Proceedings and Reports

OF THE

BELFAST NATURAL HISTORY AND PHILOSOPHICAL SOCIETY.

SESSION 1928-29.

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PROCEEDINGS AND REPORTS

— OF THE —

BELFAST NATURAL HISTORY AND PHILOSOPHICAL SOCIETY

———FOR THE———

SESSION 1928-29.

EDITED BY
ARTHUR DEANE, F.R.S.E., M.R.I.A.,
HON. SECRETARY.

Belfast:
THE NORTHERN WHIG, LTD., COMMERCIAL BUILDINGS, BRIDGE STREET.

1930.


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BELFAST NATURAL HISTORY AND PHILOSOPHICAL SOCIETY.

[ESTABLISHED 1821.]

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The membership of the Society consists of Shareholders, Annual Subscribers and Honorary Members.

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In 1914 a new class of membership was created including persons of either sex, to be elected under the bye-laws of the Society, and admitted by the Council on payment of ten shillings per annum. Such members have all the privileges of the Society, and take part in any business of the Society not affecting the ownership of its property. In 1917 an Archæological Section was founded. Persons wishing to join the Section must be members of the Society and pay an additional minimum subscription of five shillings per annum.

A general meeting of Shareholders and Members is held annually to receive the Report of the Council and the Statement of Accounts for the preceding year ending 31st October, to elect members of Council, to replace those retiring by rotation or for other reasons, and to transact any other business incidental to an Annual Meeting.

The Council elect from among their own number a President and other officers of the Society.

Each member has the right of personal attendance at the ordinary lectures of the Society, and the privilege of introducing two friends for admission to such.

Any further information required may be obtained from the Hon. Secretary, at 7 College Square North, Belfast.

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Founded 5th June, 1821.

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Name, etc. .....

[Please write name in full.]

To be filled up by the Candidate

Description .....

Residence .....

....

....., being desirous of becoming a Member of the Society, I, the undersigned member, recommend..... as a suitable candidate for election.

Dated this.....day of....., 19.....

Signature of Member .....

[Candidate must be known to the Member signing this form.]
[*All applications are subject to the approval of the Council.*]

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PROCEEDINGS OF THE BELFAST NATURAL HISTORY AND PHILOSOPHICAL SOCIETY.

SESSION 1928-1929.

OPENING OF THE SESSION.

Tuesday, 13th November, 1928.

Presidential Address.

Lecturer:

Professor J. SMALL, D.Sc., F.R.S.E., M.R.I.A., Professor of Botany, Queen's University, Belfast.

Subject:

"THE VEGETATION OF ULSTER."

Illustrated by Lantern Slides.

[No Abstract.]

Synopsis:—Vegetation as distinct from plant species; types of Ulster vegetation—maritime; sand-dunes, salt-marshes, shingle beaches, rocky shores, cliffs, "Alpine" meadows; marshlands and lakes; moorlands, low moor, high moor, alpine grassland. Ad Altiora.

Tuesday, 27th November, 1928.

Professor James Small, D.Sc., President, in the Chair.

TWO UNPUBLISHED CHARTERS OF JOHN DE COURCY, *PRINCEPS ULIDIAE*.

By E. Curtis, M.A.,
Professor of History, Trinity College, Dublin.

UNPUBLISHED CHARTERS in Latin relating to JOHN DE COURCY, *Conquestor Ultoniae*, preserved in the Register of the Canons of St. Mary's Abbey, Ashby, Northants (British Museum Library, Egerton MS. 3033. pp. 137-8). Translated and edited by Edmund Curtis, Professor of Modern History, Trinity College, Dublin.

1. John de Courcy gives lands in Ulster in free dower to his wife Alfrica.*

Know all, present and to come, that I, John de Courcy, gave, granted, and by this present charter of mine have confirmed, to my espoused wife Alfrica in dower when I took her as my lawful wife at the door of the church the whole land of Clanfahelan—saving fifteen carucates of land which I gave to the monks of Furness—as also two knights' fees in Clancoscri and Clanfergelan and Dunechti, and a third part of Imseuene, in which third part she shall have Wuemcholla and Inganeuaht, and I will add to her of my adjoining land, so that she may have the whole third part of Imseuene and a third part of Cul-in-thueskert, in which third part she shall have Balimacgilleholem and Laganclunnedalih and that island which is called Incheomeran, and [? a third part] in Lochequen and the Tuath which is called Omuren, and in Lecale, Kenalleman, and Clanfergus, and Kilbride and Farduchi-beg, with all their appurtenances, and in Huneath, Clankelte, and I will add to her that she have the whole third part of all my lordship of Ulster.

* A photograph of the original Latin text of this charter may be seen in the Record Office of the Government of Northern Ireland, Belfast.

I have given also to her all my land which I have in Middleton with all its appurtenances. Now all the above-named lands were entirely free and quit of all claim on the day when I took her to wife at the door of the church and granted the said lands to her.

These aforesaid lands I will and firmly enjoin that the said Alfrica, my espoused wife, hold and possess in free dower freely and quietly, fully and entirely, in monasteries, chapels and tithes, in wood and plain, in meadow and pasture, in waters and mills, in ponds and streams, in paths and ways, in waters sweet and salt, in mosses and moors, in fishings and fisheries and in all free liberties, with sac and soc, toll and team and infangenthef, in gallows and pit and irons and duellum.

With these witnesses . . .

CHARTER 2.

Know all present and to come that I, John de Courcy, gave and granted, and by this my present charter have confirmed, to God and the Church of the Blessed Mary of Ashby and to the canons there serving God, for the good of my soul and the souls of my father and mother and my ancestors, in free, perpetual and pure alms, one virgate of land in the vill of Middleton—that namely which William de Stanes held—to have and to hold freely and fully within the vill and without the vill, with all appurtenances to the said land belonging. And so that this charter may remain forever firm, stable and unbroken, I have affixed my seal to it.

These [witnesses] . . .

CHARTER 3.

Know all and to come that I, Warin FitzGerold, with the assent of my wife *Alfrica Kurce, granted and by this my present charter have confirmed, for the good of my soul and the souls of my ancestors and heirs, to God and the church of St. Mary of Ashby and to the canons there serving God, one virgate of land in Middleton with all its appurtenances, the which John de Courcy gave to them in his

* "Alfrica" is in the text, but this is certainly a scribal error for "Alicia," since the wife of Warin FitzGerold, who was niece of John de Courcy, was named Alice; see the attached pedigree.

body—namely that virgate which William del Ston held, as also the said William with all his issue and chattels—in perpetual and pure alms, free of all secular service even as by the present charter John de Courcy attests. And for this foregoing grant and confirmation the aforesaid canons have granted to me one palfrey.

With these witnesses . . .

NOTES ON THE FOREGOING CHARTERS.

The MS. Register of the Abbey of St. Mary of Ashby, Northants, contains three charters relating to the famous John de Courcy, which have never been noticed or published. They are written in a 13th-century hand and appear to have been copied from the original deeds, as the omission of witnesses shows. John de Courcy, though his family was of Somerset, had inherited land in Middleton, Northants, as our pedigree shows, and hence the scribe of the Abbey inserted the whole of the first charter in the Register, though most of it refers to Ulster. The Irish names, which were strange to the scribe, are probably not very correctly written. The second and third deeds are concerned entirely with Middleton. The date of the first one must have been about 1180, when John de Courcy married Alfrica, but after the founding of Inch Abbey, which took place in the same year. The second cannot be dated; the third must have been given after de Courcy's death in 1219, for it speaks of his making the grant which it confirms, "in corpore suo," i.e., while still alive.

The family to which John de Courcy belonged were lords of the Honor of Stoke Curci in Somerset, and their origin and descent have been traced as follows by two eminent authorities.[1]

John de Courcy was a younger brother of William III., lord of Stoke Curci, and uncle of Alice, sister and heiress of William IV. The arms of the Courcy family displayed eagles, and this emblem, we are told by Giraldus Cambrensis, was carried by John de Courcy in the battles he fought in Ulster.

Alice, who after the death of William IV. was a great heiress, was married firstly to Henry de Cornhill, and after his death to Warin, son of Gerold, "the King's Chamberlain." We note that, though she was twice married to men

of importance, she retains in the records and in our third deed her maiden name of Curci.

We now turn to John de Courcy's one, and, as far as we know, only marriage. In 1180 he was wedded to Alfrica or Affreca, daughter of Godred, King of Man, and sister of Ragnall, who ruled after his father from 1187 to 1229. The first English conqueror of Ulster held his territory there from 1177 to 1204 more like an independent prince than a vassal of the English Crown. Indeed, when we seek for a title for him we must borrow that which Jocelyn, the monk of Inch, in dedicating his life of St. Patrick to John de Courcy, calls him, namely, *Princeps Ulidiae*, or that of another mediæval scribe, *Conquestor Ultoniae*.[2]

Deprived of his land in Ulster and reduced to insignificance, John de Courcy died in or shortly before 1219. King John had already ordered that some portion of land in Ulster should be provided for Alfrica, and on the death of De Courcy a royal writ directed that his widow should have her rightful dower out of his lands.[3] Where Alfrica spent her last days is uncertain, but it was probably in Ulster. She had in 1193 founded the Abbey of St. Mary *de Jugo Dei*, now Grey Abbey, in the Ards, and therein she was at last interred and her tomb and effigy made.

Giraldus Cambrensis says that John de Courcy left no children behind him, and our records bear out the statement.

Only the first of these deeds need now occupy us. By this De Courcy leaves to his wife land in Middleton, which must have come to him from his mother, and various lands in Ulster. The charter illustrates the wide extent of John's lordship in Ulster and the Gaelic place-names which it gives, even if corruptly rendered by the scribe, are of value as being among the earliest record of these names in Anglo-Norman documents.

To identify them is no easy task, even with the help of certain guides.[4] It should be remembered that the Irish "clan," "cenel," or "ui," which several of them contain, are words signifying "family," "race," and "grandsons" in particular, and in general a tribal territory.

Taking the names, then, one by one:

"The land of Clanfahelan" obviously lay along Strangford Lough, since next to it are mentioned fifteen plowlands

given to the Abbey of Inch, near Downpatrick, by De Courcy. The Irish name of the abbey site was Inis Cosgraidh, no connection with Courcy, however.

The first part of "Clencroscri" is either "Clan" or "Glen"; the latter part is clearly the same as "Cosgraidh," and one may infer that it was on Strangford Lough.

"Clanfergelan" I can make nothing of, but it seems to have been adjacent to the foregoing.

"Dunechti" would seem to be the modern townland and parish of Dunaghy in Kilconway barony, County Antrim. One of the nine "tuoghs" or divisions of the Route was called "Magheredunagh" or "plain of Dun Echdach." The village of Clough close by was called Clogh-maghera-Donaghie. Dunaghy, according to O'Donovan, was the ancient Dún Echdach, and "Dunechti" is very close to the latter.[5]

"Imseuene" is a slightly corrupt form of "Inis Semhne," which, as well as Rinn Semhne, was the Irish name of Island Magee. It is frequently called "Ransevyn" in Anglo-Norman records.

"Wuemcholla" and "Inganeuaht" are evidently in Inis Semhne, Island Magee. The former may be "Ui meic Colla," "land of the descendants of MacColla," the latter suggests "Rinn gainimheach," "sandy point."[6]

"Cul-in-tueskert" is the "angle" or corner of Tweskard. The latter, in Irish Tuaiscert, was a district stretching from Rathlin to the river Ravel, now forming the deanery of Tweskard. "Cúl-an-tuaiscirt" is represented by the North-east Liberties of Coleraine (see Annals of Loch Cé under 1171).

"Balimacgilleholem" is in Cul-in-tueskert; it is clearly "Baile-mic-gillacholuim," "townland of MacGillacholuim."[7]

"Laganclunnedalih" is puzzling. There was a Cluain Dallain, now Clonallon, near Warrenpoint. The whole name might mean "the Laggan or river valley of the meadow of Dallan." But there was a church of Dalnach in the barony of Cary, north Antrim, which may be the place; in this case the Irish form must have been "Lagan-cluana-Dalnaigh."[8]

"The island called Incheomerean" is obscure. Have we here the Irish word "muirbhthean" (compare Merrion

strand near Dublin), "a sandy stretch of coast"? It may refer to what is now the townland of Ballymorran, which lies between Killinchy and Strangford Lough. This was an important place, and King John rested there in his visit in 1210.[9]

"Louchequen" is Loch Cuan, the Irish for Strangford Lough.

The "Tuath called Omuren." This Tuath or small tribal district may be connected with Incheomerean, and Ballymorran.

"Kenalleman" I would identify with an Irish territory called "Cenel Demain." MacFirbis' Pedigrees make Deman the founder of the Kings of Dál Fiatach, a subdivision of Dalaraidhe. From him was named the district of "Cenel Demain," and in the 12th century its ruling chief was Gilla-na-naemh O Labhradha or O Lourada, *Dux Kyneltemnean*, who witnesses King Murchertach MacLochlainn's charter to Newry Abbey.

Reeves locates this race around Rath Temayn, now Rademan, a townland in the Kinelarty portion of the parish of Kilmore.[10]

According to Hogan, these O'Lowrys kept a portion of their ancient demesne until the 17th century, and had land in the parish of Moira, County Down, till 1691.

"Clanfergus" may be the land about Carrickfergus.

"Kilbride" is probably the townland of that name in the parish of Bright, County Down.

"Farduchi-beg" is puzzling. It suggests (land of) "the men of the little territory" ("duithche beag") or "of the little sand-dunes" ("dumhach," a sandbank). Reeves says there was a district called Duogh ("dumhach") Connor in the barony of lower Antrim, which contained the sixteen towns of Connor. Nearer than this I cannot go.

"Huneath" suggests the name Omeath, which goes back to the Ui Meith Mara, a tribe lying between Newry and Carlingford Lough. But the word may be "Huveath," and if so might refer to the Ui or Uibh Echach, that is Iveagh, now represented by two baronies in West County Down.

"Clankelte" is probably "Clankelle" or Clankelly, a territory which lay between Comber and Drumbo in the parish of Lisburn, County Down.

So ends our list of place-names. Though obscure, they add something to our knowledge of De Courcy's lordship. The grants to Alfrica include lands stretching from Coleraine to the northern shore of Carlingford Lough and reaching inland into Down and Antrim. The places granted would be those that were in his own demesne and not yet sub-infeudated or left to Irish chiefs, and they would probably include some of the richest parts of his demesnes.

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1 Sir Henry Maxwell Lyte in *Somersetshire Arch. Soc. Proc.* LXVI., pp. 98-126, and William Farrers in *Honors and Knights' Fees*, p. 108

2 The Register of Furness Abbey, Lancashire, describes the founding of the Abbey of Inch ("Ynescuscre") in 1180 by "vir illustris Johannes de Curci, Conquestor Ultoniæ."

3 Calendar of Close Rolls, John and Henry III., p. 149 and p. 401.

4 Hogan : *Onomasticon Goidelicum;* Orpen : *Ireland under the Normans;* Reeves : *Ecclesiastical Antiquities of Down and Connor.*

5 Reeves *op. cit.* p. 332. In 1333 a Mandeville held a knight's fee in Dunaghy (Orpen).

6 This suggestion I owe to Dr. Goddard Orpen.

7 Mr. H. C. Lawlor writes :—The Deanery of Twescard in the ecclesiastical organisation of the fourteenth century, was apparently strictly bounded on its western side by the river Bann. The civil division of Twescard in the thirteenth century, however, extended across to the west of the river, including at least the parish of Killowen or district known as Drumtarsy (see Orpen, I.U.T.N., vol. iii., pp. 288-90). "A third part of Cul-in-Twescard, in which third part she shall have Balimacgilleholem" I take to refer to Magilligan, which may have, in De Courcy's time, been included in the civil district of Twescard. Orpen (*op. cit.* iv., p. 142) refers to a charter from Richard de Burgh conferring his lands of Rennard (*Rinn Arda Magilligain*), with the adjoining Keenaght, upon his sister Egidia on her marriage with James, the Steward of Scotland, in 1296; this seems to be the same territory as that mentioned in De Courcy's charter.

8 See Hogan (*op. cit.*) for Cluain Dallain. Reeves (*op. cit.*) gives Dalnach in the ecclesiastical taxation of 1306 : "The Register of Muckamore receives a grant of one carucate in Dalnach which was called Karnrey, made to the Abbey by Galfridus le Croft." Hogan, under Dalriada, gives among the churches founded therein by Patrick, Domnach Cainri in Cothraighe—i.e., Cainri's church in the barony of Carey.

9 This interesting suggestion is due to Mr. H. C. Lawlor. Ballymorran is not now an island, but may have had water round it or partly round it then.

10 Reeves (*op. cit.*), p. 358. The site is called in an ancient life of St. Mocholmog "castellum Rathtemayn in quo erat Rex Ultorum."

11 Reeves (op. cit.), p. 344. Possibly "Huveath" and "Clankelle" should go together, and thus would mean a portion of Iveagh lying near Lisburn. There was also a Muntercallie (Muintir Ceallaigh) which comprised that part of Ahoghill parish which lies in the barony of Lower Toome, west of the Main Water.

PEDIGREE OF THE COURCYS OF STOKE CURCI.

Richard, Lord of Curci in Normandy, fought at Hastings and obtained three Manors in Oxfordshire.

William (I) de Curci = Emma, heiress of William de Falaise of Stoke in Somerset, afterwards called Stoke Curci. She brought this barony to her husband.
"dapifer" to Henry I., acquired 25 Knights fees in various countries.

William (II) de Curci = Avice, dau and heiress of William le Meschin, who brought her husband 17 Knights fees in all including Middleton in Northamptonshire.
Lord of the Honor of Stoke Curci.

William (III) de Curci = the daughter of Richard de l'Aigle.

John de Curci "Conquestor Ultonie" O.S.P. 1219. = Alfrica, dau of Godred, King of Man. Tomb at Greyabbey, Co. Down.

Jordan de Curci ("brother of John de C. Prince of the realm of Ulster, killed by an Irishman of his household, 1177" — So Roger of Hovenden).

William (IV) de Curci O.S.P.

Alice sole heiress = (1) Henry de Cornhill
(2) Warin FitzGerold

Tuesday, 27th November, 1928.

Lecturer:
Mr. H. C. Lawlor, M.A., M.R.I.A.

Subject:
" SOME NOTES ON THE ANTIQUITIES OF ANTRIM AND DOWN ASSOCIATED WITH THE DE COURCY AND DE LACY PERIOD."
[No Abstract.]

The Mound of Downpatrick and Rathkeltchair or Dundalethghlas; had de Courcy a stone-built citadel in Down? The Church of St. Nicholas and the Castle of Carrickfergus; Castles attributed to de Courcy.

Tuesday, 11th December, 1928.

Lecturer:
Rev. Sydney P. Whitehouse.

Subject:
" SAMUEL BUTLER AND CREATIVE EVOLUTION."
[No Abstract.]

Synopsis:—The man and his message. Butlerianism the basis of much modern philosophical and biological teaching. Butler's lone attack on the materialism of the latter half of the nineteenth century. His challenge to Darwinism and the mechanistic theory of evolution. Butler champions the pre-Darwinian biologists and re-states the case for creative and purposive evolution. The Butler-Darwin quarrel. Nothing to do with their respective views on evolution. Butler's attack on current biology and current theology. His complete vindication after the tide of Darwinism had passed. The philosophical implications of Butler's teaching.

Tuesday, 8th January, 1929.

Lecturer:
Professor J. K. Charlsworth,
D.Sc., Ph.D., M.R.I.A., F.G.S., Professor of Geology,
Queen's University, Belfast.

Subject:
" WORLD CLIMATES OF THE PAST."

Tuesday, 12th February, 1929.

Prof. James Small, D.Sc., President, in the Chair.

THE EVOLUTION OF FORTIFICATION IN THE ROMAN EMPIRE.

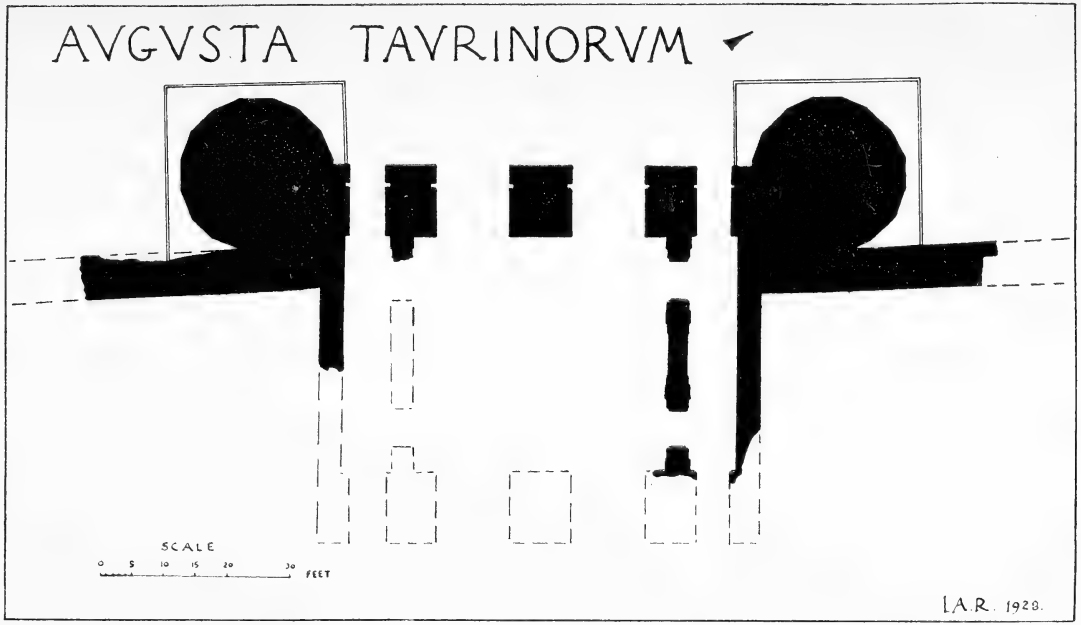
Illustrated by Lantern Slides.

By I. A. Richmond, M.A.,
Lecturer in Classical Archæology and Ancient History, Queen's University, Belfast.

I.—INTRODUCTION.

Generalisation about the Roman world is out of fashion. After the labours of Mommsen and Rostovtseff, students are engrossed in smaller considerations, whose results will become the basis for fresh deductions. So, for the moment, the collection of detail proceeds apace and precludes an estimate of the whole. Yet in some fields the collection has advanced rather further than in others; and Roman fortification is a case in point. As yet, treatises thereupon are rare. For the West there may be cited that[1] of Baurat Schultze, tedious and inadequate; for the East, we can turn to the concise account[2] by Gertrude Bell. But much work has been done upon individual sites all over the Empire, from Transjordania to Britain, and from Westphalia to the Dobrudja and the Crimea. Much, indeed, still remains. But lines of classification are emerging; and these may be of interest to my readers, if only as illustrating the method of archæological thought, as applied to rich and tangible material.

When the first century of our era began, two traditions of military architecture existed in the Mediterranean world. The first was an old heritage, the tradition of Town-walls; and it was originally common to the folk of the Levant, remaining simple until the fifth century B.C. It was then refined by the necessities of Greek warfare, until it passed, in the next four centuries, through almost every form known before the introduction of high-explosives. The second tradition was that of the Roman army; and it, in turn, was based upon the field entrenchment, whose erection was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the training-ground of Roman discipline. The two traditions seem quite independent in origin. The first goes back to the hill-top settlements which are common to most primitive peoples. The second is commonly supposed to be a new contribution; but it has been remarked[3] that it is suspiciously like the pile-dwellings of the terramare folk in plan; and the question has recently been asked[4] whether the very similar Assyrian war-camps may not have influenced Etruscan augural planning, and hence the Roman plan. Yet, however that may be, it is clear that the army, even in the earliest days of the Roman Empire, was not concerned with the building of stone walls. That was the affair of civil engineers, and it concerned peaceful towns, where soldiers were not usually employed. The army continued to build in its own fashion on the frontiers of the Empire, where towns were highly exceptional. And, thus isolated, the army-tradition perished in the end, largely owing to the decrease in the efficiency of the legions, and gave way before the town-tradition, which was better suited to the new tactics. Since it lasted for the shorter time, it may be examined first.

II.—EARTHWORKS OF THE ROMAN ARMY.

Constructional development in the Roman Republican army is the subject of literary studies by Fischer[5] and Jacobi[6], while the excavations of Schulten[7] at Numantia have supplied much actual material. Here, however, the temporary works with which these authorities mostly deal are irrelevant, except that they served as the model for the permanent Forts and Fortresses. On this basis their salient features must be described.

The outline, and chess-board plan, of the simple earthwork are familiar enough. The four sides are straight and parallel, but the angles are set out in sweeping curves, easier to defend and more difficult to denude by cross-fire. The most important obstacle is the dry ditch, dug to a standard pattern, with sloping sides and a small channel at the base. The gates are entered obliquely, the lines of direct entry being closed by one of two obstacles, the straight traverse (*tutulus*) and the lunate traverse (*clavivula*), a continuation of one end of the rampart. The rampart (*agger*), heaped breast-high, is formed of the upcast from the ditch, and is meant as a breastwork, not as a fighting-platform. Such are the special marks of Roman

construction in its elementary form; and the internal arrangement is equally distinctive, but it does not concern us here.

The important stage, for our purpose, arrives when the army in the field is besieged or somehow compelled to remain inside the temporary structure which it has built. It is then easy to dig the ditch deeper, or to add more ditches outside it, using the upcast therefrom to heighten the rampart, which will be crowned by a line of stakes (*vallum*) or by an osier breast-work (*lorica*). The gates can be furnished with wooden towers, and closed either with doors or with some less permanent obstacle, like a wall of sods or a barricade of pointed stakes and thorns (*ericius*). The rampart can be strengthened still further by towers, or reinforced by backward-projecting platforms of earth and sods for holding the Roman spring-guns, powerful machines worked by torsion or steel spring, which would shoot for three hundred yards. At the back of the rampart earth-ovens can be dug for the baking of hard-tack (*bucellum*); dug-outs can be made for the comfort of officers, and the tents of the men can be protected from the weather by low screens of turf. The camp thus begins to change into a permanent post, and, if only its tents were replaced by wooden buildings, it would be very like the early Augustan forts of Germany.

At this stage in development, however, the tactical significance of the fortified enclosure changes. When the camp is temporary, the first considerations in building it are the time and the size of the building force; the strength of the defences comes second. But the order is reversed when the fortress becomes permanent. Time rarely presses the builders, and their chief concern is the strength of the work. Thus, in developing the temporary design to meet permanent needs, there are special faults, inherent in the model, to be eliminated.

The biggest difficulty was the rampart, which, in the ordinary field-fortification was never really safe. An attacking party could always fill with faggots and brush-wood the ditches which protected it, and to carry it by assault. They could tear out the palisade with bill-hooks, and cause the rampart to collapse forwards into the ditch whence it had come. An insufficiently compacted rampart would even give way of its own accord under the weight

of its defenders. Again, the sloping face of the ordinary rampart, dictated by the angle of rest was not steep, and therefore the less difficult to mount. On every front of the Roman Empire this problem attracted attention, and was solved in different ways.

(a)—The Spanish Solution. On acquiring Spain, in B.C. 218, the Romans took over from the Carthaginians the difficult task of controlling the upland tribes; and there the Republican armies first learnt, in a grim school, how to deal with wild and revengeful Highlanders. From the wall-building methods used on the spot, whether Carthaginian or native in origin,[8] the Romans seem to have learnt the wall-building technique used in the semi-permanent camps of Numantia. These provincial walls were of rammed earth, built in temporary wooden framing, and some of them lasted for more than two hundred years. The Roman army at Numantia[9] did not hesitate to use a similar technique, but sheathed its walls in dry masonry, with vertical face, surmounting them with a stone-built parapet. This gave a strong wall, very difficult to tear down, and, incidentally, fireproof. Nor is this method confined to one epoch of the Numantine campaigns. All the camps, constructed at widely different times, and by different armies under different commanders, have this particular type of rampart. So it may be argued, with some cogency, that this type of construction was the regular tradition of the Spanish command, thoroughly suited to the dry climate and heavy rains of the province. Finally, these examples all date before 133, when Numantia fell, and are much the earliest remains of Roman army engineering known at the moment. No other fortifications of the Republican age, except those[10] of Sertorius, have yet yielded up their secrets. It is therefore the more noteworthy that these second century sites should have given us, in already complete form, the archetypes of so much that occurs in the Imperial fortresses.

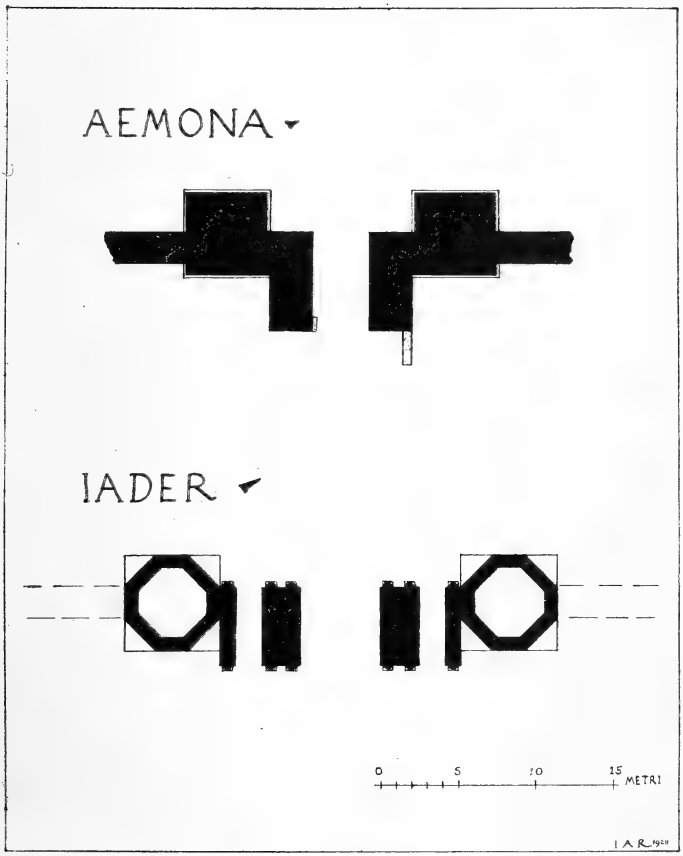
(b)—Roman Germany. On and beyond the Rhine, Augustan forts in plenty herald the age of standard fortress-building. Here, in the dense forest lands and wetter climate, the medium favoured is earth and wood. The soil is kindly, even yet, and has preserved in plenty the collapsed and broken wooden structures. It is possible to detect at least two types of wooden frame-work in con-

tinual use. Rarer types, no doubt the experiments of inventive engineers, exist; but the arguments for their reconstruction are unsuited to inclusion in this little sketch.

The first type is represented by the ramparts of Haltern[11] and Oberaden,[12] two fortresses in the Lippe valley, the gateway of Free Germany. A wooden framework takes the place of the stonework met in Spain; heavy oak posts hold firmly, at front and back, a vertical wooden frame which contains the earth rampart. A duck-board walk seals the top, and is protected by a parapet of timber and merlons of osier. The solid structure seems to have been about eight feet high, increased to an overall height of twelve feet by the parapet and merlons. Wooden towers were furnished at intervals. The result was thus a very firm and compact rampart, taking up the minimum amount of space, difficult to scale and guaranteed to endure for some time.

The second type surpasses it in constructive ingenuity. This is common on the banks of the Rhine itself, and the examples spread through the whole Augustan age. They are represented by the station of the Rhine fleet, at Alteburg,[13] near Cologne, and the Forts of Remagen I,[14] and Urmitz I and II.[15] Here the constructors took the view that the front line of posts supporting the vertical face would not be strong enough either to bear the pressure of earth behind them, or to resist an attempt to uproot them from the front. It was therefore determined to support the front line with external struts, tied in turn to a line of buried sleeper-beams. At Alteburg, the most complicated example, the struts are also tied below ground to the uprights. A reversal of this process, with strut reaching backwards through the rampart, and held in position by the weight of the earth, has recently been discovered at Munningen,[16] in Rhaetia. The front of the rampart thus becomes so securely anchored that it cannot be torn out during an attack.

There is, however, still no attempt to cope with another very serious danger, the attack with flaming missiles, so effective against the wooden frames of the ramparts. Rather than choose fire-proof material, the defenders were content to rely upon the volume of flame being insufficient to set the structure alight, or hung out wet rags and raw hides as a protection, as Caesar did a generation before.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The only rampart examined which has shown signs of permanent protection is that of Vetera,[17] the great fortress at the junction of the Lippe valley with the Rhine. Here the Claudio-Neronian fortress has a great earth rampart with a sloping wooden front. If the evidence is sound, this front was covered with roof-tiles. But the device is unique, and the evidence is not perhaps indisputable. It is therefore better to await better evidence.

(c)—Britain. Two effective media for rampart building have not yet been considered, namely, clay and sods. These are best examined in Britain. Not that Roman Britain was the home of these particular methods, any more than Spain or Germany monopolised their characteristic constructions, but because the British frontier lands (Wales, the Pennines and Southern Scotland), yield clay and sods as the most suitable material.

A rampart of clay or of sods offers in some degree a solution of the difficulties of construction so far described. Clay will not, it is true, stand upright, and it must have wooden duck-boards on top of it; but it is fire-proof, and its slippery slopes give no foot-hold to those who try to rush them. Consequently, not a few early Roman ramparts in Britain, beginning with the great ramparts of York I[18] and Caerleon I.[19] and ending with forts like Manchester,[20] Coelbren[21] and Bainbridge,[22] are built of this solid material, which defies so well both Time and Man. Contemporary, and almost as effective for the same reasons, are the fine sod ramparts of Slack[23] and Castleshaw,[24] followed by the Cumberland series, Throp[25] and Haltwhistle Burn.[26] The Isthmus-forts of Scotland, Bar Hill[27] and Old Kilpatrick,[28] take us to 140-42; while the Wall which connects them is a mixed structure, of turf in the West and clay in the East.

III.—THE EARTHWORK TRADITION APPLIED TO MASONRY.

By the second century the translation from earth and wood to masonry was overdue. The frontiers of the Empire were now fixed; their tactical problems were all quite clear; and their garrisons were much more stationary. All the conditions for consolidation had therefore arrived, and the experiment was first tried in Britain.

(a)—Britain. The new fashion began in Wales just after the turn of the century. Here the Legionary Fortress

of Caerleon[29] and the little upland fort of Gellygaer[30] were both equipped with the new rampart. The old earth bank still remained the main unit of construction, but it was revetted in front with a vertical stone wall, and behind with a low retaining wall. Stone gateways and towers took the place of wooden erections. Rapidly, the fashion spread throughout the province. In 107-8 the Legionary Fortress at York[31] was fortified in this style. The type crops up again in the Cumberland Fells at Hardknot[32]; and, finally, in the first years of Hadrian's reign, it is adopted as the standard for the Forts[33] between Tyne and Solway which the frontier Wall was to connect. So much for new buildings. Adaptation to the new type followed rather more slowly, and always sporadically, as chance offered. Carnarvon,[34] for example, did not receive the new type of wall until the age of Severus. Nor, indeed, was this type of wall always chosen for new Forts. The builders of the Scottish Wall, in 142, preferred to fit some of their Forts with the older type of turf rampart.

(b)—Germany. German experiments produced a particularly interesting transitional type, which appears at Saalburg II,[35] erected under Hadrian. It has equally high vertical faces on both sides, built with small rough stones, which are not cemented with mortar but with earth. Faces of this type could not stand vertical by themselves. They were therefore tied together with an internal framework of beams, set cross-wise and length-wise, amid rammed earth filling. This system is as remarkable as any associated with the Roman army. Its connexions[36] are with Gaul and Central Europe; and since the troops who used it were Tyrolese Rhaetians, it is evident that Celtic troops are here carrying out their own system of building to an essentially Roman plan. Altogether this is a most interesting blend of Italian army-tradition and native practice. But it was, after all, only a freak. Saalburg III had a wall of normal type, like most German forts.

IV—THE HELLENISTIC TRADITION.

The antecedents of the Augustan town-walls of Italy have not yet been fully defined. But it is clear that they were largely based upon the series erected by Sulla, of which Ostia[37] is an outstanding example, and that Sulla found the style ready to hand in Campania, in common with much other

Hellenistic engineering. The handbook of the military engineer Vitruvius embodies the whole experience of the Hellenistic world in tactics, so far as the form of walls and towers is concerned, and takes its employment for granted. And this experience was very wide, for the Hellenistic world had nothing to learn in the theory of siege-craft as unaltered by high-explosives, and had devised every imaginable form of defence.

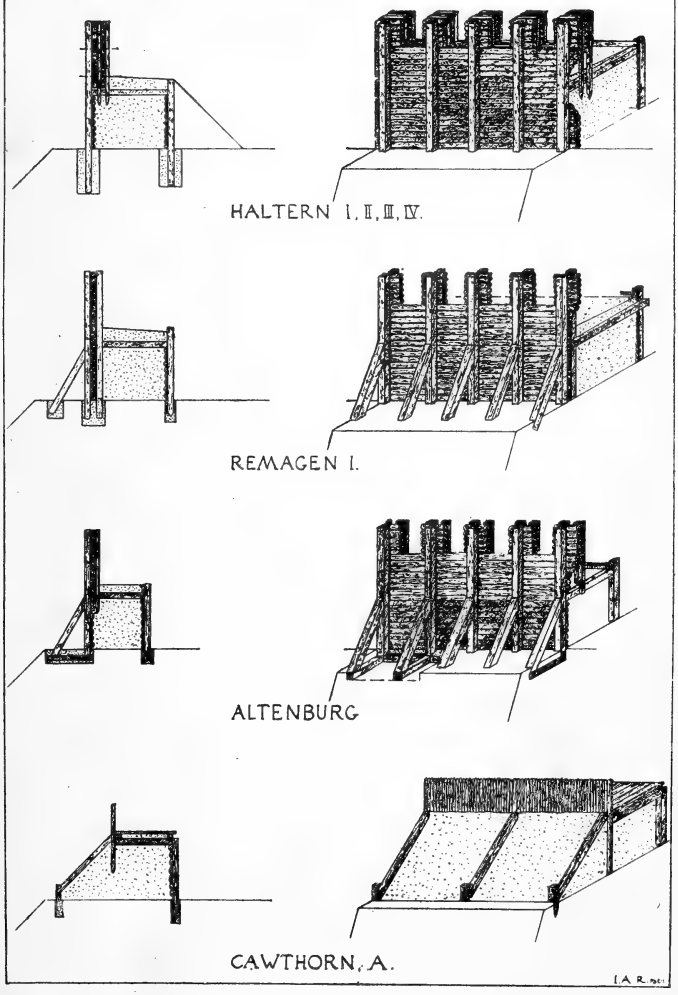
(a)—The Augustan Age: Italy, Gaul and Spain. It might be expected that the Augustan age would witness a great development in the style of town-wall building, especially since Roman concrete provided a better medium of construction than Hellenistic builders had at their disposal. Yet, on the contrary, the Augustan wall-plans remain simple, and not radically diverse in type. This was chiefly due to three reasons. The building of town-walls was usually undertaken by retired military architects, who were used to think in simple forms. Roman town-planning of the age did not invite the introduction of complications in fortifications which surrounded a chess-board plan. The walls themselves were not meant to deal with serious danger, which was far removed, and served rather as customs and police barriers, for which a cheap and simple form sufficed.

The simplicity of the Augustan conception may be demonstrated by the Gateways of Aemona[38] and Iader,[39] both early foundations of Augustus. Iader is the more elaborate, with a set of polygonal towers: but these are small and of the very simplest kind. By combining the square towers of Aemona with the more elaborate entrance of Iader, we recreate the typical gateway of first-century Spain and Gaul. It has nothing to do with the military tradition; yet it owes its sobriety to the same half-religious, half-utilitarian ideals of town-planning which governed the Roman science of mensuration, and had originally given to the Roman camp its regular form. No rule is without its exceptions, however, and the half-moon Gates of Form Iulii (Fréjus),[40] must be mentioned, together with the little group which they inspired. But the generalisation stands, remaining true for two centuries.

(b)—The Trajanic East. The first hint of a forward movement comes from the Eastern frontier, in Syria and Egypt. Here very different conditions of supply were obtaining from those in the West. Good timber was scarce;

earthworks were only to be constructed with boulders, or by using sand-bags, as the Parthians did at a later date.[41] Ditches are almost impossible to dig or to keep open. It was therefore necessary, from the first, to construct permanent fortresses in stone. Unfortunately, it is not known what the first-century fortresses within these provinces were like. Many of the garrisons were quartered in towns,[42] and Vespasian's fortresses on the Upper River are not likely to be discovered until politics in the Near East have assumed a very different complexion. But Trajan's work is recognisable, in a great line of fortresses stretched along the fringe of the Syrian desert, and feeling out into its depths. Two large ones,[43] Dmêr and El Leggun, are well-known, and their particular feature is their equipment with great round-fronted towers, for enfilading, and polygonal angle-towers. Exactly like them is the big fortress at Babylon,[44] outside Cairo, now forming part of a great Coptic monastery. These magnificent structures, as Gertrude Bell pointed out,[45] were the direct patterns for the fortified palaces, or hunting-boxes, which the Ummayid Caliphs erected in the same desert. Thus it becomes clear that, while masonry technique is only beginning to be part of the military tradition in the West, on the Eastern frontier it is two centuries ahead.

Why was it that these eastern fortresses were so far in advance of the western world, despite the co-ordination of the Army which erected them? Local conditions provide an answer. It is clear that the earth and wood, and the climatic conditions, for constructing the western type of fortress were lacking. But this cannot be all, since in the field, as the earthworks of Masada[46] show, the Eastern army held to all the normal conventions of the Roman tradition. The rest, however, does seem accounted for, by the large projecting bastions, which provide the archer with an opportunity for enfilading and cross-fire; and the bow had been the chief local weapon in the Syrian area for centuries.[47] Hence came all the archer-cohorts of the Roman army in the first century,[48] from Palestine, Iturea, Hamath and Palmyra. Again, the eastern army was always drawn from local sources, because of the difficult climatic conditions, which a westerner could not stand. It is therefore not surprising that the eastern frontier should early develop its own type of fortification, which conforms to local conditions in every detail. Yet all the buildings are typically Roman


HALTERN I, II, III, IV.
REMAGEN I.
ALTENBURG
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in type within these fortresses, and there is thus no doubt that their construction was organised by the Roman military official. As in Germany, Roman and provincial traditions blend. Archer-corps are rare in the early Roman army, and only they can use towers for cross-fire. Thus, the only place where they occur outside Asia, in the Dacian steppe,[49] is that which produces just the same type of fortress,[50] and demands similar tactics. This is the exception which proves the rule.

V—THE SPREAD OF EASTERN TYPES WESTWARD IN THE THIRD CENTURY.

During the third century these tactics of the desert were adopted all over the Empire. Their method was to pursue the enemy with cavalry, and to shoot him with arrows; and this was quite different from the traditional Roman tactics, by which the enemy was brought to a standstill, and attacked hand-to-hand, with spear and sword. Now the early Roman frontier system, designed to deal with raids, was a compromise between the two methods. For it relied upon a network of cavalry and light-infantry posts to catch the ordinary moss-trooper, and a heavy-armed reserve, the legion, to bring a massed invasion to a standstill. This compromise worked well, if pressure on the frontiers was not too great. But it failed to deal with the problem of repeated massed attacks and it was quite unsuccessful in dealing with mounted invaders. Furthermore, the legions turned out to be truculent watch-dogs, and almost ruined the Empire during the third century by their interference in politics. Their old character, of conquering Italians, had now completely vanished; and they were now provincial frontier-police, with very strong local feelings. In short, the old forms now had entirely new meaning, and had imperceptibly lost their virtue. The time for their revision had come.

Recovery came under Diocletian and Constantine. The legions were reduced in size, and became the nucleus of a new field-force, consisting of cavalry detachments, commanded by a provincial Duke. This was a mobile force, specially suitable to deal with swift raiders. The old frontier garrisons, as in Britain, often remained the same. But where there was need for a new frontier, or where an old frontier demanded drastic re-organisation new buildings began to appear, of a type suited to the new conditions.

(a)—Third Century Forts. A good example of the new tactical arrangements is the fort-system of the Saxon Shore[51] in Britain. This is well-known, but the tactics behind the disposition are less generally understood. The forts contain a cavalry garrison. They are situated from twenty-five to fifty miles apart, and their garrisons patrol the interval between them. In particular, they repell any landing on the coast. But sea raiders are difficult to meet; nobody knows where they are going to land; and, once landed, they may outnumber or ambush the patrol. It is therefore important that the coast-patrol's local base-fortress should be defensible against attack, when the patrol is away, or dead. In other words, it must be designed to meet the worst conditions. There are two ways of achieving this result. The towers must be suited to archery (by this time universal), or to spring-guns, which a small crew can work with deadly effect. In fact, the West has now to meet the tactics of the East, which gave rise to the great projecting towers of El Leggun. But in a second respect there is a notable difference. The early Eastern fortresses had low walls, designed to be manned by a maximum garrison. The walls of the fourth-century fortresses are meant to serve a minimum garrison. They must therefore be thick and high, so as to defy the battering-ram and the scaling-ladder. They have become, as it were, sea-walls, from which no attack is ever conducted, and which repell by their very massiveness. Any offensive tactics are based on the towers. This is, then, the type of the third- and fourth-century fortress, represented by the Saxon Shore Forts of Britain,[52] and the Danube[53] or Rhine[54] fortresses of Constantine and Julian. There was little room for any fundamental variation; but the hollow round tower of the German frontier had some interesting ramifications, from Susa,[55] near Turin, to the lower Rhine.[56]

(b)—Town Fortifications: 3rd to 5th Century. Some interesting half-way cases between the first and fourth-century types occur in the Towns, which the third century found in a condition ill-adapted to deal with a sudden assault by raiders. Some of the towns had their old first century walls, massive, but old in style; others had none. How did they bring their defences into line with the new conditions?

An Italian example may head the list. Rome[57] itself was equipped with an entirely new Wall in 271-5. This is

an early example, and therefore simple. The wall itself is of lowly proportions, and the towers, placed at hundred-foot intervals, are of the old type. Yet they are built to contain spring-guns, enfilading the curtains which they protect. Later, this same fortification was much altered, and its early form has only recently been recognised. Towns whose walls were already old, brought them up-to-date by the addition of new towers. Towards the end of the third century, Turin[58] received magnificent polygonal Gate-towers, commonly ascribed to the Augustan age, but clear additions, probably made in 265, when the Alemanni and Iuthungi reached Lake Garda. Many of the Gallic towns, for example Senlis,[59] now received completely new walls. In Britain, London[60] and Caerwent[61] built external bastions, and both examples can be dated to the early fourth century, though London would seem to have been fortified in two distinct phases. There was a good deal of variation in types. In the Balkans, Salonae[62] and Thessalonika[63] preferred a pointed type, against rams.

The final results of these tendencies are best exemplified by the stately walls of fifth-century Rome and Constantinople. Both of these are in very fair preservation to-day. The former was completely re-modelled[64] by Maxentius and Honorius, who rebuilt the wall and erected new gates respectively. By the addition of a gallery, on top of the old rampart-walk of 271-5, the wall became a mighty barrier, sixty feet high; and some of its towers were made higher still. In front of it a Ditch was added, begun by Maxentius[65] and finished by Belisarius[66] in 536. The Gateways, especially the marble-bastioned Portae Appia and Flaminia, were stupendous, monumental in their dignity and impregnable in their size. Their scale completely outdoes that of the Constantinople gates. Constantinople, however, is remarkable, in that the remains of the Land-Wall have been entirely untouched since the fall of the City in 1453, except at the Castle of Yedi Kulé. It is therefore possible to trace[67] even yet the remains of the system of machinery by which the wall was defended. The original system was built in 412, and modified by the addition of an outer wall[68] in 447. The new wall cut across the tactical scheme of the old one, to which we must turn if we are to understand the theory behind the design. Each battlement of the original sixty-foot wall had a box-like structure built behind the

embrasure, meant to hold firmly a small spring-gun. Outside the wall, at some distance, was a great moat, which could be flooded at need. The spring-guns on the wall were thus designed[69] to keep up a curtain-fire at the outer edge of the moat; and even if the moat were passed, the enormous wall defies all attempt to break through it or to scale it with ladders. In this way, the safety of the capitals of the Empire was assured.

Both these schemes are, however, more than a costly insurance; they are at the same time a confession of failure.[70] For centuries the Roman government had sought to keep unwanted barbarians out of the Empire. And now, to embark upon a great campaign of town-wall building, was to admit that it had already abandoned the country areas, so far as the protection of everyday life was concerned, and was staking all upon retaining possession of the towns. Frontier troops and forts still existed; but the Government had recognised that they were in no way adequate to prevent the serious invasions of folk who intended to settle within the Empire, and that they could do no more than police-work. It thus becomes evident that, in the end, the whole economic life of the so-called Dark Ages was to depend upon the settlement of the differences between the towns and the new inhabitants of the country-side. And the story of the *modus vivendi* which they found or did not find, lies behind the birth of all the national traditions of Europe that are worth having. Thus the development of Fortification implies that mediæval conditions started in fact much earlier than we have believed them to begin in theory; and they give to Bury, who started mediæval history with Diocletian, an abundantly justification.

FOOTNOTES

For " The Evolution of Fortifications in the Roman Empire."
By I. A. RICHMOND.

1 Schultze, Bonner Jahrbucher, Heft 118. Die römischen Stadttore.
2 Bell, The Palace and Mosque of Ukhaidir, pp. 106-110.
3 Haverfield, Ancient Town-Planning, p. 58-60.
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9 See especially, Numantia IV.
10 Schulten. Account not yet published.
11 Haltern, Westfälische Mitteilungen, V, pp. 87-100. For a general survey of these and other types, see Germania Romana, 2nd ed., 1924, vol. I, Die Bauten des römischen Heeres. Bamberg.
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26 Haltwhistle Burn, Archæologia Aeliana, Ser. 3, vol. V, p. 213.
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28 Old Kilpatrick; The Roman Fort at Old Kilpatrick, S. N. Miller (1928).
29 Caerleon, see n. 19.
30 Gellygaer, Proc. Hon. Soc. Cymmrodorion, 1908-9, pp. 140-1.
31 York, see n. 18.
32 Hardknot, Archæologia. 1928.
33 Macdonald, Roman Wall in Scotland (1911): Second edition pending.
34 Carnarvon, Wheeler, Segontium and the Roman occupation of Wales, p. 64, figs. 3, 23, 24. Cymmrodorion Soc. Publication.
35 Saalburg III. Saalburg Jahrbuch, IV, p. 10-39.
36 Caesar, Bell. Gall. vii, 23: cf. Cichorius, Traianssäule, II, pls. 54 and 84.

37 Ostia, Calza, Guida storico monumentale, p. 31.
38. Aemona. Jahrbuch für Altertumskunde, VII, fig. 4.
39 Iader. Jahrbuch für Altertumskunde, IV, p. 194.
40 Fréjus; Donnadieu.
41 Ammianus Marcellinus.
42 Tacitus, Ann. xiii, 35.
43 Brunnow-Domaszewski. Die Provinz Arabia.
44 No good account of this fortress exists. I owe my information to a short article in the Italian illustrated paper, *L'illustrazione*, vol. 52, No. 2, pp. 32-6.
45 See note 2.
46 Masada. Hawkes, Antiquity, June, 1929.
47 Organised archer-corps go back to Assyrian times; the use of the weapon is even older.
48 Cheesman, The Auxilia of the Roman Imperial Army, p. 181-2.
49 Pârvan, Dacia, p. 191.
50 Troesmis. Account not accessible : personal observation.
51 Disposition : Ordnance map, Roman Britain : Mothersole, The Saxon Shore : Macdonald, Die Küstenverteidigung Britanniens gegen das Ende der römischen Herrschaft, in Fünfundzwanzig Jahre Römische-Germanische Kommission.
52 Plans : Macdonald, loc. cit.; Ward, Romano-British Buildings and Earthworks.
53 Danube. Pârvan, Dacia.
54 Bericht der Römische-Germanisches Kommission. Vol. X, pp. 86-167. Rhine, Anthes.
55 Susa. No good plan exists; personal observation.
56 Cf. Jünkerath, Anthes, loc. cit. p. 103.
57 Rome. Ashby, Topographical Dictionary of Ancient Rome, s. v., *Muri aureliani*. Richmond, Bollettino Comunale di Roma, LV (1927), pp. 41-67.
58 Turin; personal observation, confirmed by R. G. Collingwood.
59 Senlis; personal observation; see also, Blanchet, Les enceintes de la Gaule romaine. Paris, 1907.
60 London, Royal Commission of Ancient Monuments, vol.
61 Caerwent, Wheeler, Antiquaries Journal.
62 Salonae, Dyggve, Recherches à Salone, vol. I, p. 18, plan B.
63 Thessalonika, Tafrali, *Salonique* : personal observation.
64 Maxentius, Mommsen, Chronograph ii, p. 648 : Honorius, Claudian, de VI Cons. Hon., 529-34.
65 Mommsen, *loc. cit.*
66 Procopius, Bell. Got., i, 14; iii, 24.
67 Personal observation. The point is not noted by Millingen, Byzantine Constantinople, London, 1899, and the new treatment, begun by Leitzmann, Abhandlungen der Preussischen Akademie der Wissenschaften 1929, Phil-Hist. Klasse, Nr. 2, has not yet reached this point.
68 Marcellinus Comes, Chronica Minora, II, 82.
69 See my notes, Durham University Journal, xxv, No. 6, pp. 399-405.
70 For a fuller statement of this view, see Roman London, Anc. Mon. Comm. Historical Introduction, by Wheeler.

Tuesday, 26th February, 1929.

Lecturer:

Mr. David E. Lowry, J.P.

Subject:

"WOMEN GREAT IN IRISH LEGEND AND HISTORY."

[No Abstract.]

Synopsis:—Banba, Maeve, Grania, Dierdre, Aude, Gormflaithe (mother of Muircheartcach of the Leather Cloaks), Gormflaithe (wife of Brian Boru) and Dervorgilla. Their influence on their own and on later times—from prehistoric to the times of the Anglo-Norman invasions.

Tuesday, 12th March, 1929.

Lecturer:

Dr. W. R. Dawson, M.R.I.A.

Subject:

"THE COUNTRY OF KING ARTHUR IN HISTORY AND LEGEND."

Illustrated by Lantern Slides.

[No Abstract.]

Synopsis:—Meaning of "Country of King Arthur." The historic Arthur a Roman or Roman Briton. End of Roman system in Britain. Arthur "Dux Bellorum" or "Imperator." His probable period and birthplace. The Twelve Battles. Last Battle and Death. Reputed Burial at Glastonbury. The legendary King Arthur. Geoffrey of Monmouth and twelfth-century chivalry. Growth of legend and romance. Places connected with legend in South-West Britain, Wales, North of England, Scotland, Midland and Eastern England, Brittany. Ireland and "La Beale Isoud."

19th March, 1929.

Mr. E. J. Elliott, President, in the Chair.

Mr. Geoffrey Garrod, M.A.

"ENGLISH FOLK SONG."

Abstract.

INTRODUCTION.

1. English only. Until recently there was a general belief that except for a few isolated instances the English had no national "folk song." 30 or even 20 years ago it was generally supposed that the English peasant alone of all the peasants of Europe was and had been unable to express himself in terms of dance and song. "Grotesque supposition" now finally disposed of—recent researches by a number of expert and enthusiastic musicians. Hundreds collected — remarkable quantity — quality equally remarkable.

Quite as beautiful as German or any other national songs. This leads to

2. What is "Folk Song"?

Contrast with Art Song—conscious composition.

Folk Song essentially the product of untutored minds—a spontaneous expression of emotion.

Contrast with Popular Song—such as "Tom Bowling" or "Sally in our Alley."

Folk Song really a German word ("Volkslied"=National Song or Peasant Song)—introduced into England comparatively recently, i.e., only when it became necessary as a result of the discovery that such a thing existed in England. 1878 Webster, 1884 Stormonth—not mentioned.

Century Dictionary definition—"A song of the people; song based on a legendary or historical event or some incident of common life."

Folk Song—"The song or genus of song created and evolved by the common people"—of communal, not individual composition. Synonymous are the words "country song," "peasant song"—as contrasted with "town song," or "art song."

Real contrast is between song which is the product of "spontaneous and intuitive exercise of untrained faculties" and that which is due to the "conscious and intentional use of faculties specially trained for that purpose."

Vagueness of definition—remember the folk song movement in England is a very recent movement. All generalisations are dangerous—here especially so—only tentative.

I. ORIGIN.

What is the dominant feeling of mankind? Not far wrong if I said it was "self-expression"—may take the form of expression of his emotions or of expression of incidents in his life history—i.e., the expression of internal or external events. Also, natural inclination to be "reminiscent"—(cf. bore who tells stories about his adventures)—hence arises the tendency to dramatize his adventures or recite them as narrative.

Now, which is easier to remember—prose or verse? Again, which is easier to remember—spoken narrative or sung narrative?

Verse more easily memorised than prose, and musical verse than spoken verse—each helps the other along and out. In other words, rhythm and music are valuable aids to memory.

What, then, more natural than that the peasant or uneducated class (before board-schools had invaded every country village, thereby tending to substitute parrot-like repetition for spontaneous expression)—(and N.B. all folk songs collected from very old peasants—"oldest inhabitant"—children and even middle-aged peasants ignorant and rather contemptuous of folk song and dance, with rare exceptions) should express itself in form of verse and rhyme set to musical phrases?

N.B.—"Song created by common people."

"Created." How created? Must have had some origin.

Two possible views—(1) Composed by individuals, but by uneducated individuals—peasants, unfamiliar with any musical technicalities—handed down and passed abroad solely by oral tradition. (2) Evolved by the community—i.e., not only handed down but actually created by common oral tradition. View (1) undoubtedly more plausible—"as poem implies poet—so song implies composer." View (1)

held by Bishop Percy (Percy's Reliques) and Sir Walter Scott (to whom we owe preservation of much folk lore and ballads). View (2) held by the brothers Grimm (Grimms' Fairy Tales) and many others.

True answer probably half-way between two views. Thus imagine A invents a story and tells it to B—B hands it on to C, C to D, D to E, &c.—each either unintentionally (through forgetfulness) or intentionally (with supposed object of "improving") altering a bit here and a bit there—change order of incidents, names of persons, locality of story, &c. Finally reaches Z in totally different form—unrecognisable as same story that A told B (e.g., sitting round table and passing a story or sentence). Who is author?—Not A—he wouldn't recognise it—not Y, he heard it from X. Author has disappeared—authorship belongs equally to all who have taken part in handing it on—originally individual—now communal.

But suppose A tells original story to several B's, and each B to several C's, &c., &c., with variations and alterations in each repetition. Z's will be innumerable—each with different story. Perpetual state of flux, very rare for two singers of same song to sing it in quite same form—widely different forms may be found in same village—on the other hand, very similar forms in villages 100 miles apart. "Evolution"—"Communal."

Of these variant versions of same original story which most likely to survive? That which meets with most general approval—hence folk poetry always approaching more and more nearly to expression of feeling of community—elimination of individualistic expression for communistic expression.

And exactly same is true of music—(illustrate as above)—e.g., "Domum" at Winchester.

Finally purely personal element eliminated—true "folk song" the result.

This process the same on a vastly larger scale as that which goes on in the mind of every individual creative artist.

Compare Beethoven—long and painful labour—note books—enormous difference between most of his A's and Z's—(Schubert and Mozart exceptions).

Must admit that original of every tune and every ballad or poem was deliberately created by some individual—but evolved through countless and continuous changes—"improvements."

Folk song therefore doubly communal—(1) in authorship, (2) as expression of communal emotions.

Remember "folk song" includes words and music—inseparably bound together.

Art-Song—individual composition—personal ideas—written on paper, and unalterably scattered abroad in one form.

Folk-Song—product of a community—communal feelings and tastes—orally transmitted—always in state of flux—always existing in many forms.

II. EVOLUTION.

Connotes the three principles of continuity, variation, and selection.

(1) Continuity.

Where books are almost unknown, newspapers a rare event, and writing generally an uncommon or even impossible mode of expression, memory fills the gap. Folk singers' amazingly accurate memory vouched for over and over again. They can't read or write—but they can remember—just as a blind man's hearing is extra keen and accurate, so is an illiterate man's memory extra retentive and trustworthy.

Moreover, point of honour to transmit words and music exactly as heard—variations almost invariably unconscious and unintentional.

(2) Variation.

Folk Singer attaches, as a rule, far more importance to words of his song than music—well-known fact. Real object is to relate the incident in narrative form—music used chiefly as a guide and help—(Different from many modern drawing-room ballads—in which, though music is poor, words are often absolute rubbish—and in which, also, the tune-author gets almost all the credit, the words-author being paid a miserly 1%). Folk Song collectors agree that most even of the best and most intelligent peasant singers are unable to recognise a tune or distinguish one from another. Their appreciation of the words, of the story they're telling, is conscious—of the tune, of the music to which the story is sung, is sub-conscious (not quite unconscious), cf. Breton proverb among peasant singers—"Celui qui perd ses mots, perd son air" (Cecil Sharp). No doubt the peasant in Vergil's Eclogues was labouring under

the same difficulty when he said—"I remember the words but I can't think of the tune." (Memini numeros, si verba tenerem.) (With most cultured singers it is probably the other way round—they may forget the words, the story, but can always remember the tune. Of course, the ideal is that one should immediately suggest the other, inseparably linked in the brain; then if you remember one you remember the other—but if you forget one you forget both. Cf. remembering names by faces, faces by names—"I know your name so well, but I can't think of your face!") Peasant fiddlers similarly associate tune with the dance danced to it —"If only I could remember the dance I could play the tune."

What bearing has all this on question of variation? This —if singer is subconscious only of tune, while fully conscious of the words, he is quite likely to introduce unconscious variations in the tune—much less likely to do so with words. Moreover, an intelligent or emotional singer will unconsciously vary the tune here and there to suit the varying character of the words. Hence you may find three or four variations of the same musical phrase in the same song, according as the words suggest variation. But words never varied except by forgetfulness. Sometimes, however, tune variations are made for other purposes—e.g., love of ornament (long sustained note either cut short or variegated with turns or passing notes). Spanish and Hungarian peasants and gipsies especially fond of ornamental devices—English folk singer prefers tunes as simple as possible—(good test of genuine English folk song). If any ornament, generally a passing note to bridge a gap in the melody or fit in with an extra syllable in the poem. (Love of "one syllable, one note.")

(3) Selection.

Essence of selection in the evolution theory is principle of "survival of the fittest." So here "survival of variations appealing to taste of community." Those tune-variations which appeal to the community will survive, to the exclusion of those which appeal only to the individual. Reasons for appeal may be (1) beauty (appeal to emotions) or (2) intellectual appeal (appeal to understanding). But great thing is that to survive they must be recognised by the majority of the community as a whole to be entitled by

some innate fitness to survive—struggle for existence—competition. Three principles and three stages:—

(1) Continuity prepares the way—invention of untutored but more or less inspired individual.

(2) Variation by untutored but more or less inspired individual—renders development possible—oral tradition only—no stereotyped printed form—always in state of flux.

(3) Selection puts stamp of communal approval upon selected variations—determines final form of material.

Hence (1) and (2) are individual products—(3) communal. Without (3) folk songs would not be folk songs in true sense, but simply work of individual peasants. (N.B.—All three stages work of untutored minds.) Crowd of human beings—flock of birds—shoal of fish—swarm of bees—in absence of acknowledged leader, receives constant suggestions from one of its members. Sooner or later one of these happens to coincide with the idea of his fellows, receives popular approval, and is acted upon.

Popular approval the real hall mark. Communal composition unthinkable—quite true that a song, as much as a poem, must have had an individual composer—but communal choice decides what shall survive and what shall not. This is the real reason why the average folk song makes such an instant appeal to audiences—it has stood the test of time—been through the crucible and been tested by the touchstone of popular approval.

Why does not modern composer, poet, sculptor, painter do the same?—compose several variant forms of each of his works—have each of them sung or exhibited for a few years—thus discover which variation is most generally admired—and finally publish that variation and destroy the others?

Two-fold answer:—

1. Popular approval a dangerous test and an ever-shifting test—quite different in educated circles, where individual opinions differ widely and communal spirit is absent—whereas on country-side much closer bond between peasants.

2. Successful composer, etc. (i.e., financially, socially, or commercially successful) is he who can put his finger on the pulse of the community and discover its tastes and then satisfy them—unless, of course, he is strong enough to create new tastes, or divert old tastes into new channels.

III. CHARACTERISTICS—with illustrations.

Hurried through to here — very sketchy — perhaps seemed dogmatic—but folk-songology a very young science in England, so that every statement is only tentative.

Five main characteristics.

1. Genuineness.—Peasant music is genuine—so is peasant poetry. Unconscious creation always sincere—man taken off his guard exposes his real nature—but set intention generally or often insincere and not his true character. Only guide of peasant is instinct—only motive is desire of self-expression.

2. Hence follows simplicity—utter absence of artificiality, freedom from pretence or affectation—simple sometimes to the point of naiveness—very little subtlety in untutored peasant mind.

3. Definiteness.—Always in definite key or mode (see later)—practically never modulates into different key or mode.

4. Directness.—Absence of repetition of words—story told straight through.

5. Supremity of Words.—Pattern of tune decided by the words.

The Modes—avoid technicalities as far as possible.

Names.	Scale on white notes.
1. Dorian	D to D.
2. Phrygian	E to E.
3. Lydian	F to F.
4. Mixolydian	G to G.
5. Aeolian	A to A.
6. Locrian	B to B (very rare)
7. Ionian	C to C.

Originally all music was melody only—unaccompanied tune. Introduction of harmony compelled alteration—most modes didn't admit of adequate harmonization—need felt for "leading note"—only two (lydian and ionian) had leading note, i.e., sharpened seventh—hence other modes either fell into disuse or had to be altered by sharpening their seventh.

Lydian only needed fourth flattened, and Mixolydian seventh sharpened, to become major scales. Dorian D-D, Phrygian E-E, Aeolian A-A needed little alteration to turn

them into minor scales. When this was done 3 modes became major scales and 3 minor scales. Birth of harmony —but death of much beautiful melody. English folk-tunes are cast in Dorian (D-D), Phrygian (E-E), Mixolydian (G-G), Aeolian (A-A), and Ionian (C-C) modes. Locrian (B-B) never found—Lydian (F-F) almost never. Minor tunes never genuine—probably Aeolian (A-A) with sharpened seventh added as leading note.

Of English folk-tunes fairly true to say that two-thirds are in the major scale or Ionian mode (C-C)—remaining one-third fairly evenly divided between Mixolydian (G-G), i.e., major scale but flattened seventh; Dorian (D-D); and Aeolian (A-A), i.e., minor scale but flattened seventh.

Ionian or major mode most popular with common people—for this very reason barred by the church and dubbed "modus lascivus."

Great characteristic is that tonic shall be supreme throughout the melody—connecting link—melody almost invariably ends on tonic too—very necessary in unaccompanied music to know where you are.

Average peasant folk singer has no or very little sense of harmony—piano accompaniment puts him off. Folk Song Society recognises this by printing all its melodies without any harmonies.

Another characteristic is that a genuine folk song practically never modulates or changes its tonality. But there often occur accidentals—generally merely as passing notes (e.g., "I'm Seventeen Come Sunday").

Patterns of tunes.—Governed largely by the words. Melody and poetry closely allied. Usual stanza 4 lines—occasionally a fifth added as an afterthought—and often a refrain at the end.

1. Commonest pattern is A A B A—sing "The Ship in Distress" (Dorian); "Green Bushes" (Mixolydian).

2. Beautiful example of A A B A is "The Keys of Canterbury." N.B.—Whole melody lies within 5 notes (Aeolian).

3. Very common is A B B A—"Banks of the Sweet Dundee" (Mixolydian) (Very popular tune—often sung when real tune forgotten).

4. Common is A B A C—"Sweet Primëroses" (Ionian).

5. Sometimes A A A B—very economical—"Little Sir Hugh" (Ionian). N.B.—"American Corn"="In Merry Lincoln."

6. Naive simplicity—"Mowing the Barley" (Ionian)—first phrase 2 consecutive notes 4 times running.

7. Rarely A B C D—"A Farmer's Son So Sweet" (Ionian).

8. A A A B and refrain—"Poor Old Horse."

9. Octave jump up or down. "The Seeds of Love." Example of rare repetition of words—here whole line (making a five-line verse)—probably sung as chorus second time.

10. Another characteristic is to curtail a phrase by shortening a long note or omitting a rest, e.g., "Seventeen Come Sunday"—in modern accompanied tunes piano fills up; in absence of accompaniment the singer becomes impatient to get on with his story and doesn't wait.

11. 5 time very common—"Lord Bateman"; so are all irregular metres—7 time, compound time—3/4 alternately with 4/4, 4/4 with 5/4, etc.

12. Passing notes. 1st, 4th, 5th, and 8th are the fixed points in the primitive scale, and the most fixed notes of the folk singer. Other notes somewhat vague and variable. Hence when he is proceeding downwards from subdominant to tonic and wants a passing note he will generally choose the nearest one—i.e., the third F E C. Harmony demands F D C.

When upwards from dominant to tonic he will sing the submediant G A C, not G B C. G A C a very common opening phrase—cf. Gregorian psalm tones.

Finally:—

1. Folk song always anonymous.

2. Modal melodies and secular words generally denote folk songs.

3. Minor folk songs are not found—such are either composed tunes or corrupt folk tunes.

4. Do not modulate.

5. Not harmonic—e.g., non-harmonic passing notes, flattened sevenths, difficulty of harmonising them.

6. Often bars of irregular length and 5 and 7 time.

A WORD AS TO THE POEMS.

1. Short and concise story.

2. Very simple and very direct.

3. Questions answered in same words as those in which they are asked.

4. Hackneyed phrase "As I went out one May morning" (cf. child's story "Once upon a time"—"lived happily ever after").

5. Refrain.

6. Narrative of adventure (Robin Hood, Dick Turpin, etc.).

7. Scarcity of sporting or hunting poems.

8. But frequency of poaching songs (illegitimate sport).

9. Popularity of execution songs—hanging was a risk many of the singers frequently ran for sheep stealing, etc.

10. Very few comic songs—boisterous, but not comic.

11. Love songs naturally the commonest then and now—challenge a comparison.

12. Cumulative songs—like "House that Jack Built," "Twelve Days of Christmas," very common—(sing "Twelve Days of Christmas").

13. Words often extremely vivid—what in modern, squeamish, less delicate, and more dishonest times would be called coarse.

HOW TO SING THEM.

With extreme simplicity and directness—with even, steady rhythm of a dance-song—"ballad"="dance-song"—"ballare"="to dance," cf. "ballet" and "ball."

Closest attention to time and rhythm—no tricks. Alternate rushes and languishings and all tricks of drawing-room singer may be necessary in rendering of an inane melody which needs strong individual expression to conceal its lack of passion and reality—quite out of place in folk singing, in which the story and the tune can safely be allowed to stand on their own merit and to speak (or sing) for themselves.

CONCLUSION.

Folk singing (and folk dancing) intimately bound up with social life of the country (especially the villages).

Words and music inexplicably interwoven—one harmonious whole. Hence the attraction of folk songs for historians, musicians, archæologists, social reformers, and poets.

New folk songs not being evolved now—railways, education, industrial revival, and flocking to towns all against any further advance.

Only just in time—most of the folk-singers over 70, many over 80—grandparents. Parents and children affect to despise them and prefer modern trashy ballads.

Foreign singers in foreign languages have monopolised English opera stage and concert platform—wide movement now to place English national music in its true place—educationally and æsthetically.

Sing "Lord Rendal"—strong narrative, homely peasant story—and hanging; "Dashing away with the Smoothing Iron"; "Berkshire Tragedy"—hanging, drowning; "The Female Highway Man"; "The Lover's Task" (duet); "Blow away the Morning Dew"; "The Crystal Spring"; "Young Herchard"; "The Tree in the Wood"; "Oh, No, John."

108th ANNUAL MEETING

OF

Belfast Natural History and Philosophical Society.

The Annual Meeting of shareholders and members for the past session was held in the Museum Building, 7 College Square North, on Wednesday, 30th October, 1929, to receive the Council's report for the past year, with the Hon. Treasurer's statement, and to transact any other business pertaining to an annual meeting.

Mr. E. J. Elliott, Past President, occupied the chair, and among those present were Mrs. Anderson, Miss M. Gaffakin; Messrs. Robert A. Mitchell, LL.D.; J. W. Gillmour; Godfrey Ferguson, F.R.I.B.A.; T. Edens Osborne, F.R.S.A.I.; Michael C. Andrews, M.R.I.A.; Theodore Greeves, Joseph Skillen, A. H. Davison, F.R.S.A.I.; R. S. Lepper, M.A.; H. C. Lawlor, M.A., M.R.I.A.; W. B. Burrowes, F.R.S.A.I. (Hon. Treasurer), and Arthur Deane (Hon. Secretary).

Apologies were received from the Very Rev. W. P. Carmody, M.A., M.R.I.A.; the Right Hon. S. Cunningham, D.L.; and Mr. Arthur S. Muir, F.C.A.

The Chairman announced that the meeting had been advertised in the Press and called upon the Hon. Secretary to read the notice convening the meeting.

The Chairman intimated that reference would be made in the Council's report to the death of two distinguished members of the Society—Sir Otto Jaffé, LL.D., a past president; and Mr. Andrew Robinson, C.B.E., M.V.O. A letter of condolence had been sent to Mr. Arthur Jaffé, and he had heard quite recently from a friend that Sir Otto had taken an interest in the affairs of Belfast up to the last. Mr. Robinson's death, the Chairman said, was more recent. He begged to move the following resolution:—

"That we, the Shareholders and Members assembled at this our Annual Meeting, desire to place on record our very sincere regret on the recent death of our member, Mr. Andrew Robinson, C.B.E., M.V.O., whose distinguished

services for many years with the Irish Board of Works as an engineer, and his practical contributions to Irish archæology. are so well known. Mr. Robinson was a prominent member of our Society, and took a keen and active interest on the Committee of the Archæological Section, over which he was frequently called upon to preside."

That a copy of this resolution be forwarded to the family of the late Andrew Robinson.

Mr. R. S. Lepper, in seconding this resolution, spoke in feeling terms of the work rendered by the late Andrew Robinson.

The resolution was passed in silence, the members standing.

ANNUAL REPORT.

The Chairman called upon the Hon. Secretary to read the Annual Report of the Council, which is as follows:—

Your Council has pleasure in submitting to this Annual Meeting the report for the year just closing, which is the 108th Session.

Deaths.

Your Council has to record, with regret, the death of Sir Otto Jaffé, who was President from 1906 to 1908, for many years a member of Council and an active worker on behalf of the Society. Sir Otto also played a philanthropic and a prominent part in the educational life of the city. A resolution of sympathy was sent to Mr. Arthur Jaffé by your Council on behalf of the Society. It also has to deplore the quite recent death of Mr. Andrew Robinson, C.B.E., M.V.O., whose long and distinguished services as a civil engineer under the Irish Board of Works, his wide knowledge of antiquities throughout Ireland, his great energy and sound judgment, made him until the end a most valuable member of the Committee of the Archæological Section.

Transfer of Shares.

Four transfers of shares have been made during the year covered by this Report, as follows:—Share No. 219, registered in the name of the late John Hogg, to Mr. F. J. Holland. Share No. 287, registered in the name of Sir William Whitla, to Mr. David E. Lowry. Share No. 348,

registered in the name of Mr. Harford H. Montgomery, to his son, Mr. Harford Trevor Montgomery. One Share, No. 454, registered in the name of the late Miss R. M. Corbett, to Mr. H. C. Lawlor.

Membership.

Your Council regrets that there is again a small falling-off in the number of members. The total number of shareholders and members is, this year, 288, as compared with 297 at the end of the previous session. With such an old Society it would be desirable that a larger percentage of our citizens should take an interest in its activities.

Lectures.

Eight lectures were given during the session, dealing with History, Archæology, and Natural History. All were well attended, and your Council is glad to note that there was a greater tendency to a discussion at the close of each lecture. The Council hopes that similar debates, which can be made such an important feature at our meetings, will be continued with increased vigour during the coming session.

Exchanges.

The usual exchanges from kindred societies at home and abroad have been received, and copies of the proceedings of our Society have been sent to those who had forwarded their publications. A list of exchanges will be appended to this Report.

Archæological Section.

The Archæological Section has had a session of continued activity. An account of its proceedings will be presented to its members at the Annual Meeting next month.

Council's Thanks.

To all who have assisted the work of the Society during the past session the Council desires to tender its thanks.

Property Committee.

The Property Committee formed during the previous session—consisting of Professor Gregg Wilson; Messrs. E. J. Elliott, R. S. Lepper, Godfrey W. Ferguson (Convener), A. H. Davison, T. Edens Osborne, and W. B. Burrowes—has been very busy during the year in financing and carrying

out the necessary repairs, additions, alterations, and painting of the premises, including the installation of lavatories, electric lighting and heating; and also in securing suitable tenants. The contractors have now received their final certificates for payment, amounting in all to £937 7s 8d. To this amount the sum of £13 11s 6d must be added for the renovation of furniture, making a total of £950 19s 2d. Mr. J. H. H. Swiney was appointed architect in connection with the work, which was carried out carefully and expeditiously under the supervision of the Convener, Mr. Godfrey Ferguson.

GRANT FROM CORPORATION.

An application was made to the Belfast Corporation for a grant towards the cost of renovating the Society's premises on their vacating the building, and it was agreed to accept the sum of £300 in full discharge of the Corporation's liability under their agreement with the Society, in respect of the Corporation's tenancy, which terminated on the 31st October, 1928.

LETTINGS.

With the help and advice of Mr. A. H. Davison, all the rooms on the ground floor have been let to three professional societies, namely, the Ulster Society of Architects, Belfast Society of Chartered Accountants, and College of Nursing, on favourable terms, bringing in an annual income of £210 0s 0d from permanent lettings. Your Council hopes that in the future local societies not already meeting in the building will avail themselves of the improved facilities offered for lectures and meetings in the lecture room and ante-room on the first floor. The top floor, with its handsome pillared hall, is still available, but requires to be decorated.

FEDERATION.

Your Council, during the year, has had under further consideration the possibility of amending the scheme of the Society in order to widen its scope by affiliating scientific and allied societies of Northern Ireland. A tentative scheme was drawn up and a preliminary questionnaire was forwarded to 33 societies for completion, but only six agreed to the questions. Your Council decided, therefore, to defer any further action at present.

NATIONAL TRUST.

During the year, through the interest of the Earl of Antrim, the Society has become affiliated with the National Trust for Places of Historic Interest or Natural Beauty.

FINANCIAL STATEMENT.

A statement in reference to the finances of the Society will be made by Mr. Burrowes, Hon. Treasurer.

ELECTION OF COUNCIL.

In order to comply with the regulations, five members retire after three years' service on the Council—namely, Professor Gregg Wilson, Professor Small, Mr. W. B. Burrowes, Mr. E. J. Elliott, and Mr. H. C. Lawlor. Professor Small does not seek re-election, and the remaining four are eligible for re-election.

HON. TREASURER'S STATEMENT.

Mr. W. B. Burrowes, Hon. Treasurer, in submitting the financial statement, said it had been a "fair" year, and that the Society was in a strong financial position. A detailed statement, as passed by the Government Auditor, appears on page 49.

ADOPTION OF REPORTS.

The Chairman, Mr. E. J. Elliott, in proposing the adoption of the reports referred with regret to the absence of Professor Small. The Society's losses by death during the year had been heavier than usual, he said, and some of those who had passed away were among their most distinguished members. The falling off of members of their Society was not a gratifying point. He hoped, however, that it was a condition which would be rectified.

In thanking the officials for their assistance during the year, the Chairman said he wished to mention the Hon. Secretary, Mr. Arthur Deane. With the arranging of the new Museum and Art Gallery, his year had been a particularly strenuous one, but he had not allowed the Society's work to suffer. Mr. Bel Burrowes, the Hon. Treasurer, was also thanked by the Chairman, who referred to his system of keeping accounts as a model one.

Mr. H. C. Lawlor, M.A., seconded the motion, and the adoption of the reports was passed.

ELECTION OF COUNCIL MEMBERS.

On the proposal of Mr. J. W. Gillmour, seconded by Mr. Michael C. Andrews, M.R.I.A.; Professor Gregg Wilson, Messrs. W. B. Burrowes, E. J. Elliott, and Mr. H. C. Lawlor were re-elected on the Council for three years, the Very Rev. W. P. Carmody, Dean of Down, being elected in place of Professor Small, resigned.

The Chairman intimated that that concluded the meeting unless any member had any business to bring forward.

Subsequently a meeting of Council was held to elect officers for the ensuing year, when The Very Rev. W. P. Carmody, M.A., M.R.I.A., was unanimously elected President; Messrs. W. B. Burrowes, Hon. Treasurer; T. Edens Osborne, Hon. Librarian; and Arthur Deane, Hon. Secretary.

ARCHÆOLOGICAL SECTION.

Session 1928-29.

The 13th Annual Meeting of the Section was held at 3 p.m. on December 4th, 1929, in the Old Museum Building, the Dean of Down presiding. There were present:— Colonel Berry, Professor Gregg-Wilson; Messrs. Arthur Deane, D. E. Lowry, Godfrey Ferguson, Edens Osborne, R. S. Lepper, A. A. Campbell, Joseph Skillen, E. J. Elliott, F. M. Greeves, M. C. Andrews, A. H. Davison, Arthur Greeves, F. A. Heron, Ian A. Richmond, R. J. Welch, The Rev. R. R. Breen, Mrs. Fallon, Miss Gaffikin, and the Hon. Secretary. Apologies for non-attendance were received from the Marquess of Londonderry and Mr. W. B. Burrowes.

The Hon. Secretary read the Committee's Annual Report as follows:—

Since our last Annual Meeting we have lost four members by death and two by resignation. One member who never paid a subscription has been struck off, while another member, struck off last year for a similar reason, has now paid up six years' arrears and been reinstated. Four new members have joined, so that the number now on the roll is 116.

Of those who have passed beyond the veil we chiefly deplore the loss of one of our most active and useful members, the late Andrew Robinson, who died on the 22nd October. His wide experience of Irish antiquities, his activity in the pursuit of archæology in his native East Ulster, and his charming personality will be sadly missed, and his loss appears irreparable. Sir John Campbell, Captain S. W. Knox, and Dr. S. W. Hill, while not so active, were always keenly interested in the work of the Section.

Since our last meeting, the Adams Collection has been actually transferred to the City Museum.

The only work of excavation attempted to be carried out during the year was at a crannog at Drumbane, Moira, on the farm of Mr. Hercules Jordan. This gentleman gave his consent to the excavation, conditional only on our enclosing

the scene of excavation with a stout paling to prevent his horses getting into any trenches. This was erected at a cost of £1 9s 0d. Mr. I. A. Richmond and the Hon. Secretary surveyed the place, and arranged a system by which every square foot of each layer of 8″, as removed, would be noted on a prepared plan marked in squares of 1 foot drawn to scale, so that the exact position of each relic, if found, could be noted down.

Unfortunately, on the removal of the fourth layer, 32″ down, water flooded in; further excavations were impossible, and the work abandoned. Mr. H. Brownrigg, of Fairmount, Moira, very kindly superintended the actual work when the Hon. Secretary could not be present, and engaged a very careful digger. The wages paid were 4½ days at 6/- (£1 7s 0d), so that the total cost of the attempt was £2 16s 0d.

The crannog is a circular platform about 48 feet in diameter, some two feet higher than the surrounding ground. It lies in a large, flat, marshy field, once a lake, but now partially drained. The crannog is close to the G.N. Railway, about a mile west of Moira station, on the south side, and is conspicuous from a lonely thorn tree growing at the edge of the platform.

Since our last report Kenbaan Castle has been taken over for protection by the Antrim County Council, and only in September last Mr. Andrew Robinson accompanied the Hon. Secretary there, when the ruin was surveyed and photographed and a report prepared with recommendations tabulated as to the safeguarding and repairs urgently necessary. This report, with photographs, is being submitted to the County Surveyor.

Nothing further has been done with regard to the preservation of Bonamarghy.

The Society is now federated with the National Trust for Places of Historical Interest or Natural Beauty. Preliminary steps are being taken, in conjunction with the Naturalists' Field Club and other bodies, to see if through the National Trust or the Government of N.I. a scheme could be carried through for the Preservation of White Park Bay as a place of natural beauty and archæological interest. The progress of these negotiations will be laid before the Committee, the Field Club, and such other bodies as may possibly help, when the scheme assumes more definite shape.

Meanwhile, it has the active support of the Parish Rector, the Parish Priest, and the local people of all classes in the district, and many from elsewhere who appreciate the magnificent scenery, botanical, antiquarian, and natural history interests of the area of 176 acres.

During the winter season two important papers were contributed to the section by Mr. Ian A. Richmond, M.A., and Mr. M. A. O'Brien, Ph.D.

Mr. Richmond's paper was entitled: "The Evolution of Fortification in the Roman Empire."

Dr. O'Brien's paper was entitled: "The Vassal Tribes of Ancient Ireland."

It is pleasant to note that both papers had good audiences, and that they provoked intelligent and appreciative discussions.

We are glad to report that Mr. Richmond promises to contribute a short paper early in December on "The Irish Chieftains' House and the Roman World," and a lecture early in 1930 on "New Discoveries and Hadrian's Wall in 1929."

The Rev. Leo M'Keown has promised us a lecture in February or early March on "The Franciscan Order, particularly in relation to its settlements in Antrim and Down." The Hon. Secretary will contribute a short paper on "Some recent archæological discoveries at Clogher," to follow Mr. Richmond's short paper early in December. A joint paper, written by Mrs. Anderson and Miss Gaffikin, entitled: "Some Prehistoric Sites in the Dordogne and Pyrenean Regions," will be read on Thursday, March 13th. Lantern illustrations of all the papers will be provided.

Three meetings of the Committee were held during the season, and well attended.

A resolution was passed by the meeting, all standing, expressing sorrow at the death of Miss Elizabeth Andrews, of 10 Park Crescent, Tonbridge, an old and respected member of the Section.

In accordance with due notice, Mr. Deane moved, and Mr. Lawlor seconded: "That in Rule III, after the word 'seven,' the following words should be inserted—'one of whom shall be the Lecturer in Archæology and Ancient History, Queen's University, provided he be a member of the Archæological Section'"; passed.

The Dean of Down having vacated the chair in favour of Mr. E. J. Elliott, on the motion of Mr. Osborne, seconded by Mr. Lowry, the Dean of Down was re-elected Chairman. On the motion of Mr. Lowry, seconded by Mr. Heron, Mr. Lawlor was re-appointed Hon. Secretary.

The amendment to Rule III having placed Mr. Ian A. Richmond on the Committee, six others were elected by ballot—Messrs. E. J. Elliott, Colonel Berry, A. A. Campbell, R. S. Lepper, D. E. Lowry, and Joseph Skillen.

Mr. David E. Lowry suggested, supported by Colonel Berry, that as the Society had now got suitable premises, those premises be open on one or two days of the month for social intercourse and discussion of those subjects for which the Section was originated, so that members from the country could meet and confer with each other on matters of general archæological interest, and that the Council Room be opened on days decided upon, from 12 o'clock noon to 6 or 10 p.m., as may be decided upon, and if possible tea supplied when required.

Professor Gregg-Wilson moved: "That an experiment towards this end be made by arranging the next lecture of the season for the afternoon instead of the evening, preceding the lecture by half an hour's tea and conversation, and that a Committee consisting of Messrs. Lowry and Skillen with the Hon. Secretary be appointed to carry out the idea." Seconded by Mr. Ferguson and passed.

EDUCATIONAL ENDOWMENTS (IRELAND) ACT, 1885

(As amended by Section 3 of the Administrative Provisions Act (N.I.), 1928).

Dr. **The Account of Belfast Natural History and Philosophical Society for the year ended 31st October, 1929.** *Cr.*

RECEIPTS.

To	Balance as per last Account	£260 17	0
,,	Donations, Bequests, &c.:—		
	Grant from Belfast Corporation ...	300 0	0
,,	Subscriptions	105 10	0
,,	Dividends	22 0	8
,,	Rents	67 5	3
,,	Insurance Refund	0 11	6
,,	Realised by Sales, War Stock	309 7	3
,,	Adams Fund	1 5	0
,,	Miscellaneous Receipts, viz.:—		
	Archæology ... £29 14 0		
	Centenary Volume 2 12 0		
		32 6	0
,,	Balance against Account on 31st October, 1929	198 3	2
	Total ...	£1,297 5	10

PAYMENTS.

By	Maintenance of Premises, &c.	£956 13	5
,,	Rent, Rates, and Taxes	43 6	1
,,	Salaries and Wages	45 11	0
,,	Advertising	19 5	9
,,	Printing and Stationery	67 3	9
,,	Fuel and Light	15 9	11
,,	Postages	17 0	2
,,	Other Payments, viz.:—		
	Adams Fund ... £105 0 0		
	Lectures 6 0 0		
	Piano 1 15 0		
	Audit Fee 1 1 0		
	Insurance Stamps ... 0 11 4		
	Bank Charges ... 1 1 0		
	Cheque Book ... 0 16 8		
	Subscriptions ... 2 4 3		
	Archæology ... 14 6 6		
		132 15	9
	Total ...	£1.297 5	10

We certify that the above is a true Account.

E. J. ELLIOTT, Governor.
W. B. BURROWES, Accounting Officer.

6th day of February, 1930.

I certify that the foregoing Account is correct.

W. R. MACONKEY,
Comptroller and Auditor-General.

29th day of March, 1930.

Dr.	In Account with the Belfast Natural History and Philosophical Society—Archæological Section.					*Cr.*				
To Balance	£83	5	5	By Typing and Clerical Work	£6	6	0
,, Subscriptions	27	10	0	,, Postages and Expenses	4	2	6
,, Subsidy	13	2	6	,, James Lowry	5	4	0
,, ,, ...	0	11	3	,, Expenses, Moira	2	16	0
				,, Balance	106	0	8
	£124	9	2		£124	9	2

EXCHANGES.

ALBANY—Bulletin of the New York State Museum.

ANN ARBOR—Publications of the University of Michigan.

BASEL—Verhandlungen der Naturforschenden Gesellschaft in Basel 1927-28.

BERKELEY—Publications of the University of California.

BIRMINGHAM—Publications of the Birmingham Natural History and Philosophical Society.

BOLOGNA—Publications of the Royal Academy of Science of Bologna.

BOULDER—Bulletin of the University of Colorado.

BUENOS AIRES—Publications of the National Museum of Natural History.

BUFFALO—Publications of the Buffalo Society of Natural Science.

CALCUTTA—Publications of the Geological Survey of India.

CAMBRIDGE, MASS—Publications of the Museum of Comparative Zoology.

CHICAGO—Publications of the Field Museum of Natural History.

COIMBRA—Memoirs of the Zoological Museum of the University of Coimbra.

COLUMBUS—Ohio Journal of Science.

DUBLIN—Proceedings of the Royal Dublin Society.

EDINBURGH—Proceedings of the Royal Physical Society.

,, Proceedings of the Royal Society of Edinburgh.

,, Transactions and Proceedings of the Botanical Society of Edinburgh.

GLASGOW—Proceedings of the Royal Philosophical Society of Glasgow.

GORLITZ—Publications of the Natural History Society of Gorlitz.

INDIANAPOLIS—Proceedings of the Indiana Academy of Science.

LAUSANNE—Memoirs and Bulletins de la Societe Vaudoise des Sciences Naturelles.

LAWRENCE—Bulletins of the University of Kansas.

LONDON—Quarterly Journal of the Royal Microscopical Society.

,, Publications of the British Association.

,, Publications of the British Museum (N.H.).

,, Proceedings of the Royal Institute of Great Britain.

,, Quarterly Journal of the Geological Society.

,, Publications of the Viking Society of Northern Research.

MADRAS—Bulletin of the Government Museum of Madras.

MELBOURNE—Proceedings of the Royal Society of Victoria.

MILWAUKEE—Publications of the Public Museum of Milwaukee.

NEW HAVEN.—Transactions of the Connecticut Academy of Arts and Sciences.

NEW YORK—Annals of the New York Academy of Sciences.

OTTAWA—Publications of the Geological Survey of Canada, Department of Mines.

PHILADELPHIA—Proceedings of the American Philosophical Society.

,, Publications of the Academy of Natural Sciences.

PULLMAN—Research Studies of the State College of Washington.

RENNES.—Bulletin de la Societe Geologique.

RIO DE JANEIRO—Publications of the National Museum of Brazil.

,, Publications of the Oswaldo Cruz Institute

ROCHESTER, N.Y.—Proceedings of the Rochester Academy of Science.

SAN DIEGO—Transactions of the San Diego Society of Natural History.

SAN FRANCISCO—Proceedings of the Californian Academy of Sciences.

STAVANGER.—Publications of the Stavanger Museum.

ST. LOUIS—Public Library Monthly Bulletin.

STRATFORD—The Essex Naturalist.

SYDNEY—Annual Report of the Technological Museum, 1928.

TORONTO—Transactions of the Royal Canadian Institute.

WASHINGTON—Yearbook of the United States Department of Agriculture, 1926.

,, Annual Report of the Smithsonian Institution.

,, Annual Report and Bulletins of the United States National Museum.

,, Publications of the Bureau of American Ethnology.

,, Bulletins of the Smithsonian Institution.

,, Proceedings of the United States National Museum.

,, Smithsonian Institution, Miscellaneous Collections.

,, Publications of the United States Geological Survey.

WEIN—Publications of the Society of Zoology and Botany in Wein.

YORK—Annual Report of the York Philosophical Society, 1927-28.

ZURICH—Publications of the Natural History Society of Zurich.

BELFAST NATURAL HISTORY AND PHILOSOPHICAL SOCIETY.

Officers and Council of Management for 1929-30.

President:
THE VERY REV. W. P. CARMODY, M.A., M.R.I.A.

Vice-Presidents:
S. W. ALLWORTHY, M.A., M.D., F.C.S.
E. J. ELLIOTT, F.R.S.A.I.
PROFESSOR W. B. MORTON, M.A., M.R.I.A.
PROF. GREGG WILSON, O.B.E., M.A., D.SC., PH.D., M.R.I.A.

Hon. Treasurer:
W. B. BURROWES, F.R.S.A.I.

Hon. Librarian:
T. EDENS OSBORNE, F.R.S.A.I.

Hon. Secretary:
ARTHUR DEANE, F.R.S.E.

Council:

WILLIAM RIDDELL, M.A. PROF. W. B. MORTON, M.A., M.R.I.A. F. ADENS HERON, D.L., J.P., F.R.S.A.I. R. S. LEPPER, M.A., LL.M., F.R.HIST.S. D. E. LOWRY, J.P.	Retire 1930
DR. D. A. CHART, M.R.I.A. T. EDENS OSBORNE, F.R.S.A.I. S. W. ALLWORTHY, M.A., M.D., F.G.S. GODFREY W. FERGUSON, J.P., F.R.I.B.A. ARTHUR DEANE, M.R.I.A., F.R.S.E.	Retire 1931.
W. B. BURROWES, F.R.S.A.I. E. J. ELLIOTT, F.R.S.A.I. H. C. LAWLOR, M.A., M.R.I.A. PROF. JAMES SMALL, D.SC., F.R.S.E., M.R.I.A. PROF. GREGG WILSON, D.SC., M.R.I.A.	Retire 1929.

SHAREHOLDERS AND MEMBERS.

Corrected to November, 1929.

[**Denotes Holders of three or more Shares.*]

[*a* ,, *Members of Archæological Section.*]

aAcheson, F. W., 37 Osborne Park, Belfast
Adams, John, Auburn, Cranmore Park, do.
*Alexander, Francis, B.E. do.
Alderdice, Richard Sinclaire, F.C.I.B., 7 Wellington Place, do.
aAllingham, Robert, J.P., North Street, do.
Allworthy, S. W., M.D., Manor House, Antrim Road, do.
aAnderson, Frank, M.B.E., Willoughby Terrace, Portadown
aAnderson, Mrs., Ballyhossett, Downpatrick
aAndrews, Michael C., F.R.G.S., F.R.S.G.S., Orsett, Derryvolgie Avenue, Belfast
aArcher, Rev. Canon, B.D., Seagoe Rectory, Portadown
aAtkinson, Arthur S., Dromana, Knockdene Park, Belfast
Baker, Geo. E., C.A., Lismacue, Belmont Road, do.
Baker, Mrs. Alyn N., Lismacue, Belmont Road do.
aBaird, Major William, J.P., Royal Avenue, do.
aBennett, S. A., B.A., B.SC., 184 Waterloo Road, Burslem, Stoke-on-Trent
aBerry, Colonel, M.R.I.A., J.P., Ardaluin, Newcastle
aBirch, J. P., Ashfield House, Ravenhill Road, Belfast
Blair, John G., 3 Victoria Gardens, do.
aBlake, R. F., F.I.C., 4 Knock Road, do.
Boyd, Thornton, Blackstaff Spinning Company do.
aBoyd, Miss Kathleen St. Clair, Chatsworth, University Road, do.
Boyd, John, San Remo, Holland Park, Neill's Hill, do.

aBreene, Rev. R. S., LL.D., 4 Beechgrove, Bristol Avenue, do.

*a*Brett, The Very Rev. Dean, M.A., Montrose, Somerton Road, Belfast.
Brierley, J. C. A., M.SC., F.I.C., 224 Cliftonville Road, do.
Bristow, John, 10 College Square North, do.
*Brown, George B., Lisnamaul, Ormeau Road, do.
Brown, J., M.A., B.SC., 32 Maryville Park, do.
*a*Burrowes, W. B., F.R.S.A.I., Ballynafeigh House, Ravenhill Road, do.
*a*Byrne, J. Edwards, J.P., F.R.S.A.I., 37 Royal Avenue, do.

*a*Campbell, A. A., F.R.S.A.I., Drumnaferrie, Rosetta Park, do.
*Campbell, Miss Anna (Representatives of), do.
Carrothers, E. N., 145 Stranmillis Road, do.
*a*Charlemont, The Rt. Hon. The Viscount, Drumcairne, Stewartstown, Co. Tyrone
Clark, Sir George S., Bart, D.L., Dunlambert, Belfast
*a*Clarke, John, Antrim Arms Hotel, Glenarm
Cleeland, Robt. V., 13 Eglantine Gardens, Belfast
*a*Cleland, A. M'I., Macedon, Green Road, Knock, do.
Combe, Barbour & Co., Ltd., do.
*a*Chart, D. A., LITT.D., M.R.I.A., 12 Malone Park, do.
*a*Clarke, G. W., M.B.E., 39, Adelaide Park, do.
*a*Crawford, Col. The Rt. Hon. R. G. Sharman, D.L., Crawfordsburn
*a*Crawford, W. M., B.A., I.C.S., F.E.S., F.Z.S., Orissa, Marlborough Park, Belfast
Cromie, A. G., Seeburgh, Castle Avenue, do.
Crymble, H., 40 Wellington Place, do.
*a*Cunningham, Right Hon. S., Fern Hill, Ballygomartin Road, do.
Cutler, H. A., M.INST.C.E., Craigdarragh Cottage, Helen's Bay

*a*Dawson, Col. W. R., M.D., M.R.I.A., 26 Windsor Park, Belfast

Davies, A. C., Lenaderg House, Banbridge, Co. Down
Davin, Miss A. G., Glenmore Lodge, Lambeg
*a*Davison, A. H., F.A.I., F.R.S.A.I., 32 Wellington Place, Belfast
Deans, T. M., LL.D., Academy House, Rosetta, do.
*Deramore, Lord, D.L., Heslington Park, York
Despard, V. D., 10 Academy Street, Belfast
*a*Dickie, John W., 51 Ravenhill Park, do.
Dixon, Professor, M.A., SC.D., F.R.S., St. Ives, Bladon Drive, do.
Dobbs, A. E., M.A., Kildollagh, Coleraine
Donaldson, B. A. K., Westaston, Comber
*Donegall, Marquis of (Representatives of), Belfast
*Downshire, Marquis of.
Drummond, T. H., 7 Chichester Street, do.
Dunleath, Lord, Ballywalter Park, Ballywalter, Co. Down

Earls, Professor J., B.A., Municipal College of Technology, Belfast
Ewart, Fred W., M.A., B.L., Derryvolgie, Lisburn
Ewart, Sir Robert H., Bart., Glenmachan House, Belfast
a Elliott, E. J., F.R.S.A.I., Ione, Parkmount Road, do.
a Elliott, Miss A., B.A., Ardroe, Bloomfield, do.

*a*Fallon, Mrs. E. J., 25 St. James' Park, do.
*a*Ferguson, G. W., F.R.I.B.A., C.E., J.P., Carnamenagh, Antrim Road do.
Finlay, Archibald H., A.C.G.I., A.I.E.E., Willesden, Holywood
Finlay, Robert H. F., Victoria Square, Belfast
Forsythe, J., Lisadell, Cliftonville Road, do.
*a*Frazer, Kenneth J., Hillmount, Cullybackey
*a*French, E. J., M.A., St. Anne's, Donnybrook, Dublin
Fry, W. Arthur, High Street, Holywood
Fulton, G. F., Arlington, Windsor Avenue, Belfast
*a*Gaffikin, Miss Mary, 21 Deramore Drive, do.
*a*Garrod, Geoffrey, M.A., B.L., Maryville, Malone Road, do.

Geale, R. G., 40 Wellington Park, Belfast.
*Getty, Edmund (Representative of), do.
Gibbon, Lt.-Col. W. D., D.S.O., M.A., Campbell College, do.
Gibson, Andrew, F.R.S.A.I., Fairfield, Lansdowne Road, do.
Gibson, W. H., O.B.E., D.SC., F.I.C., F.INST.P., Linen Research Institute, Lambeg do.
Gibson, W. K., 44 Upper Arthur Street, do.
Goldsbrough, J. B., Central Public Library, do.
Gordon, J. S., D.SC., Ministry of Agriculture, do.
Gordon, Malcolm, Dunarnon, University Road do.
Gourlay, R. J., Central Public Library, do.
Grainger, Robert, The Beeches, Holywood
Green, H. Percy, Limehurst, Holland Park, Belfast
*a*Greeves, Arthur, Altona, Strandtown, do.
*a*Greeves, F. M., Garranard, Strandtown, do.
*a*Greeves, John Theo., Nendrum, Knockdene Park, do.
*a*Greeves, W. Leopold, 11 Ormeau Avenue, do.
Greeves, Owden V., Collin House, Dunmurry
Grogan, J., Junior, 2 Orient Gardens, Belfast
*a*Gillmour, J. W., Knocknarea, Kensington Road, Knock

Harris, Miss S. M., 25 Hartington Street, Belfast
*a*Hall, Councillor D. Lyle, 79 Cliftonville Road, do.
*Hall, Frederick H., Waterford
*Hamilton, Hill, J.P. (Representative of), Belfast
Hanson, W. M., St. John's Villa, Holland Park, do.
Harland, Capt. W., 4 Psalter Lane, Sheffield
Hawthorne, John, B.A., PH.D., F.I.C., 16 Donegall Square S., Belfast
Henderson, J. W., M.A., Methodist College, do.
*a*Henry, Professor R. M., M.A., M.R.I.A., Crosshill, Windsor Avenue North, do.
Herdman, Sir E. C., Carricklee House, Strabane
*Herdman, Robert Ernest, D.L., J.P., Merronhurst, Craigavad, Co. Down

*a*Heron, F. Adens, D.L., J.P., F.R.S.A.I., Maryfield, Holywood
*a*Hewton, John, M.P.S.I., Ava Pharmacy, 315 Ormeau Road, Belfast
*a*Hill, Mrs. Elliot, Fairholme Cottage, Helen's Bay
Hind, John, 22 Cliftonville Road, Belfast
*a*Hogg, A. R., 10 Thorndale Avenue, do.
Holland, F. J., 10 Academy Street, do.
Honneyman, Wm., B.SC., (LOND.), F.I.C., York Street Flax Spinning Co., do.
Hoskins, A. Percy, F.I.C., F.C.S., 14 Rosetta Park, do.
**a*Blakiston-Houston, Major C., D.L., J.P., Myode, Bloomfield, do.
*Hughes, Edwin, Craigavad (Representatives of) Co Down
Hummel, Professor F. H., M.SC., A.M.I.C.E., Queen's University, Belfast
Hunter, William, J.P., Fortwilliam Villas, do.

Irwin, Wilson, Helen's Bay, Co. Down

Jenkins, J. C., 86 University Road, Belfast
*a*Johnston, E. C., F.R.S.A.I., Lyncote, Helen's Bay, Co. Down
*a*Jury, P.M., Brooklands, Dunmurry
*a*Jennings, V. G., Wellcroft, Sandown Road, Knock

*a*Kerr, A. W. M., M.A., LL.D., Rocklands, Waterloo Gardens, Belfast
*Kinghan, John R. (Representatives of), Windsor Avenue, do.
Kinnaird, Miss, 1 Eglantine Place, do.
Kirkpatrick, Wm. Hollins, 20 Derryvolgie Avenue, do.
*a*Knox, Major S. W., LL.B., Glenburn, Dunmurry, do.
Kyle, Robert Alexander, 15 Wellington Park, do.

*a*Lamb, G. C., Leura, Finaghy, do.

Larmor, J. F., Beech Hill, near Lisburn, Co. Antrim
*a*Lawlor, H. C., M.A., M.R.I.A., 14 Windsor Avenue, Belfast
*a*Lawlor, Mrs. H. C., 14 Windsor Avenue, do.
*a*Lepper, R. S., M.A., F.R.HIST.S., LL.M., F.R.S.A.I., Elsinore, Crawfordsburn, Co. Down
Lewars, D. B., 17 Dundela Gardens, Bloomfield, Belfast
*a*Liggett, Miss M. M., 109 The Mount, do.
Lindsay, Professor J. A., M.A., M.D., F.R.C.P., Queen's Elms, do.
Livingstone, R. W., M.A., D.LITT., M.R.I.A., Elmwood House, do.
*a*Loewenthal, John McC., Lennoxvale, Malone Road do.
*a*Londonderry, The Marquess of, K.G., P.C., M.V.O., LL.D., Mount Stewart, Newtownards.
*a*Londonderry, The Marchioness of, D.B.E., J.P., Mount Stewart, do.
Loughridge, James S., M.D., F.R.C.S., (ENG.), 52 Elmwood Avenue, Belfast
Logan, Jas., M.A., F.R.G.S., Greystone, Ravenhill Pk., do.
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