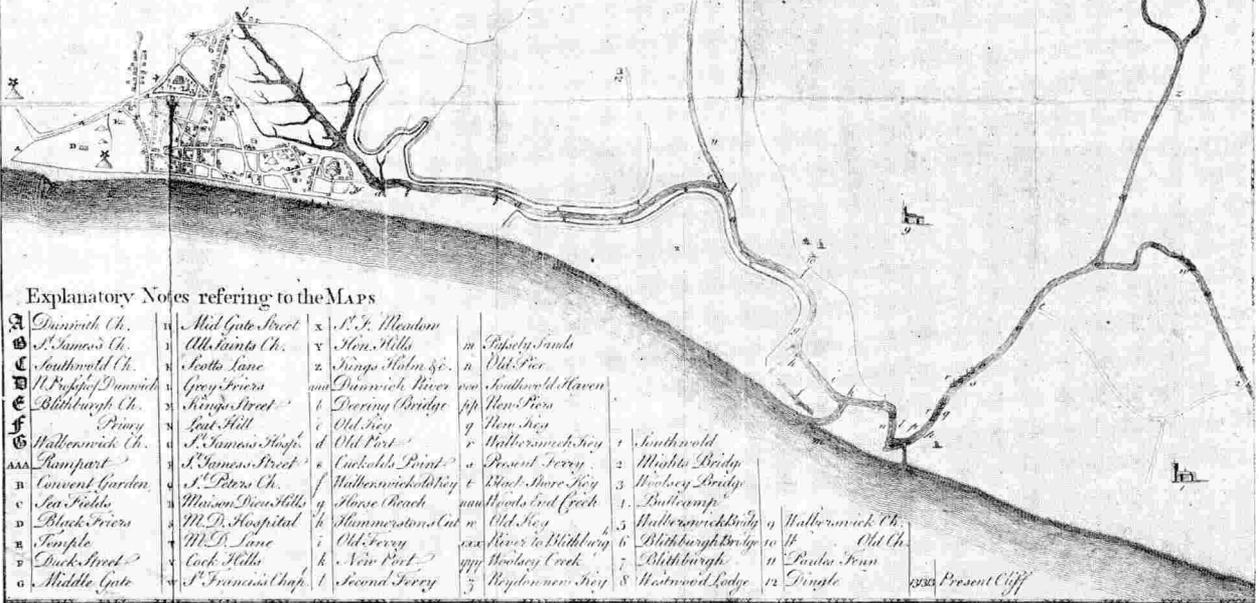
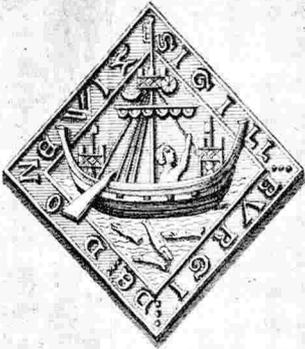


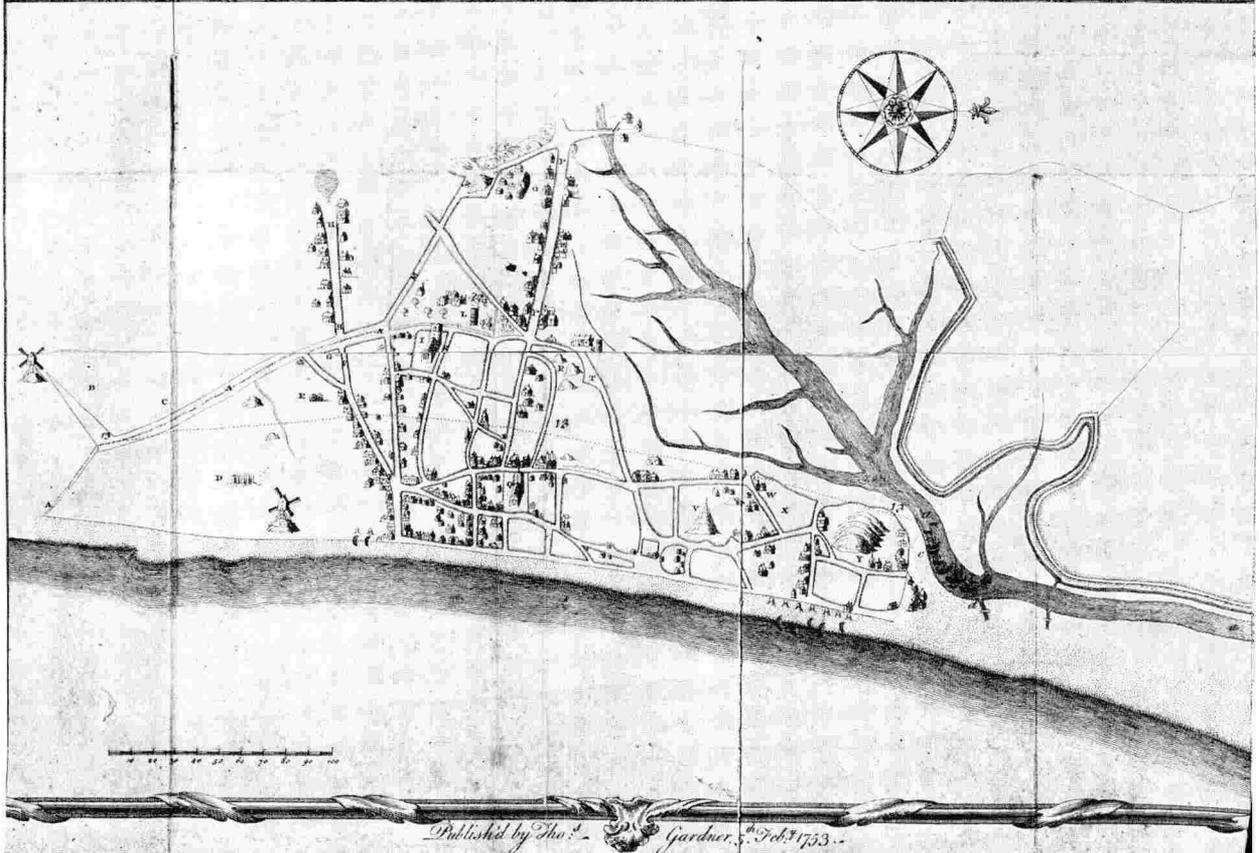
A PLAN

Exhibiting the Remains of the ancient City of *Dunwich*, A.D. 1587. Also its River Part whereof is *Southwold Haven*, with Places of Note bordering thereon.



Explanatory Notes referring to the Maps

A	Dunwich Ch.	11	Mid Gate Street	x	S. P. Meadow	20	Popsay Sands
B	S. James's Ch.	12	W. Sants Ch.	y	Hen. Hills	21	Old Pier
C	Southwold Ch.	13	South Lane	z	Kings Holm &c.	22	Southwold Haven
D	M. Roper's Dunwich	14	Grey Friars	aa	Dunwich River	23	Hen. Pier
E	Blythburgh Ch.	15	Kings Street	t	Dovering Bridge	24	Hen. Pier
F	Prury	16	Leat Hill	v	Old Pier	25	Hen. Pier
G	Walterwich Ch.	17	S. James's Hosp.	d	Old Pier	26	Walterwich Haven
AAA	Rampart	18	S. James's Street	e	Cartkells Point	27	Present Ferry
B	Convent Garden	19	S. Peter's Ch.	f	Walterwich Holm	28	Black Shore Pier
C	Sea Pocks	20	Minion Dunes Hills	g	Horse Beach	29	Woods End (Flood)
D	Black Friars	21	M. D. Hospital	h	Hammerstone's Cut	30	Old Pier
E	Temple	22	M. D. Lane	i	Old Ferry	31	River to Blythburgh
F	Quack Street	23	Cock Hills	k	Sea Port	32	Woolsey Creek
G	Middle Gate	24	S. Francis's Ch.	l	Second Ferry	33	Raydon new Pier
						34	Southwold
						35	Wrights Bridge
						36	Woolsey Bridge
						37	Dulcamp
						38	Walterwich Bridge
						39	Walterwich Ch.
						40	Old Ch.
						41	Black Stone
						42	Dingle
						43	Present Cliff



Suffolk Institute of Archæology and Natural History.

THE SUFFOLK SHORE. YARMOUTH TO ALDEBURGH.

BY J. A. STEERS.

The stretch of coast described in this paper is one of considerable interest both from the historical and the geomorphological points of view. There is a great deal of literature dealing with the historical side, but, so far as the writer knows, little has been written on the morphological significance of the changes that have taken place in the actual form of the coast during comparatively recent times. The fullest account up to the present is the paper by J. B. Redman published in the Proceedings of the Institute of Civil Engineers.* This is a great source of information on all matters concerning the coast of East Anglia, but little is there written on the evolution of the particular area included within the limits of the present paper.

Geologically the last important movement affecting the Suffolk shore was the Neolithic Subsidence. The

*Vol. XXIII., pps. 186—257.

effect of this is well seen to-day in the drowned valleys and submerged forests of East Anglia.* At the close of this movement the coast must have been very irregular in outline, and, formed as it is, of very soft strata, the attack of the sea soon made itself felt on the promontories, which were cut back comparatively quickly. Spits and bars formed across the re-entrants, and many of the smaller rivers were completely dammed back, and now reach the sea by percolating through vast shingle banks. Only the Yare and the Blyth have open mouths at the present time, and there are records to shew that under certain conditions the Blyth has been entirely blocked.†

As the prevailing drift here is from north to south, it will be convenient to describe the details in that order. Of Yarmouth little will be said in this place. It is a well known fact that at one time the sea ran far inland in the region now occupied by the Broads. The Hutch Map (A.D. 1000?) is an early attempt to shew the coast as it then was, but a more accurate picture may be obtained by studying the Ordnance map or the Geological map, the alluvium-filled valleys of the latter corresponding roughly to the estuaries of an earlier period. Tradition has it that Yarmouth itself originated as a small fishing settlement on a sand or shingle bank which formed across the mouth of the estuaries. At first there were two entrances, the one to the north of this bank, afterwards called Grubb's Haven or Cockle Water, and one to the south. This latter became the main entrance, the northern one being closed up by material drifting from the north.

° The southern entrance was liable to great fluctuations and a spit formed, deflecting the Yare southwards

*The evidence of the submerged forests is more open to doubt than that of the drowned valleys.

†Gardner. Hist. of Dunwich, p. 40.

parallel to the mainland. The history of the growth of this spit is given in Redman's paper and elsewhere,* but it is referred to here because it seems to the writer that it throws some light on the formation of Lowestoft Ness.

North Lowestoft stands on a cliff and is fronted by low-lying ground forming the Denes or Ness. This ness is formed essentially of sand and shingle, the latter often shewing a ridged arrangement. The origin of Lowestoft Ness is obscure. Gillingwater, the historian of Lowestoft, says it did not exist in Roman times,† but gives no evidence for this statement. The first mention of the Ness appears to be in the Hundred Rolls 2nd Ed. 1.‡:—

Johannes de Nes tempore Regis Henrici patris domini Regis nunc tenuit de ipso in capite ꝑ socagium gersumarium in tres per annalem redditum XXIId unde Nicolaus de Cabelhowe Johannes frater ejus Thomas de Nes tenent de perquisito suo predictum socagium faciendo inde per annum domino Rege predictum redditum.
and,

Willelmus de Nes tenet de domino Rege in capite ꝑ socagium gersumarium in Nes per annualem redditum IIIIs IIIId unde alii sunt inde tenentes ex dono Gilberdi de Nes patris ipsius Willelmi.

These two entries suggest that the Ness had begun to form by the fourteenth century or earlier. The question arises, Why should such a ness form here? Perhaps the original ness was quite small and liable to rapid fluctuations, but in course of time it attained considerable size. It is known that in 1347 the Yare spit reached as far south as Gunton. Material sweeping down this spit would tend to accumulate under its

*Manship. History of Great Yarmouth.

†Gillingwater. History of Lowestoft, p. 45.

‡For this information I am indebted to Mr. V. B. Redstone.

lee, just as the great accumulation of Shingle Street has grown up on the opposite side of the mouth of the Alde to North Weir Point (i.e. the distal end of Orford Ness.) But the inhabitants of Yarmouth were much put about by the constant shifting of their haven mouth, so that various cuts were made through the spit to bring the haven nearer to the town. A gateway was cut in 1392 at the north end of Gorleston and five others were cut before the present mouth was fixed in 1566.*

As a result of these various cuts the shingle to the south became "dead," and was gradually swept southwards. At the same time the spit ceased to act as a protective agent to the mainland, which, in its turn, was attacked by the sea. This again supplied more material for the prevailing southward drift. However, conditions were now more favourable to the formation of a Ness at Lowestoft. Reference to the diagram† will make the following explanation more clear. Prior to 1392 the main travel of the shingle must have been along the line a b. It is important to note that this line is continued almost exactly by the 50-foot contour line of Gunton and North Lowestoft cliffs. In other words the spit and cliffs formed a tolerably straight line from Caister to Central Lowestoft at that time.

After 1392 the shingle was held up by the various new havens at Yarmouth, and the cliffs south of the haven mouth were attacked, thus forming the broad bay between Gorleston and Corton.‡ Gradually the line of shingle transport took the position of the second line c d, and this line is now continued along the

*There have been minor alterations since 1566.

†I would like to take this opportunity of thanking Mr. R. A. Abigail, B.A., for his kindness in drawing the two maps for me.

‡Between Gorleston and Corton there apparently existed the village of Newton. This has disappeared owing to the ravages of the sea.

outer edge of Lowestoft Ness. In short the shingle has accumulated under the lee of Corton Cliffs.

It may be asked, Why did not the cliff recede equally fast south of Corton? It is not easy to answer this question, but in all probability the cliff foot was protected to some extent by the shingle that had accumulated in this place before 1347. But a more effective cause may be found in the fact that immediately under the lee of the new haven at Yarmouth there would now be no shingle travelling along, all being held up by the breakwaters and harbour works. Consequently the cliffs would recede very quickly. The scouring action of the eddy current which would tend to develop under the lee of the Yare spit might also accentuate this action.

This argument is certainly supported by the historical evidence given earlier, and, judging from similar cases the time required for the formation of the ness is quite sufficient.

At the present time the Ness is suffering considerable erosion, especially in its more northern parts. This is to be expected, and has probably gone on for some time. The modern piers and harbour works at Yarmouth hold up the great majority of the material travelling from the north and thus deprive Lowestoft of its normal supply. As a result, the depredations of the waves are not made good between the two towns, and Lowestoft is the sufferer.

South of Lowestoft Ness conditions are very similar. The present outlet of the Waveney through Lake Lothing is artificial. There was never a true mouth here. This point is made clear by F. D. Longe in his "Lowestoft in Olden Time." When the present channel was cut a glacial ridge was found between

the head of Lake Lothing and the sea, in every way similar to the rising ground on either side of the valley. This ridge was not sufficiently high to prevent occasional overflows from the lake to the sea and vice-versa. Evidence for this is found in the channel having been used as a boundary between the parishes of Lowestoft and Kirkley. There is a second and similar glacial ridge extending between Lake Lothing and Oulton Broad. This, again, may have been crossed by a shallow dip, where is now Mutford Bridge.*

From Lowestoft to Aldeburgh there are many small streams dammed back by shingle. It is not always possible to give much detail about these, but some interesting light is thrown upon some of them by an old document—The Butley Cartulary—which is quoted in Suckling's History of Suffolk.† This document deals with the wreck of the sea along the Suffolk Shore. The more important part from the point of view of the present paper is given below:—

“Inquisitio capta apud Donewicum, die Mercurii prox. post festum Sancti Gregorii, Papae, anno regni regis Henrici, filii regis Johannis, XXI, pro wrecco maris, et alius diversis Domino Regi tangentibus, coram Roberto de Laxinton..... qui dicunt quod Henricus de Colvile et Thomas Batun habent wreccum maris in villa de Pakefield, et Kessingland, quo warranto ignorant. Item Simon Perpond habet wreccum maris in villa de Benacre, viz., a portu de Kessingland, usque ad portum de Benacre. Item, Ballivus de Blything habet wreccum maris nomine regis in tota villa de Northaling, a dicto portu de Benacre usque le Southmere. Item Thomas Bavent capit wreccum maris in villa de Easton, viz., a Southmere usque Eston-Stone. Item Comes Gloucestriae capit wreccum maris in villa de Southwold a Eston-Stone usque partem australem de Eycliff. Item Domina Margeria Cressy

*Skeat suggests Mouth-ford was the original of Mutford. The Place-names of Suffolk. Cam. Antiq. Soc., Oct. pubns. No. XLIV., 1913, p. 35.

†Vol. 2, p. 305. The original is in the Bodleian Library, Oxford.

capit wreccum maris in villa de Blithburgh, et Walberswick, viz., a Eycliff usque portum Donewych. Item Burgenses Donewici habent wreccum maris in villa Donewico, viz., a portu Donewici usque ad limitem de Westleton, abutt. super altum mare Cachecliff. Item, quod Willimus Hardyll capit wreccum maris in villa de Westleton, viz., a predicto limite usque portum de Menesmere. Item Abbas de Leyston capit wreccum maris in villa de Thorp, viz., a portu de Menesmere usque Almouthe. Item Prior de Snape capit wreccum maris in villa de Aldeburgh, viz., a Almouthe usque le Ness de Orford. Item Ballivi de Orford habent wreccum nomine Domini Regis in tota villa de Orford, viz., a le Ness usque le Newmore. Item Comes Marecallus capit wreccum maris a Newmore usque portum de Handford in comitatu Essex, et appropriat. et portum de Orwell, et Gosford, qui pertinent Domino Regi."

If this document may be interpreted literally the mouths of the Kessingland, Benacre, Dunwich, Minsmere and the little Hundred River at Aldeburgh were then open and served as havens. Each of these is now dammed by sand and shingle.

To fix the positions of the places mentioned in the Cartulary on a modern map is difficult. Apparently Henry de Colville and Thomas Batun held right of the wreck of the sea approximately as far south as the present sluice of the Kessingland River. From there to Benacre Broad wreck of the sea was in the possession of Simon Perpond (Pierpoint). This area is interesting; between Kessingland and Benacre is Covehithe Ness, a formation similar to Lowestoft Ness, but smaller. It is probable that this Ness originated as a spit across the mouth of the Kessingland River, and that in course of time the spit deflected the stream. However, an artificial outlet seems to have been maintained, and now the water from the tiny stream which

drains Benacre Broad is carried northwards by the New Cut to the Kessingland sluice.

Ballivus de Blything held wreck of the sea in Northaling (Covehithe) from Benacre to Southmere. This is probably the space between Benacre Broad and Covehithe Broad. Easton Stone, the southern limit of Thomas Bavent's area, was probably the eastern limit of what are now Easton Cliffs. It has been held that these cliffs once extended so far seawards as to form the most easterly point of England. As Suckling says, this means a loss of land here of nearly three miles since Roman times. This point was named 'E30 x n by Ptolemy*. From Easton Stone to Eycliff, which must have coincided roughly with the south end of Southwold cliff, the Duke of Gloucester had wreck of the sea. From here to Dunwich harbour Lady Margery Cressy had wreck of the sea. The entrance to Dunwich haven was subject to great fluctuations, not unlike those which affected the mouth of the Yare. Some account of these fluctuations is given in a later paragraph. The Cachecliff, which was the southern limit of the stretch of shore over which the burghers of Dunwich had wreck of the sea, was probably at the south east end of Dunwich Common, near the modern Coast Guard Station. Southwards from this point is the lowlying ground of Minsmere Level. The stream now reaches the sea through a sluice, but in the past the outlet lay, in all probability, farther south, having been deflected in the usual way.† Low cliffs occur again at Sizewell, and

*Suckling. Op. cit. ii. 307.

†“ Also lastlie ye shall undirstand, that it hath been reported that there hath been, long tyme paste, another parish church in the subbarbes of the town of Donewiche, called Myssmeare pryshe, standing about a quarter of a mile from Messemeare haven, to Donewyche ward. And the inhabitations and buildings that did belong to the same parish, some of them were called Mysemeare Street and Mysmeare row; as I have heard Syr Edmonde Rous, knyght, saye that he had evidence of the same to show it so called the same. The which parish, if there ware any such, is now all drowned

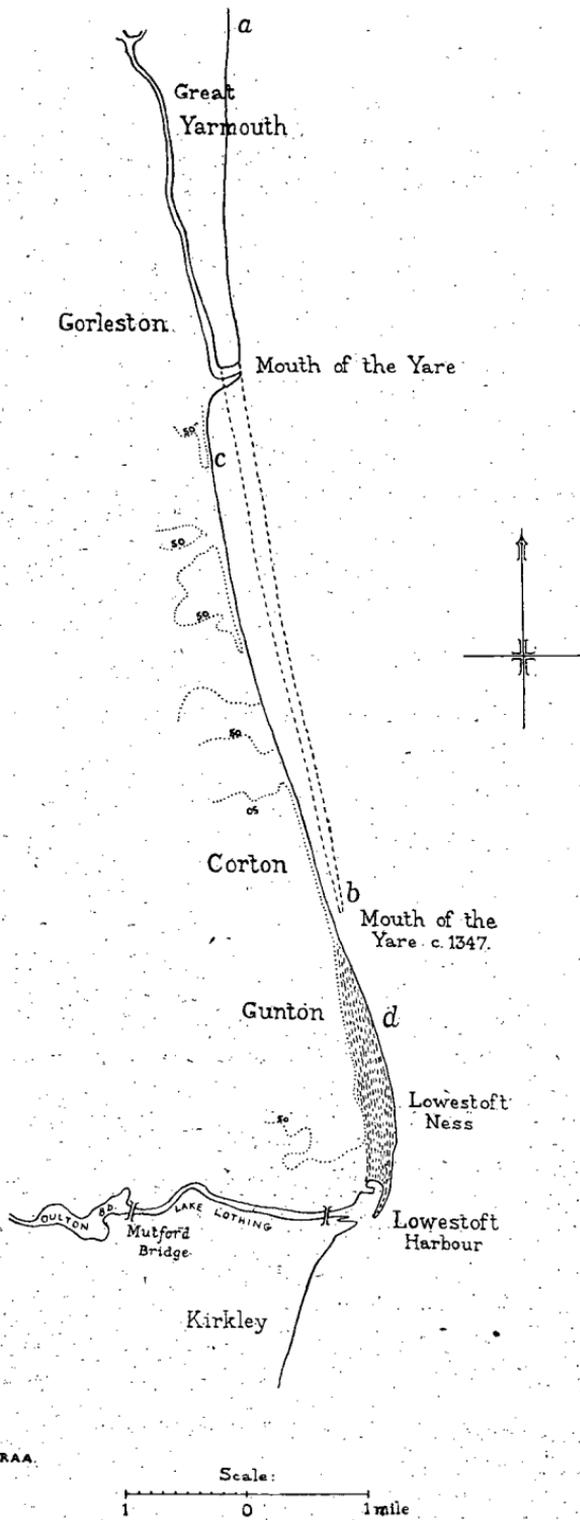


Fig. 1.

SOUTHWOLD HARBOUR.

COTTON M.S.S.

TIME HEN. VIII. A.D. 1509-47.

(After Redman)

Op. cit.

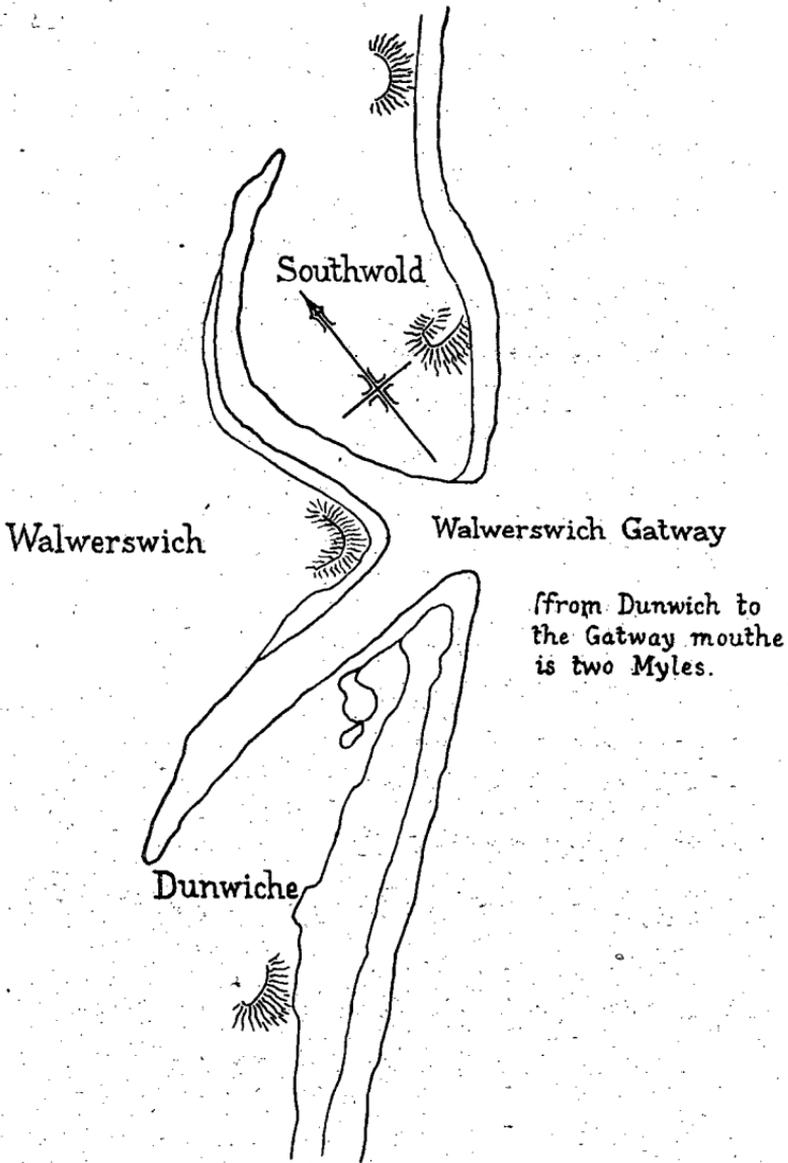


Fig. 2.

the Abbot of Leyston had wreck of the sea from Minsmere Haven to Almouth. Almouth was certainly the original outlet of the Hundred River of Aldeburgh. Here again is a phenomenon similar to Covehithe. Thorpe Ness is a small sand and shingle headland which has grown up to the north of the river mouth, and marks the change in the direction of the beach from a nearly north and south line (Dunwich to Thorpe) to a line trending west of south. From Almouth to Orford Ness the Prior of Snape had wreck of the sea.

Along this coast perhaps the greatest changes have taken place at Dunwich. Originally Dunwich was a thriving town and stood in a comparatively favourable position for a mediæval port. In fact, its position must have been similar to that of Orford—a harbour enclosed by a shingle spit. However, harbours of this type are notoriously liable to rapid changes, and this fact, coupled with the rapid erosion of the soft cliffs of the mainland, brought about the downfall of Dunwich. The sketch shews the general position of the town as shewn on a map of the time of Henry VIII. It is quite possible, in fact probable, that the map is representative of the coast at a time earlier than Henry VIII. The map is part of a larger one of the East Coast from the Orwell to Gorleston, and the writer has suggested elsewhere that there are reasons for believing that in the case of Orford Ness the map is certainly a picture of the coast well before Henry VIII's time.† The plate shews the old city in some detail. It is Gardner's map.

in the sea, and nothinge thōf now remayning to be perceived or seen for the profe thōf, ōrwise than as before is expressed and decl'd known not: therefore in this behalf use your own discretion."

The words "standing about a quarter of a mile from Messemeare haven to Donewyche ward" are suggestive of the normal fluctuations of the east Anglian Havens. From Suckling ii., 252, after Harl. MSS. No. 532, fol. 54, Brit. Mus.

†"Orford Ness": to appear in the Proceedings of the Geologists' Association.

All that can be said prior to 1328 is that there was a serviceable harbour. This harbour was completely choked up on January 14th. 1328, by north-east and east-north-east winds. The entries in Gardner's History are a little misleading in this matter in that there appears to be some confusion of ordinary and regnal years. The state of the haven before 1328 can be estimated from the following :—

*“ Ex Inqui. 28 Ed. III. quod a Tempore quo non extat Memoria, ad 14 Diem Jan. Anno Regni Domini Regis, Edwardi nunc, primo erat quidam Portus contiguus Villae Donw. largus et profundus, etc. qui quidam Portus, Ann. et Die praed. per Impetu Maris, omnino est obstructus ; et alius Portus tunc Temporis factus, qui quidam Portus distat a Villa praed. fere per duas Leucas, et est nimis strictus et non profundus : et in illo Portu est ; et fuit rara et parva Applicatio Navium, etc.”**

In this connection it is certainly impossible to translate “ Leucas ” as leagues ; if so the mouth of the harbour must have been in the middle of what are now Easton Cliffs.† In all probability one may read miles rather than leagues.‡

Making this assumption it is more easy to follow Gardner. This second harbour was the natural result of the stopping up of the first ; the water within the shingle had to find an outlet at some place, and did so two miles north of the first harbour. But here, as

*T. Gardner. History of Dunwich. 1754. p. 39.

†Redman (op. cit.) says that as a result of the shifting of the haven mouth two “ leucas ” to the north, Buss Creek, to the north of Southwold, must have been the position of the new haven. This is unlikely for several reasons. First, unless the entrance to Dunwich Haven prior to the storm of 1328 was almost at Walberswick, or quite two and a half miles from the present Coast Guard Station at Dunwich, the distance is too great. At the same time Gardner does not suggest that the haven was so far away from Dunwich. Secondly Gardner makes no mention of Buss Creek having been used as a main haven even for Southwold. The mistake seems to be the result of translating “ leucas ” as leagues.

‡See the New English Dictionary under “ League.”

at Yarmouth, many new cuts had to be made through the obstructing shingle. There is one great difference, however, between the two places. Yarmouth is still a very thriving port; Dunwich has to all intents and purposes disappeared. One reason for this is that at Dunwich the cliffs to the immediate south of the first quay yielded so readily to the attack of the sea that the quay itself was cut into by the sea. To the north the constant difficulty of maintaining an outlet and the many differences which existed between the burghers of Dunwich, Walberswick and Southwold as to where these cuts should be made also caused great difficulties. Gradually, then, together with the decay of the town, the shingle of the original spit was steadily rolled landwards, the haven became useless, and the cliffs receded rapidly. The final result is seen to-day. All that now remains is a large expanse of shingle fronting extensive marshlands between Dunwich and Southwold.

In brief, the history of this part of the coast seems to have been first, the development of a spit which deflected the River Blyth to the south. In the course of time this spit attached itself to the cliffs at Dunwich, and the waters within, either naturally or artificially, found egress where the haven stood prior to the storm of 1328. It would be impossible to say what had happened before that date with any pretence to accuracy, but it is reasonable to assume that this haven was not the first. At this time, then, the Blyth and the Dunwich rivers had one common outlet which was the haven mouth for Dunwich, Walberswick and Southwold. Many later cuts were made through the obstructing shingle but none lasted* for any time. In the eighteenth century the shingle bank seems to have been cast back on to the marshes and since that time erosion has removed nearly the whole site of the old town.

*Gardner. op. cit. p. 213.

At one time Southwold stood on an island. This island has now been joined to the mainland by the formation of a spit of shingle across Buss Creek. It is not clear when this spit was completed. Gardner, in his History of Dunwich, says that the entrance to Southwold Harbour was to the south of the town. Besides this he speaks of Woods End Creek and Wolsey Creek. The former appears to be the same as Buss Creek, and Gardner says "it passes under Southwold (or Might's) Bridge, to the Sea-Beach, on the North of the Town. And is well known by Sailors to be a Place very commodious for mooring Vessels. . . ."* This seems to imply that there was no actual outlet to the sea north of the town in Gardner's time, but that ships could sail round the town from the southern haven and anchor in safety.

Along much of the Suffolk coast erosion has eaten far into the land. It is interesting to examine this question in some detail to see what light it throws on the possible amounts of land lost through this cause in recent times. Fortunately certain records are available and some of them are given in the Geological Survey Memoir.† From these, rough estimates can be made of the possible loss of land in certain places during the historical period. At Covehithe there is recorded a loss of 130 feet between the years 1878 (August) and 1882 (May). The estimated loss here is 32 feet per annum.‡ Taking a longer series of measurements at the same place—1878 to 1887—there is seen to be a loss of 172 feet, or an average annual loss of 19 feet. Whitaker (op. cit.) records a loss at Easton Bavent of 20 feet in 8 months. At Dunwich, during a period of 108 years, the average annual loss was $18\frac{1}{2}$ inches. These measurements are taken at

*Gardner, op. cit. p. 213.

†Mem. Geol. Survey. 1887. W. Whitaker.

‡Op. Cit. p. 51.

random; others shewing similar figures may be found for many places on the Suffolk Coast. However, those given will be sufficient to shew that an average annual loss of one or two yards per annum is by no means an unreasonable estimate for *certain parts* of the coast. If, for the purposes of argument, we take $1\frac{1}{2}$ yards we have a total possible loss of nearly 3,000 yards since the beginning of the Christian Era. It is admittedly very unsafe to generalize on such grounds as these, but they afford some support to the traditions of many lost towns and villages along this shore.

Accepting for the moment Clement Reid's figure of 3,500* years since the Neolithic Subsidence and allowing a loss of $1\frac{1}{2}$ yards per annum in the most favourable places, it follows that about two miles of land may have disappeared. This amount cannot be presumed to have been lost on all parts of the coast of Suffolk. It has been pointed out that as a result of the Neolithic Subsidence there were left many peninsulas and headlands projecting out to sea. These would suffer the most rapid erosion, and as they were gradually cut back the higher the cliffs would become, and the rate of loss would tend to decrease. In other words, if now we find erosion of nearly two yards a year along a comparatively mature coast with cliffs forty to fifty feet high, it is not unfair to assume that an earlier time erosion was much more rapid. If this were so, then the figures given above are rendered slightly more probable.

Nevertheless the best that can be obtained from such calculations is, by the nature of things, very unreliable, there being so many unknown and variable factors. However, figures of this sort do tend to shew that many estimates are great exaggerations. Such

*This figure is used so that a rough estimate of the amount of erosion may be given; it is realized that it is only an approximation.

statements as "In former times a wood called Eastwood, or the King's Forest, extended several miles east of the town (Dunwich) till it was destroyed by the sea," are of very doubtful value. Similarly, the loss that must have taken place at Easton, if Easton Ness were originally the most easterly point of England, is somewhat excessive, because the cliffs at Lowestoft imply a considerable loss at the same time. In this case, too, the loss is supposed to have taken place since Roman times.

The small map of 'Walwerswich Gatway' is copied from Redman's paper on The East Coast. Proc. Inst. Civ. Engs. XXIII. 186-257.