The three sample surnames with 100+ hits were: Friggs, Beann and Inigley.

With the sample size the Standard Error (SE) would be: $\sqrt{(p[1-p]/s)}$

where p is the probability of a hit and s is the sample size. In this case p is (260)(100)/508, or about 51.18 and s is 508. The SE is thus $\sqrt{((51.18)(48.72)/508)} = 2.2155\%$.

We can say with 99.7% confidence that actual hit rate would be the sample hit rate plus or minus three times the SE. This is: 51.18%±6.7% or between 44.5% and 57.9%. In the worst case, 44.5% of the 149, 446 outstanding names are likely to be found at Ancestry.com census files.

Of course the selected sources themselves would have their own typos and typo matching would be a real possibility so we will ignore all the hits of 10 and under. P now becomes 15.6%, and the SE 1.6%. We can say with 99.7% confidence that actual hit rate would be $15.6\% \pm 4.8\%$, or between 10.8% and 20.4%. In the worst case 10.8% of the 149,446 outstanding names are likely to be found at Ancestry. com census files. This is equivalent to 16,140 surname types.

12. Summary and Conclusion

The total number of *Missing* accounted for by surnames held only by females, matches with surnames in contemporary USA and Canada, and historical records held by Ancestry.com, is thus 139,021, which is 51%. I will call these 139,021 the *Extinct*. There are more *Extinct*, than the 128,870 *Survivors*, and there are probably more surname types that can be added to *Extinct*. *Extinct* represents a significant cultural loss, 139,021 surname types in 116 years, about 100 a month during that period, and that loss should be recorded.⁵

Many of the balance of the *Missing* are the type inflators: the typos. The challenge is to identify them.

Land Drainage Records: A Source for Name Studies in East Lincolnshire

Arthur Owen Thimbleby

Although I shall have something to say here about the Fenland, my main concern in what follows is with the coastal Marsh district in Lindsey within the historic county of Lincolnshire. This extends for some fifty miles from Barton-on-Humber in the north to Wainfleet in the south, where it merges almost imperceptibly into the Fenland. Clifford Darby describes the Lindsey Marsh as follows:

It includes two types of land at different levels ... The Middle Marsh, sometimes known as the 'Clays', forms a zone some three to six miles wide flanking the Wolds. It lies between 20 and 100 feet above sea-level, and consists of an undulating boulder clay surface varied occasionally by patches of glacial sands and gravels ... The 'Marsh' proper is a coastal belt of silt lying almost entirely below 20 feet, and, of course, draining has done much to give it its present character.²

I quoted the above when introducing a volume of selected documents relating to the medieval Marsh in 1996.³ I do so again because the physical nature of the Lindsey Marsh and the problems to which this has given rise are basic to the records to be discussed here.⁴ It should be explained at this point that the original name for the authorities who

⁵ Rosencrantz and Guildenstern may be dead, but their cousins Rosencrance and Gilderstein are extinct. With apologies to William Shakespeare and Tom Stoppard.

¹ This is a revised version of a paper read at the Thirteenth Annual Conference of the Society for Name Studies in Britain and Ireland, Cambridge, 26–29 March 2004.

² H. C. Darby, The Domesday Geography of Eastern England (Cambridge, 1952),

The Medieval Lindsey Marsh: Select Documents, edited by A. E. B. Owen, Lincoln Record Society, 85 (1996), p. xiii.

⁴ A. E. B. Owen, 'Coastal erosion in East Lincolnshire', *Lincolnshire Historian*, 1, ix (1952), 330–41.

administered the land drainage organizations in Lincolnshire and other parts of the country, Commissions of Sewers, has nothing to do with disposal of sewage in the modern sense, except in London which was a special case, 'sewer' being just another word for a watercourse. Furthermore, so far as these records are concerned, land drainage is not just about laying lines of little pipes under a field or cleaning out the dikes surrounding that field. These are of course important but they are only part of the big picture, which is concerned with natural rivers and streams and major man-made land drains, and also with the 'gotes' or sluices which control the flow of water from one watercourse to another, and in particular in east Lincolnshire control the flow of fresh water into the sea while preventing the salt water from entering the land.

One other function complementary to the last-named performed by the drainage authorities here was, and is, the upkeep of the sea banks. Without these indeed the Marsh could hardly remain habitable in the face of a rising sea level on the North Sea coast. Here I must inject a personal element into the story. I was brought up on the edge of the Marsh not many miles inland of Skegness. My father, a local solicitor, held the position of Clerk to two local drainage boards. He used occasionally to take me with him to look at a big drain that needed attention or a weak place in the sea defences, which at that time were often no more than a line of sandhills held together by buckthorn and marram grass. When I got interested in the history of this coast and was putting together an article on local coastal erosion in historical times, he revealed that in his office he had custody of the records of these drainage boards going back in an unbroken series to the mid-sixteenth century.⁵ He agreed to deposit them in the Lincolnshire Archives Office, and they proved to be an exceptionally fine series of their kind. An unforeseen consequence was that a few years later the then assistant archivist, Dorothy Williamson, became Dorothy Owen; and long afterwards I was able to assure the congregation at her funeral service that what had brought us together was—DRAINS!

I will not go into detail here about the workings of drainage

⁵ Ibid.

authorities, but will try to summarise what I have said elsewhere about the principal classes of records in the East Lindsey series likely to be useful for name studies.⁶ The Commissioners of Sewers operating through courts of sewers—to give what became drainage boards their original title—had as their main record a series of what are simply minute books, though going under other names in different parts of the country. Here they begin only in 1626. Other classes begin earlier. Classes such as dikereeves' accounts and so-called 'laws of sewers' survive in abundance from soon after 1560. 'Verdicts' or presentments of the sewers juries set forth the state of the sewers and sea banks and indicate who was responsible for their upkeep. The 'laws of sewers' are really orders or decrees of the court giving effect to the jury's findings; there are sets of 'general laws' or by-laws; and records of various officers such as the treasurer and surveyors. As the commissioners came to rely more and more on their technical officers for information about the works needed, the jury verdicts became increasingly formal. In Lincolnshire formal presentments were still being made by at least one court of sewers as late as the 1920s, though by that time the presentment was written out in advance and a jury of 'twelve old topers' was then rounded up by the clerk and given a shilling apiece for swearing to what was put before them. (That last detail was information from my father, presumably from personal experience.)

The Lincolnshire dikereeves, whose name explains their function, were elected parish officers, usually two in number, under the orders of and responsible to the courts of sewers, and submitting their accounts annually. The originals of these, as already mentioned, survive in great numbers from the 1560s onwards in the East Lindsey records and are a mine of information on many topics besides drainage, as well as an excellent source for both personal names and minor place-names, featuring for example such elements as gate 'road', gote 'sluice', dike 'ditch, drain', and stretches of sea bank. Something must be said here

⁶ A. E. B. Owen, 'Land drainage authorities and their records', in *Prisca Munimenta*. Studies in Archival & Administrative History Presented to Dr A. E. J. Hollaender, edited by F. Ranger (London, 1973), pp. 274–81.

about the similar records of south-east Lincolnshire—the Holland division of the county, consisting entirely of Fenland—not only because these also are now in the Lincolnshire Archives Office but because they have features absent from the Lindsey series. While lacking such early dikereeves' accounts, they include two classes particularly relevant to those of its parishes having sea banks. These are 'joyce books' (short for adjoistment or agistment) and 'acre books'. In contrast to Lindsey where such banks seem regularly to have been the collective responsibility of each parish, in Holland every landholder in the parish was liable for maintenance of a length of bank, so many feet of bank for each acre of land held. The liability was recorded in the joyce books, while the acre books recorded each man's holding as a basis for assessment. Here again we have good sources for both personal and place-names.

A special merit of the Holland records is that, so far as I know, they are the only series of land drainage records to have found their way into print, save for the chance survival of a short series of fourteenthcentury sewers records for west Norfolk published by the Norfolk Record Society. Three volumes of sixteenth-century Holland records were published by the Lincoln Record Society, respectively in 1959, 1968 and 1977.8 The first was edited by Mary Kirkus, then Reading University Librarian. She had planned a total of four volumes, but died when she had barely begun work on the second, and the present writer was invited to take over. In the event it was decided to complete the edition in three volumes instead of four, and to bring it to a close in 1598, slightly earlier than the 1603 in the original title (which was, however, retained). A principal reason for this was that a high proportion of what Miss Kirkus had proposed for printing consisted of 'jury' verdicts which, quite apart from their length, tend to repeat much of the detail from one verdict to the next. The omission of a number of

⁷ The Records of a Commission of Sewers for Wiggenhall 1319–1324, edited by A. E. B. Owen, Norfolk Record Society, 48 (1981).

these in whole or in part allowed the inclusion of items not in the original plan, including a second set of dikereeves' accounts and some interesting later laws. Overall, the wealth of minute topographical detail makes the Holland series a valuable source for name studies, and I recommend it as a 'trailer' for what may be expected to come to light in the East Lindsey series.

Both in the Fens and in the Marsh the sewers commissioners were required to keep in repair not only the watercourses but the means of crossing them, and in some cases also the nearby roads. A lengthy jurors' verdict of 1560 for Bolingbroke soke and Candleshoe wapentake—that is, the extreme south-east corner of the Marsh and the fringe of the East Fen-begins by empowering those responsible 'to enquire and to present all defaults of the sewers, gotes, sea banks, bridges, drains and ways' in the area. After great detail about the work needed at Skegness for new sea banks and repairs to the old bank 'because the rage of the sea is there of great violence and extreme', it goes on with a parish-by-parish recital of work to be done. Among all the drains, creeks and sewers there is, every now and then, a bridge, for example: 'There must be one wain bridge in the King's Street over the said drain at Pepperthorpe, to be made by all the landholders in Wainfleet St. Mary's'. (It is worth mention that, though still on the modern map as Pepperthorpe Hall, this is one thorp that has escaped notice in Gillian Fellows-Jensen's list of thorps in her study of Scandinavian Settlement Names in the East Midlands.) 10 Another bridge in Wainfleet named in this document is Salome Bridge, said to be defective 'and it ought to be repaired and amended by all the lords owners and freeholders of ...' a specified area. The modern spelling of this bridge is Salem, but it has nothing to do with Jerusalem as might be supposed. The name actually

¹⁰ G. Fellows-Jensen, Scandinavian Settlement Names in the East Midlands (Copenhagen, 1978), pp. 83-135.

⁸ The Records of the Commissioners of Sewers in the Parts of Holland 1547–1603, I-III, edited by A. M. Kirkus and A. E. B. Owen, Lincoln Record Society, 54 (1959), 63 (1968), 77 (1977).

⁹ A. E. B. Owen, 'The upkeep of the Lindsey sea defences, 1550–1650', *Lincoln-shire Historian*, 2, x (1963), 23–30, n. 4. The *Fens Antiquities* volumes, where the 1560 verdict is copied in vol. 1, pp. 301–39, are in the 1963 article said to be in the Lindsey and Holland County Library, Lincoln; they are currently held in Lincoln Central Library (information kindly supplied by Mrs S. Payne).

derives from medieval *Sailholme* which, when first recorded, seems to have been virtually an island and was a focus for the local industry of extracting salt from sea water.¹¹

So far as names of watercourses in the Marsh are concerned, beck seems the chief witness for Scandinavian influence on them. The numerous small streams running off the Wolds are nearly all named 'so-and-so-beck' from the village where they originate or through which they pass: Scremby Beck, Welton Beck and so on. One that passes through Great Steeping on its way to join the River Lymn (alias the Steeping River) has, on the modern Ordnance Survey map, acquired the name of Lady Wath's Beck, and the curious might be forgiven for asking: who was Lady Wath? Answer: there never was any such person. Her name reappears further upstream at Lady Wath's Bridge, and this provides the clue. On older maps the name at this spot is plain Lady Wath—in other words the bridge replaces a ford, Scandinavian wath, dedicated to Our Lady the Virgin Mary, a reminder that a short distance along this road lies the hamlet of Monksthorpe with its pre-Reformation cell or grange of Bardney Abbey. From the 1560 jurors' verdict already quoted we learn a little more: 'Both wathes in Great Steeping be defective, the one called Lady Wathe, the other called Hackethorpe Wathe'; they are to be repaired by the tenants and inhabitants of Great Steeping, and the next entry adds that 'the beck in Great Steeping is defective from Lady Wathe to the Great Eae', presumably the Lymn. Hackethorpe I cannot locate (and it is another not recorded by Fellows-Jensen).

Two minor Warth names, at present known to me only from the modern map, I strongly suspect to be really waths because of their locations. One is on the landward side of Skegness, where Warth House stands at the point where Warth Lane crosses Winthorpe Drain. The other is Warth's Bridge, where the road from Thorpe St Peter to the hamlet of Thorpe Fendykes crosses the River Lymn.

The potential usefulness of these drainage records for the study of nersonal names, quite as much as place-names, should be emphasised. Genealogists could find that they complement or supplement some better-known sources such as parish registers, which in many parishes do not begin, or are not known to survive, before well into the seventeenth century. The dikereeves' accounts, which might seem to have no obvious merit for surname study, are often in large part simply wages books. Furthermore, those for coastal parishes in the Marsh may well contain names of labourers from parishes further inland, since at times of crisis—and there were many such times when the sea pressed hard upon the land throughout the sixteenth century-the local labour force needed reinforcement. 12 Routine maintenance work on the sea banks was fitted into the slack periods of the farming year so that, for example, at Ingoldmells in the 1570s when such work was in progress it was quite common for perhaps forty to sixty men to be employed daily. On the other hand, construction of an entirely new bank might require two hundred to four hundred men at once almost throughout the working season, and in such circumstances labour had to be brought in from a wide area. The new bank erected by Mumby and its chapelry of Chapel St Leonards in 1571-72 not only appears to have employed almost every able-bodied male in the parish at the peak of operations, but drew on eight other Marsh townships besides. The printed Bicker accounts for 1579 show labour recruited in similar fashion in the Fenland: labourers' names are here listed for each day according to their parish of origin, in this case Bicker itself plus four others not actually in the Holland division of the county but over the border in the Kesteven division. 13 Thus ancestors may need to be sought in parishes where they worked as well as those where they resided.

¹¹ A. E. B. Owen, 'St Edmund in Lincolnshire: the Abbey's lands at Wainfleet and Wrangle', in *Bury St Edmunds: Medieval Art, Architecture, Archaeology and Economy*, edited by A. Gransden, British Archaeological Association Conference Transactions 20 (1998), pp. 122–27.

¹² Owen, 'The upkeep of the Lindsey sea defences'.

Owen, The Records of the Commissioners of Sewers in the Parts of Holland 1547–1603, III, 91–96.