

are produced, and it is expected that this number will be greatly increased by machines invented by an American engineer, Mr. Hoe, of New York.

Type-composing machines have been invented, and that invented by Mr. Hattersley is working successfully. Although type is composed of very hard metal, it deteriorates under the wear and tear required in the printing of large editions, as in Bibles, Prayer-books, dictionaries, &c.; it has been proposed to cover the type with a copper-facing by means of the electrotype process, but the result has not been altogether satisfactory.

Printing in colours is a branch of the typographic art which has been carried to perfection of late years. At first it was effected with wooden blocks, but its greatest triumphs emanate from the lithographic press. We have now *fac-similes* of water-colour drawings and oil-paintings, which at first sight can hardly be distinguished from the originals.

Our space does not permit of our following the author of this erudite volume through all the auxiliary subjects he has touched upon. There is much that is interesting to be said upon certain *reproductive* arts in connection with typography, arts which have for their object the reproduction of the printed page by other means than by typography. They are very ingenious, and depend for the most part upon chemical agencies. We can but mention the anastatic process, chemitypy, and photography. Each of these can render great service when the production of a limited number of examples is required, or when a page is wanted to make good a loss. There is yet a machine we wait for patiently, that which will supersede the use of the pen: the printing electric telegraph seems a step in the right direction to this object.

The pleasure and instruction we have derived from this *brochure* of Mr. Bohn's is marred only by the reflection that it is "privately printed." The information it contains is not to be readily met with in a popular form. If amplified, as it might be, beyond the limits imposed on it by the form of a lecture, it would form a valuable addition to our "Standard Libraries." The perusal of this lecture has also raised in our minds a vague idea that the book, as understood by the pioneers of typography, is passing away. We have no more folios, few quartos, nothing but trim octavos and duodecimos; and these, we fear, may in their turn yield to the journal and newspaper.

ANTIQUITIES OF THE GARRUENOS.

COAST-RECREATION now attracts many summer visitors to Yarmouth and Lowestoff. These places are situated in districts which have undergone such changes that their early history opens an interesting field for inquiry. The Yare, the river at the efflux of which into the sea the first of these towns stands, is the modern form of *Garruenos*, the name given by the Greek mariner of Alexandria to the *Garu-an*, the Rough Water of the Britons. Many streams were so designated by the first Keltic inhabitants of Europe, and still retain the designation, variously modified. The turbulent character of the Garonne in France, the *Garouna* and *Garumna* of antiquity, was witnessed and described by Mela Pomponius, about the middle of the first century, (*De Situ Orbis*, l. iii. c. 2). Chalmers (*Caledonia*, vol. ii. p. 968) says that the Yarrow, having its course "over a

rocky and gravelly bottom, is the roughest and most precipitous stream in the country." How the now smooth and placid current of the Norfolk Yare can have derived its name from such a source is to be explained only by a review of its former condition.

It is first mentioned in the Geography of Ptolemy as the "outlets of the river *Garruenos*," from which we may infer that its waters at that time flowed into the sea through more than one channel. This accords perfectly with the present features of the coast and the character of the valleys which extend from it into the interior; it is also confirmed by positive records of a later date. The opening of the southernmost of these passages was in the narrow space between the present cliffs of Lowestoff and Pakefield. This being the first entrance reached by ships coming from the south, and also a sheltered river-like navigation, of which Lake Lothing and Oulton Broad are remaining evidences, was probably the most frequented by the Romans; and when in the Saxon times the Flemish merchants resorted to the wool-markets of the district, it was most likely here that they came in. At the entrance of such a scene of traffic, sailors, pilots, and shipwrights generally fix their abodes. For these the high grounds of Lowestoff were an eligible site, and so the town probably originated in very early times. Its date and the meaning of its name are alike obscure; in Domesday Book it is called Lothenwistof, which perhaps may indicate some connection with the Dane Lothen, the companion of Icling in their invasion of the eastern coast, A.D. 1046. The haven was called in aftertimes Kirkley Road, from the village abutting on its southern side, was blocked up when placed under the jurisdiction of Yarmouth by Edward III. towards the close of the fourteenth century, and re-opened by Act of Parliament about thirty years ago, to form the present harbour of Lowestoff, round which a new town has of late grown up.

The principal opening of the *Garruenos* occupied the low sandy tract, five miles in width, between the present haven's mouth of the Yare at the foot of the Gorleston cliff and the rising ground of Caistor on the north, where, as the name and many relics of antiquity denote, a Roman station was fixed. In this wide space, exposed to the north-eastern gales which blow so furiously on this coast, its rough surges, like those of the *Garumna*, obtained from the Keltic races living on its shores the name of the *Garu-an*. In these struggles of the winds and waves a line of sand-banks was thrown up and eventually left dry. Through these the tidal waters preserved for themselves two passages, forming an island, on the most elevated parts of which, during the fishing seasons, sailors first pitched temporary tents; a fair or mart for the sale of their cargoes of fish was next established; permanent abodes were then raised; and thus, early in the eleventh century, arose the seaport of *Moche Gernemuth*, or Great Yarmouth.

More to the northward were two other small openings, one through the breach in the cliffs still known as Horsea Gap, and the other near Happisburgh. These, which appear to have been little used and scarcely navigable, were blocked up at an unknown early period; but violent storms have occasionally forced the sea through them, and precautions are still taken to guard against such irruptions, although of late the danger has abated.

Entering at these apertures, the tides of the ocean covered all the lower levels, and, reuniting their waters, formed a succession of islands extending from south to north along nearly thirty miles of coast. The largest of these is now included in the hundreds of East and West Flegg; the

southernmost, at the extremest point of which Lowestoff stands, was originally called by the Saxons "Little England," now abbreviated into Lothingland^a. The estuary then divided into three branches, flowing far up into the interior, that in the centre beyond the site of the present city of Norwich, the southern reaching Beccles and Bungay, and the northern to a Roman town, now only known as Burgh-by-Brampton. These valleys were originally longitudinal basins of chalk, coated with gravel, in the bottom of which an alluvial deposit constitutes their present series of meadows and marshlands. Imbedded in this formation, and lying also on the face of the hills by which it is skirted, marine shells similar to those now constantly found in the German Ocean attest that its tides formerly occupied these tracts, and that at some remote period they filled them to the height of forty feet above the present level. Anchors, together with fragments of ships and parts of their rigging, have also been dug up, which prove that these floods were navigable at a period when some progress had been made in the arts of civilized society.

The situations of ten Roman towns, or fortresses, on the verge of these lowlands, shew that they were erected for the protection of this inlet against the attacks of piratical rovers, or to improve the facilities for mercantile traffic offered by these wide-spread arms of the sea. The names of no more than three of these have been preserved, and of them the notice is so slight that we cannot with any certainty determine to which of the remains of that period they ought to be attached. These are *Venta Icenorum*, *Garrionenunum*, and *Ad Taum*. The name of the first was corrupted by Ptolemy's informant into *Venta Simenorum*, is given correctly in the ninth Iter of Antoninus, and again miscalled *Venta Genonum* by the geographer of Ravenna. From these scanty notices we may collect that, like the *Venta Belgarum* (Winchester) and *Venta Silurum* (Caerwent in Monmouthshire), it was the chief town of the tribe, afterwards walled and fortified as a Roman station. No other place among them was known to the Alexandrian merchants; it was probably visited by them in their trading voyages, and accessible to them by its situation on the *Garruenos*. It was sufficiently important for a road to be constructed to it from London, of which it was the terminating point; the length of this way, taking a circuitous route by *Sitomagus* (supposed to be Thetford by some, Dunwich by others, and Woolpit by a third set,) and *Camulodunum* (Colchester), was 128 miles. These circumstances concur in indicating the site of this town to have been at Caistor St. Edmund's, four miles south of Norwich, where a clearly traceable Roman vallum incloses an area of forty acres, now a cultivated farm-land; the western wall edges a narrow side-valley, which the tides of the *Garruenos* once covered; the remains of its water-gate, and of iron rings long visible on its face, to which ships had been moored, proves that this was a port in ancient times. The wide estuary intercepting the traveller's and the soldier's progress, accounts for the Roman road stopping there in the time of Antoninus. It was afterwards carried further northward by Stratton Strawlers to Burgh-by-Brampton; and the village of Trowse, near Norwich, appears to have taken its name from *Trás*, the contracted form of *Trajestus*, the point from which the passage across the stream was effected. Some have assigned other localities to *Venta Icenorum*, not one of which corresponds so well with the few facts known respecting it.

^a Hollinshed, Chron., vol. i. p. 44, where this island is particularly described.

The situation of *Garriennonum* is still more doubtful. All that has been recorded of it is found in the *Notitia Imperii*, where it appears in the early part of the fifth century as one of the nine stations under the jurisdiction of the Count of the Saxon Shore. The commander of the Stablesian horse (*Præpositus Stablesianorum equitum Garriennonensis*) had his head-quarters there. It was evidently of Roman origin, and may have been placed at any point on the shores of the *Garruenos* most convenient for its defence. On the authority of Camden, many have unhesitatingly selected for its site Burgh Castle, two miles inland from Yarmouth, at the north-western angle of the island since called Lothingland. The walls here, which are among the most perfect of their kind, form three sides of an oblong inclosure, sloping down a declivity to the edge of the valley, where the fourth side, one of the two longest, was protected by the estuary. It was evidently a naval station, from which fleets might be despatched to any shore threatened by an enemy, and in the winter season could be drawn upon dry land, to be floated again in spring :—

“Trahuntque siccas machinæ carinas.”

It answers precisely to the description given of the coast-defences raised by Stilicho about A.D. 400, against the depredations of the marauding Saxons, and was intended to intercept their movements by sea. The cavalry stationed at *Garriennonum* was, on the contrary, to act on land; and no one acquainted with the features of the country can imagine that an officer, versed in the evolutions of war, would coop them up in a narrow corner, separated by wide arms of the sea from the district which they were appointed to guard. The same objection is fatal to the opinion of Spelman, who identified this station with Caistor, at the south-eastern point of the island on the northern side of the widest entrance. The mainland between the two principal branches of the estuary was the best peopled part of its neighbourhood, and the most likely to attract the visitations of its rapacious plunderers; it is therefore reasonable to look for the head-quarters of its defenders in one of the stations, traces of which remain there. Among these, Whitaker Burgh has been judged to be the best adapted to the purpose, from its commanding position on a projecting point opposite to the southern entrance and the wide survey of the surrounding floods overlooked from its uplands. Part of a Roman vicinal road pointing towards it, and called the Portway, has also been discovered between Raveringham and Haddiseoe^b. Conjecture founded on this circumstantial evidence must here supply the place of positive testimony.

That such a station as *Ad Taum* existed is known only from a fragment of a map supposed to have been made in the fourth century, and called the *Tabula Peutingeriana*. In this rude and imperfect sketch, which is generally received as historical authority, it occupies a place among other towns of this district, and from the resemblance of the names is supposed by antiquaries to be the Tasburgh of the present day. This village stands near the head of the small valley which descends to Caistor St. Edmund's; on its highest ground remains of a Roman work are still to be seen, enclosing an area of twenty-four acres. The shallow stream which waters the valley is the same on which the ancient *Venta* stood, when it poured a more copious tribute into the *Garruenos*; it is believed to have had, in common

^b Introduction to Gough's Camden, p. lxxv.

with other British rivers, the name of *Taus*, now modernized into Tees. From this station to another at Blithburgh, in Suffolk, a line of communication was formed by the Roman road, now called the Stone Street.

Within the same precincts Burgh-Apton occupies the site of another town of that period, standing also on a stream that flowed into the *Garruenos*; the antiquities discovered there denote it to have been so important, that Spelman, in his *Icenia*, was disposed to doubt whether the *Venta Icenorum* ought not to be placed there. Burgh-by-Brampton, at the termination of the northern branch of the estuary, is shewn, by its relics of Roman dominion, to have been in ancient days a populous town; the numerous urns found there are conspicuously commented upon by Sir Thomas Browne in his *Hydrotaphia*, who refers also to vestiges of the same people, left in the "East Bloody Burgh Furlong" at Caistor, near Yarmouth. Another Burgh in the hundred of West Flegg, Smallburgh, and Happisburgh were outposts to resist the landing of maritime assailants on exposed parts of the coast. These invaders can have been no others than the Saxons. The extensive provision shewn to have been made here against their attacks, sufficiently disproves the now prevailing theory of the Saxon Shore, *Limes Saxonicus*, having been so called because already possessed by them. It also evinces that the borders of the *Garruenos* were then productive of such rich harvests as to invite piratical plunderers, and so valuable to their rulers as to be worth protecting. They probably furnished a large share of those agricultural stores with which Britain replenished the granaries of neighbouring provinces during the fourth century, and for the preservation of which from the aggressions of hungry tribes Theodosius the Elder was deputed by the Emperor Valentinian I. in A.D. 367.

The imperial garrisons were withdrawn in 408, soon after which it is probable that some independent Saxon chiefs began to occupy the inner bays of this estuary as others did those of the *Metaris*^c, many of the villages on the former coast-line having names which terminate in *by*. The naval station at Burgh Castle was called by them Cnobersburgh, and so known in Bede's time. Our early chroniclers have very erroneously made Yarmouth the landing-place of Cerdic, the founder of the kingdom of Wessex, in 495; the town of Yarmouth was not in existence at that time, and it is extremely doubtful whether the sand-bank on which it was afterwards built was then raised above the level of the sea. The mistake originated in Robert of Gloucester or some other monastic scribe whom he copied having written Gernemuth for Cernemuth, the form given in Domesday Book to Charmouth in Dorsetshire, which was unquestionably the *Cerdices ore* of the Saxon Chronicle^d.

Another legend, of a rather later date, which is repeated by Higden and Spelman, tells us that Lothbroc, a Dane, was driven by a storm to Reedham, a village now several miles distant from the coast. It was probably another version of the history of Ragnar Ludbrok, the hero of so much Northern romance, but placed eighty years after his time. Even as a-fiction, however, the scene of the adventure would not have been placed in such a locality, had not Reedham, as its situation now denotes, stood on the inner

^c See "Memorials of the Wash," p. 488.

^d This question is fully discussed in a small volume of "Geological and Historical Observations on the Eastern Valleys of Norfolk," published at Norwich in 1826, from which some other facts here stated are also taken.

shore of the Rough Water, nearly opposite to its widest opening, and obvious to the course of a vessel drifting from Denmark before a north-eastern gale.

On a small solitary island in the northern branch, a monastery, afterwards the mitred abbey of St. Benedict de Hulmo, was founded about the year 800, and destroyed in 870 by the Danes, Ingwar and Hubba. It was in part restored during the following century; but to atone for the sacrilegious violence of his progenitors, Canute, in 1020 (deferred by some writers till 1033), erected a new edifice, and gave it a liberal endowment, which Edward the Confessor augmented. It was so constructed that its insular situation made it a strong fortress, and in 1381 it resisted successfully the attempts of the rebels under John the Litester to make themselves masters of it. Its end was remarkable. In 1530 William Rugge, or Reppe, was appointed abbot; six years afterwards he prevailed on Henry VIII. to make him Bishop of Norwich by relinquishing to the crown the lands which constituted the barony of the see, and replacing them by those of his abbey, which was thus exempted from the dissolution of the other English *cœnobia*. This source has supplied the revenues of all the succeeding prelates of the diocese; in virtue of this, during the reign of Charles I., Bishop Montague signed his leases and other official papers as "Richard, by Divine permission Lord Bishop of Norwich and Lord Abbot of St. Benedict de Hulmo." But after this transfer the buildings were deserted and soon fell into decay; they are now a desolate wreck, surmounting a gravelly knoll, which rises to the height of a few feet out of the surrounding low-lands on the banks of the river Bure.

The broken shores, bays, and islands of the *Garruenos* afforded to the Danes so firm a footing in this part of England, that they were never wholly dispossessed after the year 866. Fourteen years afterwards, King Alfred, by his treaty with Gunthrum, ceded to them permanent settlements there; but their East-Anglian kingdom did not extend far into the interior; from their subsequent depredations it appears that the principal towns there did not submit to them till the time of Sweyn and Canute. About the tenth century the subsiding waters of the estuary began to produce great changes. The stream on which *Venta Icenorum* stood became so shallow that it was no longer navigable; the markets were removed to the nearest point which the ships of foreign merchants and home fishermen could still reach; the new settlement was first called the *Vicus* by the descendants of the Latinized Britons, who still remained in the home of their ancestors, and continued their trading operations; the Saxons, who were the occupiers and cultivators of the land, brought their produce there for sale, especially the wool, which was their most valuable commodity, and denoted by their prefix the northern situation of their new place of resort; the *Nordvicus* grew up to be the port of the district, and afterwards, under the modernized name of Norwich, the chief city of the county. In the year 1004 Sweyn, King of Denmark, arrived before it with a powerful fleet, and plundered and burnt the rising town; the concourse of an established traffic soon repaired its injuries and raised it again out of its ruins. To this period may probably be referred a rude earthen urn, discovered about thirty years ago by the labourers employed in excavating a mound of gravel amidst the alluvial bed of the valley, now occupied by the terminus of the Eastern Counties Railway. This was a small island in the estuary, and appears to have been made the depository of the ashes of some Danish chief who perished in this expedition.

Spelman fixes the year 1008 as the time when the sand-bank in the entrance of the Rough Water became sufficiently secure from the invasion of the tides to be made the site of the town of Yarmouth. This date probably marks the stage in its gradual progress, when it acquired the character of a settled community. In 1050 it had seventy burgesses, according to the survey made by order of Edward the Confessor, and cited in Domesday Book. The latter document, however, shews that the marine flood then overspread lands far in the interior, for among the various forms of property registered in it, many villages now remote from the coast had, like those round the Wash in Lincolnshire, numerous *salinae*, or salt-pans; Runham had 19, Herringby 6, Stokesby 3, Thrickby 6, Filby 9, Rollesby 1, Hemesby 2, Clippesby 1, Burgh 2, Burgh Castle 3, Halvergate 1, South Walsham 3; some of these are now seven or eight miles distant from the sea. Soon after the Conquest the channel on the north side of Yarmouth, called Grubb's Haven, or Cockle Water, ceased to be navigable; the main branch of the *Garruenos* continued to issue by the remaining channel on the other side of the town, nearer to it than the present haven's mouth, and retained its name in the form of *Gerne*. The southern branch, still preserving its outlet at Kirkby Road, began to be known as the Waveney.

Connected with these changes, and coeval with them, is that singular formation, the Point, or Ness, in front of Lowestoff, a low foreland, now never surmounted by the highest tides, projecting into the sea 640 yards beyond the general line of the coast. This line is a range of cliffs, with a narrow beach at their foot, broken in their continuity, for a short space, by the former southern opening of the *Garruenos*. These cliffs have been formed by the action of the waves, abrading "a mild declivity of hill," which once descended to the edge of the basin below. The original base of the land thus washed away is shewn by a shoal, called Pakefield Flats, about a quarter of a mile wide, along the whole strand. The depth of low water on this shoal is from seven to ten feet, but on its edge the soundings increase to twenty and thirty. It is on a part of this shoal that the dunes lie which constitute Lowestoff Ness. To account for such a superstructure having been raised here, and at no other part of the coast, theorists have called in the aid of storms to roll up large stones from the bottom of a sea thirty feet deep, of winds to drift sands on the forming mass, and of currents to shape the embankment: they have overlooked the simple fact that it rises immediately on the northern side of the ancient southern entrance of the *Garruenos*; that the ebb-tide sets there invariably to the northward; that the turbid waters of the estuary, poured out in that direction, deposited there the sand, mud, vegetable, and other matter which they brought down from the inland districts; that these, mingling with the heavy substances that fell from the cliff and re-compacting the lighter, by the gradual accretion of ages accumulated the tract which now covers that part of the shoal, and excludes the sea there from its encroached dominion. The retiring tide still carried onward smaller quantities of the alluvium suspended in it, which the breakers extended along the shore in a ridge, regularly decreasing in its dimensions in proportion as the means of forming it were exhausted by the progressive depuration of the stream. In the same proportion the shoal was left uncovered, and at Corton, where the ridge terminates, regained its full width of a quarter of a mile, so that the coast there now exhibits precisely the same character as to the southward of Lowestoff. This foreland, evidently concreted beneath the surface of the sea, has been ranged at a secure elevation above it by the same natural

process which left the sands of Yarmouth dry and withdrew the waters of the estuary from its upperside valleys.

The continued access of the Flemish merchants to Norwich by the navigation of the *Garruenos* was attended with consequences of the highest importance. A proof of this intercourse is on record in the year 1075, when Ralph Guader, the Earl of Norfolk, having failed in an attempted rebellion against William the Conqueror, escaped in one of their ships to Flanders, from his castle of Norwich, then a strong fortress, leaving his wife to surrender it on the best conditions she could obtain from their offended sovereign. The advance of English civilization created new wants, some of which the Flemings supplied by bringing with them, when they came to purchase wool, the cloths, stuffs, and other fabrics produced from that material. This additional traffic contributed to raise the prosperity of a growing community, which was witnessed by Henry I. when at Christmas, 1122, he held his court in the castle, and was feasted by the earl, Hugh Bigod. Soon after this he granted the citizens their first charter. The security afforded by this privilege of local self-government induced the Flemings to take a step the consequences of which they did not foresee. To save the double expense of carrying over the raw material and bringing it back converted into textile wares, they began to manufacture it where it was grown: for this purpose, about the year 1132 they brought over artisans, implements, and looms; the spinning was commenced at Worstead, a small town in the neighbourhood, which gave to the yarn made there the name still borne by the same article, though now wrought by the intricate combination of spinning-frames and steam-engines; the weaving was conducted at Norwich, where it has since, under many vicissitudes, continued to employ a numerous population. Thus it is that the waters of the *Garruenos* floated into England the first rudiments of that manufacturing skill which, widely matured by industry and intelligence, has been the principal agent in raising our country to an eminence never attained by the proudest empire that glitters on the page of history. Honoured be the *Garruenos*! Other streams in our island bear more celebrated names, but none can boast a nobler memorial of early usefulness, or a better claim to enduring fame. Its subsequent changes are of too recent a date to be classed among its antiquities: by these it has been reduced to the quiet rivers of the Yare, the Waveney, and the Bure, with their tributary rills, some picturesque lakes, and the more expanded basins of *Broads*, stocked with fish and wild fowl; these, with verdant meadows and wide marsh-lands covered with grazing herds, with fertile corn-lands and busy railways, now occupy the space where once Britons dreaded the "Rough Water," where Roman, Saxon, and Danish navies strove for mastery or plunder in the conflicts of harassing warfare, and where in later times Flemings steered their peaceful prows, freighted with the merchandize of a lucrative commerce.