8
1774	3	9	14	2 2	1.0

9.9

15.8

1.4

2.7

Average

The total annual harvest averaged nearly 10 quarts (15.8 kg) of honey and 3 lb (1.4 kg) of beeswax. The average annual honey yield per overwintered hive (13 lb, 6 kg) was what one might expect. For fixed-comb hives such as skeps, from which complete combs are harvested, the wax yield is likely to be around 10% of the honey yield. The ten-year average here was 9%, and this close agreement endorses the veracity of Owen Thomas's records.

Owen Thomas sold his beeswax at the local markets, the price ranging from 14 to 18 pence per pound. In 1772 at Chester he got his best price (18 pence), 'thanks be to God' (*i Dduw y bo'r diolch*). The notebooks contain no details of the prices he received for his honey. In 1787, honey sold for 2d. a pound in Hampshire and Essex; by 1822 higglers were buying it for 6d. a pound, and beeswax at about 18d. or 20d.⁵

4. The occurrence and fate of swarms

Owen Thomas's records of swarms, written in a consistent and clear style throughout, are translated in full below. They cover the twenty years 1757 to 1776, except that 1775 lacks an entry; possibly there were no swarms in that year.

- 1757: One old hive: the first swarm 7 June, the second swarm 20 June; swarm out of the first swarm 8 July, second swarm from the first 22 July.
- 1758: Two old hives: the first swarm was got into a hive 2 June, the first swarm from the other hive 6 June; second swarm out of the hive that swarmed on 6 June, 23 June. Swarm out of the first swarm 19 July. Shared between us and Robert Owen 28 August.
- 1759: Two old hives: the first swarm 17 June, and the other rose soon after and the two went together; second swarm 25 June; third swarm and soon after a second swarm came from the other hive 28 June; drove the bees from the old hive to a new hive, 14 July, and they went into two swarms; did the same with the other hive 21 July; and they went to the other bees but only a few stayed in the hive.

³ John Lawrence (pseudonym Bonington Moubray) A Practical Treatise on Breeding All Kind of Domestic Poultry (4th edition, 1822).

farewell.

	1761	:	Two old hives: the first swarm 30 May; the first swarm from the other hive 17 June. Second swarm from the 17 June hive on 2 July and that's all.
٠.	1762	:	Two old hives, one strong and the other weak; on 24 May a swarm came from somewhere to the weak hive. First swarm 16 June, second swarm 27 June.
	1763	:	Two old hives, one strong and the other weak; the first swarm was lost 13 June. Got the second swarm to a hive 21 June, and that's all.
	1764	:	Two old hives; the first swarm 17 June, the second swarm 30 June, the third swarm 3 July; the first swarm from the other hive 18 July.
	1765	:	Three old hives; one died early in the summer, and the other didn't swarm at all, and the third swarmed 30 June.
	1766	:	One old hive, the first swarm 13 June, the second swarm 24 June.
	1767	:	Four old hives, the first swarm 4 July and that's all.
4	1768	:	Three old hives, the first swarm 19 June, a swarm from another hive rose and went to the hive from which the swarm came on 19 June, and soon the third hive rose and a large swarm was got into a hive successfully, and that was 22 June. A second swarm from the hive from which the swarm went to its neighbours on

1760: Two old hives, the first swarm 7 June, the second swarm 25 June. Lifted the old hive on top of a new hive 23 June; pulled the new hive away empty and put the old hive in its place 2 August. The bees went away from the other old hive early in the summer with the honey to some place. I got only the hive and the wax and

1770: Two old hives, the first swarm 2 June, and that's all that year.

1771: Swarming 27 June, and before finishing settling rose and went

other hive 14 July.

the other old hive 17 July.

1771: Swarming 27 June, and before finishing settling rose and went to its old home; the 9th of July got the first swarm to a hive. Second swarming 12 July, and a swarm from another garden rose the same time and the two settled into one mass, and so it was a large swarm.
1772: Two old hives, the first swarm 23 June, second swarm the first day of July, third swarm 3 July and because it was a small

swarm we drove it to the second swarm; first swarm from the other hive 7 July; drove the old hive which swarmed first, 7 July, drove

the 22nd, 28 June. A second from the other hive, 8 July.

1769: Two old hives, the first swarm 30 June, the first swarm from the other hive, 2 July; second swarm 9 July. Second swarm from the

- 1773: Two old hives, the first swarm 16 June, second swarm 28 June; the first swarm from the other hive 3 August.
- 1774: Two old hives one to Ann and one to us, the first swarm from Ann's hive 24 May, and the first swarm from our hive 17 June, and a second swarm from our hive 1 July, drove Ann's hive 29 June, a white swarm to Ann 8 July, second white swarm 22 July, drove Ann's first swarm 5 August, killed Ann's white swarm 15 August.

1776: 2 old hives, the first swarm 13 June.

These records give a picture of Welsh skep beekeeping in the late eighteenth century, with its dependence on swarms issuing from overwintered hives. It is a picture that had probably not changed much in principle during the preceding centuries, although the records show that in several aspects Owen Thomas's beekeeping was more advanced than the most primitive level.

The records also provide some details about the swarming behaviour of the native Welsh bees. The number of swarms per overwintered colony, the swarming season, and the interval between the prime swarm and an afterswarm from the same hive, are discussed below.

5. Comments on the occurrence of swarms, and the skep beekeeper's dependence on them

Any swarm that issues from a hive normally settles in a cluster on a tree or bush nearby, and later in the day it flies off again to a hollow in a tree or building (or possibly an empty hive), where it establishes its nest.

The swarming process of honeybees is briefly as follows:

In late spring, a colony in a small hive becomes overcrowded, and as a result it makes preparation for swarming. After it has started to rear several queens, a 'prime swarm' leaves the hive with the old queen; this usually occurs some days before the new queens are fully developed. When the new queen(s) emerge from their cells as adults, one will remain in the hive, and after she has flown out to mate, she will head the old (mother) colony. Other young queens may be killed by the first queen to emerge, or they may fly out from the hive, each with a smaller swarm of bees, known as cast or afterswarm.

The monetary values of different swarms were laid down in the Welsh laws⁶:

first (prime) swarm	kynheit	16d.
second swarm, i.e. first afterswarm	tarwheit	12 <i>d</i> .
third swarm, i.e. second afterswarm	tryded heit	8d.

As elsewhere in northern Europe, beekeepers in Britain were advised to encourage colonies to swarm early in the season by keeping the bees in small hives. For instance: 'let your Hives bee rather too little, than too great, for such are hurtful to the increase and prosperity of Bees'. This advice was given in 1657 by Samuel Purchas.⁷ There was no beekeeping book in Welsh until 1888, when H. P. Jones and Michael D. Jones published Y Gwenynydd.

In late spring and early summer the hives were watched daily for swarms 'rising', and the beekeepers 'took' any swarm that issued while it was clustered, for instance by shaking it into an upturned skep (Fig. 3). The skep was put on a stand in the apiary and in a good season would store some honey. Early swarms were better able to do this than late swarms, hence the proverb quoted by Samuel Hartlib (1655): 'A Swarm of Bees in May is worth a Cow and a Bottle of Hay, whereas a swarm in July is not worth a fly'. This saying is attributed in an earlier version, 1617, to Gervase Markham, and it is therefore older than the change from the Julian to the Gregorian calendar which was not adopted in Britain until 1752 by removing eleven days from September.

Some swarming events in the records are not clear enough to identify. In Owen Thomas's beekeeping records, 38 individual 'old hives' are mentioned in which the bees had survived the winter. A prime swarm (kynheit) issued from 30 of them; presumably the other 8 colonies did not grow large enough to do so.

The dates of Owen Thomas's prime swarms were as follows:

⁶ E. Crane & P. Walker, 'Evidence on Welsh beekeeping in the past', Folk Life (1985), XXIII, 21-48.

⁷ Samuel Purchas, A Theatre of Politicall Flying-Insects (1657).
⁸ Samuel Hartlib, The Reformed Commonwealth of Bees (1655).

⁹ Gervase Markham, The Country Housewife's Garden (1617).



FIG. 3
Hiving a swarm (from F. G. Jenyns, A Book about Bees, page 51).

Date of prime swarm	No. of swarms	Date of prime swarm	No. of swarms
May 24 30	1	June 22 23	2
June 2	1	30	2
6 7	$\frac{1}{2}$	July 2	1
10 13	3 3	7 18	1
16 17	2	August 3	ī
19	ĭ		

Two swarms 'rose' in May, 23 in June, 4 in July and 1 in August, but according to the old Julian calendar 9 swarms 'rose' in May, 19 in June and 2 in July.

Of the 30 swarming colonies, a first afterswarm with a virgin queen (second swarm, tarwheit) also left from 17 hives, following an interval after the prime swarm that varied between 7 and 18 days. A large proportion did not leave until after a more normal 10 days or so, suggesting that the weather in June and July was not very clement. A second afterswarm (third swarm, tryded heit) also issued from 3 colonies, 2 or 3 days after the first afterswarm.

In a good season, a prime swarm may develop strongly enough to send out a prime swarm of its own before the summer is over, and possibly even afterswarms as well. Such swarms also had a set value in the Welsh laws:

heit s	gyntaf	a del	o'r	kynheit	value	12 <i>d</i> .
heit į	gyntaf	a del	o'r	tarwheit	value	8 <i>d</i> .

They appear in the first two years of the records. In 1757 there were two: a 'swarm out of the first swarm 8 July, second swarm from the first 22 July'. In 1758 there was one: 'swarm out of the first swarm 19 July'.

On 17 June 1759, bees in one of the hives swarmed, 'and the other rose soon after and the two went together' (i.e. amalgamated into a single swarm). In 1771, 'second swarming 12 July, and a swarm from another garden rose at the same time, and the two settled into one

mass'. Such a combining of swarms is not an exceptional occurrence, but it was noteworthy.

We cannot offer any interpretation of the two 'white swarms' in July 1774, that were given to Ann.

The swarm records are also interesting because they relate to bees native to the island of Great Britain. These bees lost their identity in the next century, as a result of introduction of other bees (of the same species of honey bee, *Apis mellifera*) from various parts of mainland Europe and elsewhere.

The colonies in Owen Thomas's hives were living almost as in the wild, except that the skeps provided for them to nest in may have been smaller than natural cavities available. Since all his new queens were produced by colonies preparing to swarm, there would have been some genetic selection for a swarming tendency. In modern beekeeping this is deliberately avoided. There is no evidence that Owen Thomas fed his bees.

Conclusion

Owen Thomas's beekeeping records form a lasting epitaph, for such information on the activity of Welsh cottager craftsmen is rare indeed. Owen's son Harri followed in his father's craft, making items such as bee skeps, seed baskets, chairs and sieve bottoms, but his records of lipwork production early in the nineteenth century were not nearly as detailed as those of this father. Perhaps Harri spent too much of his time reading his Bible:

- 'January 1801. Start going through the Bible the 3rd time'.
- '1 May 1803. Finish going through the Bible the 3rd time and start the 4th time'.