



navigation, has suffered much since the introduction of railways; still they continue of great benefit for cheap, if slow, communication. Of the highest commercial value still are the Thames, the Humber, the Mersey, and the Severn, but these four principal English rivers derive their importance mainly, if not entirely, from being arms of the sea.

Affected by its insular position, with no part of its land more than a hundred miles from the sea, and perhaps equally as much—though modern scientific investigation has not quite set this matter at rest—by that most remarkable current of the ocean known as the Gulf Stream, the climate of England is much milder than that of any other country in the same latitude on the continent of Europe, or in America. The mean annual temperature of England in recent years has been 49·7°,—that of summer averaging 60·8°, and that of winter 39·5°. The principal cause of this very high as well as very equable temperature, contrasting to a marvellous extent with that of other countries in like latitude, such as, for example, Northern Canada, is generally ascribed, with but few dissenting opinions, to the constant flow of heated water bathing the western shore of the island. The vast current of the Gulf Stream, originating within the land-locked area of the Gulf of Mexico, where the tropical sun is heating the waters as in an immense cauldron, after running for some distance eastward into the open ocean, then turns direct to the north-east, so that the first land it meets with, and which feels its effect, is the shores of Ireland and England. The actual amount of heat so given to England must be enormous, since the temperature of the Gulf Stream is at least 8° above that of the surrounding waters of the North Atlantic. A recent scientific traveller, making experiments in a voyage from England to the United States, found that, while in the Gulf Stream the water was at sunrise always not less than 4° above the temperature of the air, by a sudden change, on quitting the north-easterly current, the temperature of the waves was found to be, on the average, 4° below that of the air. England is thus in the position of a great hot-house, kept above the surrounding temperature by never ending currents of warm air.

Rainfall. But it is not warmth alone, but moisture, which the Gulf Stream gives to England. Here, as in the greater part of western Europe, the prevailing winds are from the south-west, bringing with them the warm, moist air of the great Atlantic current, and discharging it in rainfall all over the land. This is strikingly shown in the statistics of rainfall in England, which prove it far higher in the western than in the eastern counties, and greatest in those parts where the moist Atlantic air-currents are unimpeded by mountain ranges. In the extreme south-west, in Cornwall, from 22 to 47 inches of rain fall every year, and the average may be taken at 36 inches; while in the adjoining county, Devonshire, a little further inland, the average is but 32 inches. However, the high range of the Dartmoor hills causes a much greater variation in the amount of rainfall in the latter county than in the former; for while no less than 52·33 inches fall on the summit of Dartmoor, only 19·87 inches fall at Sidmouth, lying sheltered to the west. The same is the case further east, in Somersetshire, where 36·76 inches of rain fall annually at West Harptree, facing the Bristol Channel, while only 19 inches fall at Taunton, shut off from the moist gulf current by the Exmoor range. So it is everywhere, all over England, with the general result that in the west, and more especially the southern parts of it, there is more rainfall than in the east, the variations also being much less in the latter districts. In Dorsetshire the annual rainfall varies from 18·45 inches at Abbotsbury to 29·05 inches at Blandford, and in Wiltshire from 18·14 inches at Chippenham to 25·20 inches at Salisbury. Further

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eastward, in Hampshire, the variation is from 16·51 inches at Aldershot to 26·90 inches in Woolmer Forest; while in Sussex, nearer the sea, it is from 18·18 inches at Hastings to 32·79 inches at Chichester. In the metropolitan counties of Middlesex, Kent, and Surrey the variations are no greater than from 16·22 inches at Hampstead to 28·90 inches at Cranbrook. The highest rainfall anywhere yet ascertained in England and Wales was at Beddgelert, Carnarvonshire, where it reached the enormous amount of 101·58 inches in the year 1870. Lying on the western slope of the highest summit of the Snowdon range, close to the Atlantic, the little village received a surcharge of the moist air of the Gulf Stream.

Co-operating in their influence, climate and geological formation have given England a soil moderately fertile, yet adapted on the whole more for pasturage than for agriculture. In Wales, and other parts of northern and western England through which stretch the principal mountain ranges, the Silurian rocks, covered on their upper surface chiefly with hard gritty and slaty material, difficult to decompose by atmospheric action, form but little soil, so that the ground must to a large extent remain untilled, leaving it at the same time well adapted for pastoral purposes. Again, through the inland counties, from Northumberland to Derbyshire, there runs another long tract of hilly country, composed of carboniferous rocks, so constituted as to be unfit for ordinary agriculture, except where intersected by stream-fed valleys. Further east come the bleak moorlands of Yorkshire, which, barren in their nature, are being surrounded and intersected by some of the most fertile tracts in England, extremely well cultivated and thickly inhabited. On the whole, it may be said that while much of the high-lying ground is fit only for pastoral purposes, the low lands are more or less fertile, the extreme moisture of the air having caused the complete disintegration even of such old geological formations as those of the Red Sandstone. It is a somewhat singular fact that nearly all the districts of England, where fruit-trees are grown in large quantities, lie chiefly upon red rocks, sometimes of the Old and sometimes of the New Sandstone strata. There cannot be a doubt, however, that, on the whole, the soil of England would be very barren, repaying poorly the labours of the husbandman, but for the vast cover of warmth and moisture received from the waters of the Atlantic, which favours it as the sun of more southerly regions, and makes its fauna and flora equal to those of any country in the temperate zone.

The physical aspect of England has had little to do with its civil divisions, which are somewhat arbitrary, and remote in their origin. The division of the country into tythings, hundreds, and counties is generally attributed, on the authority of Ingulphus, to King Alfred, but it is more probable that he only systematized what already existed, in the general survey which was taken during his reign. English county names occur in history before the extinction of the Heptarchy, some of the smaller kingdoms of which, as Kent, Sussex, and Essex, became counties under the new political settlement. At the same time, the kingdom of Wessex was composed of counties with still existing names, Berkshire, Hampshire, Wiltshire, and Somersetshire. Under King Alfred's re-arrangement, virtually that of the present day, as far as the larger divisions are concerned, physical boundaries were frequently disregarded, which had its cause probably in the existence of the older political borders, such as those existing during the heptarchy. On the east coast of England, the divisions generally conform with the physical features: the Tyne, Tees, Humber, Wash, Yare, Stour, and Thames separate the counties of Northumberland, Durham, Yorkshire, Lincolnshire, Norfolk, Suffolk, Essex, and Kent. The same, however,

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is not the case on the south and south-west coast, the smaller rivers of which were disregarded in fixing the borders of Kent, Sussex, Hampshire, and Devon. Again, the east-running Thames divides counties from its mouth almost up to its source; while the westerly Severn forms not a single boundary, even for a short distance, from its spring down to its sea estuary. Finally, the dividing line between England and Scotland is mainly artificial in the west, while in the east are the natural boundaries of the Tweed and the Cheviot Hills.

Counties and hundreds.

Modern legislation has made few changes in the ancient divisions of England into counties, or shires, and hundreds. Each of the forty counties of England and twelve counties of Wales is still primarily divided into hundreds, although the borders thus formed are little more than nominal, the hundreds having become practically extinct as an administrative subdivision. Originally signifying a district containing a hundred families, the division lost its meaning entirely with the unequal increase of population, and at present, while some hundreds count their population by hundreds of thousands, others have not gone far beyond the number that gave rise to the name. At the census of 1871 the number of hundreds, or their equivalents, for which the population was separately shown was 818. In naming the subdivisions corresponding to hundreds, the ancient word "wapentake" is still adopted officially as regards the counties of York, Lincoln, and Nottingham, — Yorkshire, exclusive of the city of York, and Lincolnshire being each divided into three parts, consisting of a given number of wapentakes. In Cumberland and Westmoreland the hundreds are called "wards," while in Kent they are grouped into "lathes," and in Sussex into "rapes."

Boroughs.

Intimately connected with the division into hundreds in former times was that into boroughs. The old Saxon borough, in fact, was nothing more than a hundred, or a group of hundreds, encircled by a moat, a stockade, or a wall. All the inhabitants of the borough, or burgesses, were freemen, bound to each other as neighbours, sharing common burthens, and responsible for each other to surrounding communities. As the boroughs grew in size and importance, the hundred lost its former significance; still for a long time the original principle was kept in view of having the same subdivision, organization, and government for town and country populations. Many of the ancient boroughs have now fallen into decay, while new boroughs sprang up in many parts of the country with the rapid progress of population which commenced after the middle of the last century. In 1835 a great change was made in their constitution, and the limits of many were enlarged by the adoption of new boundaries. The change was the result of the labours of a parliamentary commission appointed "to inquire into municipal corporations."

Municipal corporations.

The parliamentary commissioners experienced, at the outset of their work, considerable difficulty in ascertaining the exact number of corporate bodies in England and Wales. Acting upon the best information they were able to collect, they visited and instituted inquiries in 285 places. It was found that 16 of them contained corporations of an exclusively manorial character; that 89 could claim to be properly boroughs; and that the remainder, 178 in number, required legislation to settle their rights and privileges. The latter, accordingly, were placed under the operation of the Municipal Corporation Act, 5 and 6 Will. IV. c. 76. Subsequently to the passing of this Act, two more old boroughs, Ashton-under-Lyne and Hartlepool, were brought under its provision by the grant of new charters.

It was provided for by section 141 of the Municipal Corporation Act that any towns, on the petition of the inhabitant householders, may have granted to them charters of incorporation if Her Majesty, by the advice of the Privy

Council, shall think fit to accede to the request. The number of towns which thus obtained charters has since 1835 been 45; but the provisions of the Act were not universally adopted, and to this day a number of towns, some of considerable importance, are still without municipal organization. At the census of 1871, the total number of municipal boroughs was 224, containing more than one-fourth of the population of England and Wales.

Claiming high rank among the municipal corporations of England, and forming one of the most ancient and celebrated subdivisions, or jurisdictions, of the country, are the Cinque Ports. The Cinque Ports existed as self-governing boroughs from a very early time, though the exact date of their incorporation is not known. It is stated in *Jeake's Charters of the Cinque Ports* that in the records of the town of Rye there is a memorandum that "the five Ports were enfranchised in the time of King Edward the Confessor." The five ports originating the title were Hastings, Romney, Hythe, Dover, and Sandwich. To these were added the so-called "ancient towns" of Rye and Winchelsea, which were placed, as regards rights and privileges, on the same footing as the original Cinque Ports. Each of the seven towns, with the exception of Winchelsea, had one or more "members," or "limbs," placed under the mantle of its privileges, very important for many centuries, one of them being an almost entire exemption from taxes levied by the king. In early times these "members" were in a great measure dependent from their respective ports, but the old connection has long ceased. Most of the old "members" are at present corporate towns, and therefore completely independent, and only the few that are not remain under the municipal jurisdiction of their parent ports. The still existing privileges of the Cinque Ports, including jurisdiction of the south coast from Seaford in Sussex to the mouth of the Thames, are of no great importance, but they are favoured by a large share of parliamentary representation. (See also vol. v. p. 786.)

Unlike the civil divisions of the country, those formed for parliamentary representation are mainly of recent date. Vast changes in the character of this representation—the origin of which is involved in much obscurity—were made by the Reform Bill of 1832; and others, scarcely less important, by the statute c. 30 and 31 Vict. c. 102, known as the Reform Act of 1867. By the latter Act, the existing franchise was not only much enlarged, but new divisions of counties were made for electoral purposes, while the limits of many boroughs were extended, new ones created, and old ones excluded from the list. The new parliamentary boroughs created by the Act of 1867 were Burnley, Chelsea, Darlington, Dewsbury, Gravesend, Hackney, Hartlepool, Middlesbrough, Staleybridge, Stockton, and Wednesbury; a representative was also given to the university of London, and additional ones to Birmingham, Leeds, Liverpool, Manchester, Merthyr Tydfil, and Salford. On the other hand, 4 boroughs were disfranchised immediately by the Act, and 7 more in 1868, the year after its passing, while 36 were reduced to one representative instead of two. In the new division of counties made by the Reform Act of 1867, Cheshire and Lincolnshire were separated into North, Mid, and South; Devonshire and Derbyshire into North, South, and East; Essex into North-East, North-West, and South; Norfolk into West, North-East, and South-East; Somersetshire into East, Mid, and West; and the West Riding of Yorkshire into North, Mid, and South; with minor alterations. These re-arrangements of parliamentary representation were more than justified by the changes of population brought about by time. Within the parliamentary boroughs the population increased 16.1 per cent. from 1851 to 1861, and 23.3 per cent. from 1861-71; while outside them the increase was only 8.9 per

cent. in the first, and 5.5 per cent. in the second decennial period.

Much less systematic than the parliamentary are the judicial divisions of the country. There is in all of them a striking want of coherence, even as regards the administration of the law. The circuits of the judges do not consist of any definite number of the county-court circuits, nor are the county-court circuits aggregates of the petty sessional divisions. For the purposes of assizes and jail delivery, there are in England eight circuits of the judges, besides the jurisdiction of the central criminal court in London. The eight circuits of the judges have received the names of the Home, Midland, Norfolk, Oxford, Northern, Western, North Wales, and South Wales circuits, indicating the counties which they embrace. Based chiefly on the old boundaries of hundreds, all the counties of England and Wales have divisions for the purposes of special and petty sessions. By the authority of various Acts of Parliament, the justices at quarter sessions are allowed to alter and rearrange these sessional divisions, making them conformable, if so inclined, to the boundaries of poor-law unions. The last census returns show that in 1871 there were 700 sessional divisions in England and Wales, besides 193 boroughs with petty sessions, 97 of the latter having also separate quarter sessions. For police purposes there were, at the same time, 622 divisions, including 167 boroughs possessing independent police control.

Ecclesiastical divisions.

Quite as early as the division of the country into hundreds was that into ecclesiastical districts. But they varied much, both in number and extent, up to the time of the Reformation, and there have been constant alterations up to the present time. The ancient division of the land for ecclesiastical purposes was exclusively into parishes, or districts containing a church; but as the population went on increasing, and additional places of worship came to be erected, some portions of the old parishes were generally assigned to the newly formed districts. First known simply as chapelries, these districts gradually acquired boundaries as definite, and as fully recognized by law, as those of the parent parish. In recent years, the term parish has acquired a rather uncertain meaning, being used in a twofold sense,—the clergy adhering to the old signification of ecclesiastical district, while the poor-law authorities make it the designation of boundaries separately rated for the relief of the poor. In the census returns for 1871, the term "civil parish" was adopted for the poor-law parish, to distinguish it from the ecclesiastical parish. The exact number of ecclesiastical parishes was not ascertained at the census of 1871, which only refers to "ecclesiastical districts," 3000 in number; and in the absence of other official information, it is difficult to calculate it, the more so as new parishes are being constantly formed by the action of the Ecclesiastical Commission, established in 1836, by Act 6 and 7 Will. c. 77. According to estimates based on the returns of the *Clergy List*, there are at present about 13,500 ecclesiastical parishes in England and Wales. They are grouped in 728 rural deaneries, with further division into 78 archdeaconries, 30 episcopal dioceses, and 2 archiepiscopal provinces.

Besides the divisions already enumerated, there are various others of minor importance, or not in frequent use. Of this character are the so-called lieutenantancy subdivisions, established to carry out the laws affecting the militia. Within the boundaries thus formed, lists are kept containing the names of all men liable to serve, under certain circumstances, in the militia of England and Wales, so as to keep the force in permanency. A subdivision of another kind is that of the country into highway districts. These divisions were constituted under the Act 25 and 26 Vict. c. 61, which gave power to justices in general, or quarter

sessions, to form special boundaries, consisting of parishes and places not within the jurisdiction of other boards or legal authorities, for the better management of highways. The Act came into effect in 1863, but its provisions, being optional, were not widely adopted; it led to the formation of not quite 500 highway districts. Their extent and population was not given in the census returns of 1871.

In the introduction to the report on the census of England and Wales, the registrar-general furnished a list of the various divisions of the country, showing their complexity. He classed the whole of the existing divisions, including those made for the special purpose of taking the census into five orders, as follows:—

Order.	Subdivisions.	Number of Subdivisions.
I.	England.....	1
	Wales.....	1
II.	Registration Divisions.....	11
	Counties Proper.....	52
	Parliamentary Counties and Divisions of Counties.....	95
III.	Hundreds, Wapentakes, Wards, Liberties, Sokes, and Boroughs.....	1,042
	Petty Sessional Divisions and Boroughs.....	893
	Lieutenancy Subdivisions.....	621
	Poor Law Unions.....	647
	Registration Districts.....	626
IV.	Registration Sub-districts.....	2,195
V.	Parishes, Townships, or Places with separate returns of population.....	15,416
	Enumeration Districts.....	32,543
VI.	Parliamentary Boroughs.....	198
	Municipal Boroughs.....	224
	Local Board Districts.....	721
	Towns with Improvement Commissioners.....	88
	Other Large Towns.....	96
	Highway Districts.....	443
	Ecclesiastical Districts.....	3,000

Commenting upon the extraordinary amount of divisions and subdivisions of England and Wales, the registrar-general remarks that "it is a peculiarity of this country that nearly every public authority divides the country differently, and with little or no reference to other divisions; each authority appears to be unacquainted with the existence, or at least the work, of the others." He gives at the same time his opinion that "one simple connected series of subdivisions of the country" would not only simplify the census takings, greatly disturbed at present by "the multiplicity, entanglement, and want of harmony in the groups," but would still more be an aid towards reducing "the difficulties of local administration."

II. Area and Population.—Vital Statistics.—Emigration.

Until the beginning of the present century, there existed no other knowledge of the actual area and population of the country but what was given in the vaguest estimates. But there can be little doubt that the population of England and Wales was almost stationary for centuries, owing chiefly to want of intercommunication, which led to famines, more or less severe—it being a common occurrence that, while one county, with a good harvest, was revelling in abundance, the people of the adjoining one were starving. It is calculated, on the basis of a number of parish registers, that in 1650 the population of England and Wales numbered 5,450,000, having probably risen less than half a million during the lapse of a century. In the course of another century, when there was a feeble commencement of road-making, the increase amounted, probably, to close upon a million, the calculated population of 1750 being 6,400,000. From that time began a marked increase, and at the taking of the first census, in 1801, it was ascertained that the