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    OF ANTIQUARIES OF SCOTLANE
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## PROCEEDINGS

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## SOCIETY OF ANTIQUARIES OF SCOTLAND.

SESSION
MbCCCXCIV--XCV.


VOL. NXIX.

## EDINBURGH:

PRINTED FOR THE SOCIETY BY NEILL AND COMPANY.
M1)CCCXCV.

## PROCEEDINGS

## Gacirty of Antiquarits of Grotland

 one hundred hvd fifteenth session1894-95


VOL V-THIRI SERIES

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Eatron.
her masesty the queen.
plresiont
The Must Hon. the Mangeress of Lothins, K.T., LL.D.
Wice- Fresion ents.
R. Rowayd Aspersor, hl.t. .

Reginald Macleod.
Jajies Macdosildd, LL D.
( ouncillors.
Sir George Reid, LL.D., I Riqusentimy the Pantrl
P.R.S.A.
John Ritchie Findlay, 1 of Trusters.
J. Balfour Paul.

Major-Gen. Sir R. Merdoch smitr, K. C.M.G., F.E.
The Hom. Hew Dalrimple.
Alexander J. S. Broor.
Johs Taylor Erown.
The Hom. John Abercromby.
Charles J. Gethrie.
Escretarics.
David Christison, M.1).
Robert M(xro, M.A., M.I).


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James llenry Cexningham, 4 Magdala Crescent.

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Sibrarian.
James Curle, Ju.

THE RIIINH LECTURESHIIP.

Alexander Henry lihind of Silster, Mm. Mom. S.A. Siuf.)

SESSION 1894-95.
Rman Lecturer in Archeologi-Arthur J. Evans's, M..., Kint" of the Ashmulean Museum, Oxford.

## L A WS S

OF THE

## SOCTETY OF ANTIQUARIES OF SCOTLAND.

INSTITUTEI NOVEMBER 1780.
(Revised and adopted December 1, 1873.)

The purpose of the socicty shall be the promotion of Archeonogr, especially as comnected with the Antiquities and llistomeal literature of Sootland.

## 1. Members.

1. The Society shall consist of Ordinary and Honorary Fellows, amd of Corresponding and Lady Assuciates.
2. The number of the Orlinary Fellows shall be mimited.
3. Candidates for admission as Ordinary Fellows must sign the Form of $A_{p p l i}$ ation prescribed by the Council, and must be recommender by one ordinary Fellow and two Members of the Council.
4. The Secretary shall canse the names of the Candidates and of their l'roposers to be inserted in the hillet calling the Meeting at which they are to be batloted for. The Sallot may be taken for all the Cimdidates named in the billet at once; lut if three or more black balls alyear, the Chamman shall eanse the Comblates to be balloted for singly. No ('andidate shall be almitted unless by the votes of two-thinds of the Fullows present.
5. The number of llonorary Fellows shall not exceed twenty-live: and vol. sxix.
shall consist of men eminent in Archæolngical Science or llistorical Literature, and they shall not be liable for any fees of admission or annual contributions.
6. All recommendations of Honorary Fellows must be made through the Comeil ; and they shall be balloted for in the same way as Ordinaty Fellows.
7. Corresponding Associates must be recommended and balloted for in the same way as Orlinary Fellows, and they shall not be liable for any fees of atmission or annual contributions.
8. The number of Lady Associates shall not exeecd twenty-five. They shall be elected by the Council, and shall not be liable for any fees of aulmission or annual contributions.
9. Before the name of any person can be recorded as an Ordinary Fellow, he shall pay Two Guineas of entrance fees to the funds of the Society, and One Guinea for the current year's sulscription. Or he may compoum for all future emtrilutions, including entrance fees, by the payment of Twenty Guineas at the time of his almission; or of Fifteen Guinens after having lail live ammal contributions; or of Ten Guineas after having $\mathrm{l}^{\text {mill }}$ ten annual contributions.
10. If any "relinary Fellow who has not compounded shall fail to pay his ammal contribution of One Guinea for three successive years, due application having been mate for payment, the Treasurer shall report the same to the Council, by whose authority the name of the defaulter may be erasel from the list of Fellows.
11. Every Fellow not heing in arears of his annual subscription shall be entitled to receive the printed Proceedings of the Society from the date of his election, together with such special issues of Chartularies, or other occasional volumes, as may be providel for gratuitous distribation from time to time under authority of the Council. Associates shall have the privilege of $1^{\text {murchasing the Socicty's }} \mathrm{p}^{\text {mblications at }}$ at the rates fixed by the Council for supplying back numbers to the Fellows.
12. None but Ordinary Fellows shall holl any office or vote in the business of the Society.

## II. Office-Bearers and Council.

1. The Office-Bearers of the Society shall consist of a President, who continues in office for three years ; three Vice-Presidents, two Secretaries for general purposes, and two Secretaries for Foreign Correspondence, a Treasurer, two Curators of the Museum, a Curator of Coins, and a Librarian, who shall be elected for one year, all of whom may be reelected at the Annual General Meeting, except the first Vice-President, who shall go out by rotation, and shall not be again cligible till he has been one year out of office.
2. The Council shall consist of the Office-Bearers and seven Ordinary Fellows, besiles two annually nominated from the Board of Manufactures. Of these seven, two shall retire ammally hy rotation, and shall not be again eligible till they have been one year out of office. Any two OfficeBearers and three of the Ordinary Council shall be a quorum.
3. The Council shall have the direction of the affirs and the custody of the effects of the Society; and shall report to the Ammual General Mecting the state of the Society's funds, and other matters which may have come before them during the preceding year.
4. The Council may appoint committees or individuals to take charge of particular departments of the Society's business.
5. The Otfice-Bearers shall be elected annually at the General Meeting.
6. The Sucretaries for general purposes shall record all the proceedings of mectings, whether of the Society or Council ; and conluct such correspondence as may be authorised ly the Society or Council, except the Foreign Correspondence, whirls is to be carried on, under the same authority, by the Secretare appinten for that particular purpose.
7. The Treasurer shall receive and disburse all moneys due to or by the Soeiety, and shall lay a state of the funds before the Council 1 revious to the Ammal Gencral Mseting.
8. The duty of the Curators of the Muscum shall be to exercise a general supervision over it and the Socicty's ('ollections.
9. The Council shall meet during the session as often as is requisite
for the due despatch of business; and the Secretaries shall have power to call Meetings of the Council as often as they see cause.

## III. Meetings of the Society.

1. One General Meeting shall take place every year on St Anlrew's day, the 30th of November, or on the following day if the 30th be a Sunday.
2. The Council shall have power to call Extraordinary General Meetings when they see canse.
3. The Ordinary Meetings of the Society shall be held on the second Monday of each month, from December to March inclusive at Eight p.m., and in April and May at Four f.m.

The Council may give notice of a proposal to change the hour and day of meeting if they see cause.

## IV. Bye-Laws.

1. All Bye-Laws formerly made are hereby repealed.
2. Every proposal for altering the Laws as already established must he made though the Comeil ; and if agreed to by the Comeil, the Sucretary shall cause intimation thereof to be made to all the Fellows at least thre months hefore the General Meeting at which it is to be determined on.

## Form of Sprial Request.

T, A. B. do hereby leave and lrequeath to the Soriety of Antiquaries of Scotland incorporated ly Royal C'harter, my collection of that the same shall tue deliverel to the said suciety on the receipt of the Secretary or Treasurer thereof.
Cecturvil Form of Bequist.

I, A. B. do hereby leave and hequeath to the Sosciefy of Antiquaries of Sootland incomprated liy Royal Charter, the sum of $£$, sterling, to be used for the sumeral purposes of the Society or for any special purposes or objects, as the Society may determine from time to time, and I direct that the said sum may he paid to the sail Socinty on the receipt of the Treasurer for the time leing.

# LIST OF THE FELLOWS 

# SOCIETY OF ANTIQUARIES OF SCOTLAND. 

NOYEMBER 30, 1895.

## PATRON.

## H1LIE NAJHSUY QUEEN VIGHORIA.

1209. Abkat tomby, Hon. JuHN, b2 Palmer. ston Hawe.
1210. Abfrdeis; Francis, The Mall, Montruse.
1211. ADAM, lioment, Accomatant, 2 (iillsland Roul.
1212. AgNEw, AlEXINDER, ProcuratorFiscal, Balwherrie, Dumbee,
1ゝㄴ. AgNEW, Sir STAlR, K.C.B., M.A., ~Bukingham Terrace,
Ioऽ- AIkMAN, ANDREW, Banker, 27 Buckinghan Termace.
In94. Aikmin, Walter Menteith, 2217 spruce Street, lhiludelphia.
ISy2. Allss, The Host Hon, the Marguis of, Culzean Castle, Mayhole.
1213. Ainslik, David, Custertou Ilouse, Blackshiels.
18St. AItKEN, (iEOBGE SHAW, Arehitect, 49) Queen Sitreet.
1214. Aitken, James 11., Girtcows, Falkirk.
1215. ALKXiNDER, W. Lisdsay, l'inkicburn, Musselburgh.

IS7. Allen, J. Rnmilly, (: E., 26 f.1. . Ormourd Street, London, W.:
IS64.*ANDERSON, ARCHIBALD, 30 GxLu川 Sifuare, London, W.
1865. * Andersun, Artacr, (.B., M.D., Sumylrae, Eitloclury.
1884. Andelison, ('inhees M., 7 Welliu: ton St., Higher Broughton, Man. chester.
IS89. ANDERsON, JaMEs, Carronvale, Warlu Roaul.
ISS2. ANDERSON, JUHN, M.D., LL.I., 71 Harrington Gardens, Lonslun. S.W.
1885. Anderson, P. J., M.A., LL.B., 2 East Craibstone street, Aleraleen.
IS71. *ANDEHBON, liobert Row:and, LL.D., Arehitect, It Fintland spuare, Fiee. Premiliut.
1565. *Anbersun, Thomas S., Liugarth, Newburgh, Fife.
1894. Andersun, Williay, Arus Brac, New Kilpatrick.

An asterisk ( ) denotes Life Members who have compounded for their Annual Contubutions.

Iss7. Andermic. - Berri, D.avid, M.I., Clevedin, Somerset.
1894. Anges, Romert, Lugar, Ayrshire

18s2. Annandale, Thomis, M.D., Professor of CTinical Surgery, University of Elinhorth, 34 Charlotte sipare.
1850.*Argyll. His (irace the Dukw of, K.T., D.C:L., luyeraray Castle.
1878.*Ammatrong, Robert Bruce, 6 limdolph Cliff.
1889. Athole. His Grace the Duke of, K.T., Blair Castle, Blair Athole.
I8sb. *Atkinsun, W. A., Knocklarie, Pitlochry.
1877. Batlet, J. Lambert, Solicitor, Arilrossan.
1868. *BaIN, Joserh, 3 Heathfied, Wamenworth C'mumon, Lonton. S.W.
1889. Bans, Willam, Bark of Scotlami Huluse, Elinhurgh.
1892. Barn, Willian, Creagorys, Honth Uist.
1891. Bumd, Willias, Clydesdale Bank, Portobello.
10s3. Balmot, Charles Babringtun, of Newtun Don, Kelso.
15s5. Baleotr, Major Fravers, Fernie Castle, Cupar-Fife.
1876. Ballantine, Alexinder, 42 George Street.
1877.*Bannerman, Rev. D. Douglas, M.A.. D.D., Free St Leonarl's Manse. Perth.
1890. Bannerman, Willtam, M.A., M.D., West Park, Polwarth Terrace.
1880. Barron, James, Elitor of Intoricesis Contrici, luveruess.
1883. Baxter, James Curbie, S.S.C., 45 Heriot liow.
1891. Dixter, Rev. George Chalmers, F. (: Minister, Cargill, Guildtown, Perth.
1891,*Bayne, Thomas, Larchfield Actulemy, Helenslurgh.
1884. Beatun, Anaus J., C.E., Engineer's Otlice, L. aum N.-W. and (G,-W. Railway, Birkeuhead.
1877. Benumont, Chahles G., M.D., West Terrace, Folkestune.

1s01. Beak. Eaerton Wi, thestnut Ruat, West Norwood, s, E.
1863.* Deck, Rev. James, A.M., Billeston liwetory, 1hwich, Suffolk.
1889. Bedpord, Surg- C'apt. C'hatles Henry, D.Sc., M.D., Meslical Officer, Lawrence Military Asylum, Sanawar, Punjanh, India.
$1872 .{ }^{*}$ Beer, Joun T., Green Heys, Rock Ferry, Cheshire.
1817. Begu, Robert Burns, Solicitor, Kinross.
1877. Bell, Robert Crailie, W.S., 4 Buckingham Terrace.
1889. Bell, Thomas, of Belmont, Hazelwood, Bronghty Ferry.
1877. Bell, William, of Gribdae, Kirkendbright.
1886. Deverddge, Menry, Pitreavie House, Dunfermliue.
1890. Beveridge, Erskive, St Leonard's Hill, Dunfermline.
1891. Leveridge, James, Church of Sontland's Training College, Glavions.
1895.*Bhlaland, William, 28 Park ('irchs, Glasgow.
1877.*Biltun, Lewis, W.S., 16 Hope Strect.
1891. Bird, George, 24 Qucen Struet.
1852. Black, William (ikorge, 88 West Regent Street, Glasgow.
1817.*Blackik. Walter G., Mh.D., LL.D., 17 Stanhope Street, ( flasgow.
1885. Blaikie, Walter Biggar, 11 Thistle Street.
1891. Blair, Rev. William, M.A., D.D.. Leichton Manse, Danllane.
1879. Blane, 1Hppolyte. 1., A. R.s.A., Architect, is George Strect.
1986. Blyth, R. Henix, 25 Old Elvet, Durham.
18s7. Bogie, Alexinder, Banker, 4S Lauder Foad.
1892. Buche, Lockhart, Artint, Stratforl Stulins, stratford Road, Kensington.
1885. Bompas, C'harles S. M., 121 Westbourne Terrace, London.
1s50. *Buniar, Huratius, W:.s., 15 Strathearn Place.
1876. Bonnak, Thomas, 127 Gin-1.c Street.
1850. Borland, Jobn, Etruria Biuk, Kilmarnock.
1873. ${ }^{*}$ Buyd, William, M.A., Solicitor, Pcterhead.
1593. Boyle, the Hon. Robert, Colonel, 6 Sumner Terrare, London.
Lhs4. Boynton, Thomas, Norman House: Briallingtou Quay, llull.
1883. Bravd, David, sherill of Ayrshire, 14 linyal Terrace.
1891. Brand, Janes, C.E., 10 Marchmont Terrace, (ilasyow.
1854.*Breadalbane, Tha* Most Hoh. the Harquess of, Taymoutl ('astle.
1857. "Lrodie, Sir Thomas Dawson, Bart., 9 Ainslie Place.
1857. Brook, Alex. J. S., 21 Chalmers Street.
Jozs. Brotin - Morison, John Broun, of Finderlic, Murie House, Errol.
1885. Brown, liev. George, Bemlochy Manse, Couprar-Angus.
1887. Brown, George, 2 Spottiswoole Strect.
1684. Brown, (i. Baldwin, M.A., Professor of Fine Art, University of Elinhurgh, 20 Lansfowne Crescent.
1871.*Brown, John Tincor, (iibraltar IIonse, St Leonaril's Bauk.
1884. Browne, Right Rev. G. F., B.D., LL. D., Bishop of Stepney, Lomion.
18s2. Browne, Gborge Washington, A.R.S.A., Architect, 1 Alhyn Place.

Jss5. Bruce, C'inarles, J.P., Mount Hooly House, Wick.
1892. Butce, George Wacgh, Banker, Leven, Fife.
1882. Druce, Jimes, W.S., 59 Great King Street.
1893. Brece, John, Woodhank, Helensbuygh.
1880. Brece, Rur. William, B.D., Dunimarle, Culross.
1894. Bryd.al, Forert, ist fiemge's Art Shool, 8 Newton Terrace, Claring Cross, filansow.
1889. Bryce, Windiam Moir, 5 Dick Place.
1840). Bhemen, if bela. 15 Pahon intin Pl.
1885."Buchams, Thomas Rym ms, M1.A., M, 1'., 21) Moray Place.
Jane. Bulst, Juhn B., M.D., Lecturer (ul Pathology, 1 Clifton Ternare.
1542. Burnet, John James, A.R.S.A., Arclitect, IS University Avemue, Hillbearl, chlasmw.
1892. Burnett, Ruv. J. B., B.D., Minister of Aberlempo, Forfar.
18s7. Brrafss, Peter, Calelonian Bank, Fortrose.
1887. Burxs, Rev. Tromis, Croston Loilge, Chalmers Crescent.
1889. Butir, Rev: P'. Lorimer, D. D., Manse of Lundie and Fowlis, Dumlee.
1867.*Bute, The Most Hon. the Marquess of, K.T., LL.D., Momentstuart Honse, Rothenay.
1895. Butlen, (harles, D.L., 3 Comanght Place, Lomlon.
1880. Caldwell, James, Craigielea Place, Paisley:
1887. Cameron, J. A.; M.D., Nairn.

1ヶ09. C.umpers, John M., M.B., C.M., (ilenlee, Dalmuir, Dumbartonshire.
1590. Cameros, Rfebard, 1 st David Street.
1886. Cabpbell, Donald, M.D., Craig. rannoelh, Ballachulish.
IS80. Clameelf, Sir Duxcan Alexindere Dundas, Lart., of Rarmalline and Glenure, 16 Ridgeway Place, Wimhledon.
1865.*Campberl, Rev: Jamer, 1).D., The Mause, Ealmerino, Fifeshire.
1881. Campbetil, James, of Craignish, Arilnactegran, callander.
1577. 'CimpebliL, James, of Tillichewan, Alexanilia, Dambartonshire.
$1874 .{ }^{*}$ Campbele, James A., LL. D., M.P., of Stracathro, Brechin.
1890. Cimpbell, James Lexwiox, Achmacorrach, Dalmally.
1850.*Campiell, Rev. John A.L., 2 Albyin Place.
 Moray Ilace.
1884. ('ampbell, Richard Vary, M.A., LL. B., Admeate, 37 Moray Platee.
1883. Campbell, Walter J. Douglis, of Inuis Chomain, Loch Awe.
1877. "Campbell-Bannermin, Sir Heniry, G.C.B., LL.I.. 6 Grostemor Flace, Loudon.
1892. Cannive, Francis Lennox, Architect to the Orange Free State, South Africa.
1895. C'apeon, Thomas Martin, Arelitect, (Cliffrank, Newport, Fife.
18ci2.*Carfrae, Rurert, 77 George Street, - Cunrlor uf Mascm.
1891. Carmizeiel, James, of Arthurstone, Neigle.
1ss8.* Carmichael, Sir Thumas 1). Gibson, Bart. of Castlecraig, Dolphinton.
14.99. C'arrick, liev. Jo\#n C'hardes. B.D., Newbattle, Dalkeith.
1594. Carter, J.ames Gurdon, The Fintchell, Dalry, Galloway.
1871.*Cartwright, Thomis Leslie Melvilee, Melville Honse, Ladylaank, Fife.
18.4. "Chalmers, 1)avid, Feellall, Slatefort.

1*6'5.' ('halmers, James, Westburn, Aberdeen.
1890. Chalmers, P. Macgreionr, Architect, $176 \frac{1}{2}$ Hope Ntrect, Glaxgow.
1895. Chimbers, C'uirles E. S., 7 Glencaim C'rescent.
1889. Chatwin, J. A., Wellington Honse, Edglaraton, Birtuingbam.
1895. Chisholm, A. W., Gohlsmith, 7 Claremont Crescent.
1881. Christie, John, of Cowden, 19 Buckingham Terrace.
1882. Caristisun, D.ivid, M. D., 20 Magdala Crescent,-Sccretary.
1859. ('lark, David Ru, M.A., Clairmont, Pollokshields.
1885. ('lark, George Bennett, W.S., 15 Donglas C'rescent.
1871. * Clark, Sir John Furbes, Dart., LL.D., of Tillypronie, Aberdeenshire:
1874. Clabke, Whlihm Brece, M.A., M. B., 51 Harley Street, Cavendish Siquare, Lundon.
1879. Cleland, John, M.D. Professor of Anatomy, Iniversity of Glasgow.
1880. Clouston, Thonas \&, M.D. Tipperlinu House, Morningside Place.
1891. Coats, Sir Thomas Glen, Bart., of Ferguslie, Paisley.
1570.*Cirihill, J. (i. Sinclath, M.J., St Catharine's House, Ventuor, Isle of Wight.
1892. Constable, Georce Willina, Traqnair Estate Oflice, Innerleithen.
1885. Cooper, Johs, Burgh Engmeer, 15 C'umin Place.
1867. *Copland, James, Assistaut C'mrator. Ilistorical Department, Cieneral Register Honse.
3895. Corrie, Adim J. Senwick, Kirkmul bright.
1891. Coutts, Rev. Alfred, B.D., F.C. Minister, Fathheal, Kirkeahly.
1879. Cowan, Rev. Charles J., L.D. . Morehattle, Kelso.
1865. *COWAN, JAME×, 35 Royal Tertace.
1887. Cowan, John, W.S., St Florpue. Grange Loan.
1888. Cowan, William, 7 Brail Avenne.
1898. Cux, Alfred W.. Westwood, Perth.
1876. Cox, Times (', The Cottage, Lochee, Dimilee.
1877. C'ox, Fubert, M.A.. M.P., 34 Drum. shengh Gariens.
1882. ('rimbie, Georlee, 56 Palmerston Place.
1579. C'rabbie, John M., 33 Chester Struet.
1892. Craig-Erown, T., Woollhern, Selkirk.
1842. Craige, Wm. A., M1.A., 142 North Street, St Ambrews.
1879. C'ritk, Geonse Lillie, 29 Belforl Street, C'ovent Garlen, Loudon.
1893. Cramoxd, William, M.A., LL.D., Culleu.
1880. *'r.an, JoHs, Kirkton, Inveruess,
1892. C'raw, 11. Hewst, West Foulden, Berwick-on-Tweed.
1889. Crawflrd, Rev. J. Howard, M.A., Aliercorn Manse, South Queensferry.
1861. *Crawfurd, Thomas Mackigiet, of Cartshurn, Lauriston Castle.
1878. Crond, Thomas A., 16 London Street.
1892. CRucketr, Rev. IV. S. Tweelsnmir, Biggar.
1889. Chombie, Rev. Jimes M., The Manse, Cote iles Neiges, Montreal, Canala.
1586. Cruss, Robfrt, \& Rothesay Terrace.

I891. ('vllen, Alexinderr, Architect, Clyale Street, Motherwell.
1867. *'rmivg, H. Sier, 63 Kemington Park Roul, surrey.
1883. Cenningham, Cirus D., Oriental ('lnl), Hanover square, Lomben.
1891. Cunninghad, James Henky, ('. E., f Margdala Crescent,-Trectumi.
1893. Cumington, B. Howard, Devizes.
1867. *Clrle, Alexander, of Morriston, I'tiorwonl, Melrose.
1893. Curle, Alex. O., W'.S., S2 Melville St.
1889. C'urle, J.mises, jun., Priorwool, Mclrose,-Lilizariun.
18s6. Currie, James, jum., Larkfielh, (iolden Acre.
1884. Cumrie, Walter Thomson, of Tuy daw, Cupar-Fite.
1879.*Cursiter, James W.alls, Albert St., Kirkwall.
1879. Diluleish, J. J., Drankston Grange. Stirling.
1893. Dithymple, Sir Chitrles, Bart., M. P., Newhailes, Mir-Lothiam.
1583. Dalrymple, Hon. Hew Ilamhton, Oxenfoord Castle, Dallkith.
1stib. "Davidson, (! B., LL.D., Alvocate, Rounlhay, Fonthill Fiond, Alerilem.
1872. Dividsos, IItgh, Procurator-Fiscal, Bracdale, Lanark.
1-S6. D.svidson, Jis., Solicitor, Kimiemair.
1882. *Devehar, David, 12 Hope Terrace.
1881. Dewar, James, Ealliliesk, Dollar.
1884. Diek, Major J. Proudfont,
1893. Itekson, Rev, John, 150 Feny Roat, Leith.
1870.*Dtekson, Tuns., LL.D., r'urator of the Historical Department II.M. (ieneral Register House.
1895. Duknon, W. Kirk, Advocate, 19 Dumdas street.
1852. ${ }^{*}$ Mekshes. Willlam Triquair, W.S., 11 Hill street.
1886.*Dinion, Juhn Henry, Invelul Poolewe.
1889. Dubie, (ieorge, 9 Priestfield Roul.
1877. Lhobie, John Shedden, of Morihhill, Beith.
1887. Dudds, Fev. James, D. D., The Manse, Corstorphine.
1995. Dunsldson, ILenry T.,Solicitor, Naitu 1867. *Donaldson, James, LL.1., Princigal of the University of St Amlrews.
1888. Donaldsun, James, Sumyside, Formby, near Liverrool.
1S91. Dunaldsun, Rubert, M.A., 22 Fetter Row.
1879. Imvelas, Abchibald Shulto, Birkhill Cottace, Mackart loy Dollar.
1861.*Duvglas, Divid, 10 Castle Street.
1895. Duculas, Sir Georue, Brrt. Siringwoot Park, Kelso.
1855. Douglas, Rev. Sholto 1). ('., Douglas Support, Coathridge
1881.*Dovglas, IV. I. Itobrnson, Orchariltm, Castle-Douglas.
1893. Duwden, lifight Rev. Jobn, I.D., Fishop of Elinharyh, Lym Hous: (iillsland Moal.
1si4. Duwell, Alexinder, 13 Palmerstou Place.
1578. Dremmand, Willtims, \& Learmonth Terrace.
1895. "Dumamond-Monsy, Capt. W. II., of Alereairney, Criefl.
1881. Duff, Edward Gurdus, Park Nowk, I'rinces Park, Liverpool.
1807. Doff, Itight IIon. Sir Mutwtateuart Elphinston (irant, Gi, C.s.i., Yurk House, Twickenhan, Lonton.
1891. Duff, Thomls Gurdun, of Drummair, Keith.
1872. *Duke, Rev. Willlam, D.D.,St Vistans, Arlironth.
1878. Dunbar, Archibald llamitun, of Northfichl, Bournemonth,
1880. Dincan, James Daldramef, Meiklewhot, Stirling.
1887. Duscan, (: S. Dummore Villa, Blangowric.
1874. Devean, liev. Jouns. Alnlic, Newhurgh, Fils.
1877.*1)unima, Jalifu, (.S.', 16 St Andrew Stuane.
1874. Denlof, liev. James Marcer, Ashhrook House, Fury Roml.
1892. Deslof. licy. lioberit H., Mini-ter of Elic, Fife.
1803. Duxn, Richamp 11., Eanlutou, Berwickshire.
1575. Duns, Joins, I. D., Professor of Natural Sciense, New College, 14 Greeuhill Place,-6's metor of Mist ilm.
1895. Edgar, Juinn, M, A., Clakieal Master, Foyal Fiehl Schom, 4 Alfred Place. Newington.
189\%. Elwauis, Fumin, 4 Great Western Temace, Glision,
18sí. *Elder, Willias Nicol, M.I), 6 Torphichen strent.
1880. Elliot, John, of Binkc, Stamley House, Nightingale Roal, Southamit
1.sy. Erskine, Dayid (.. E., yr. of Liulathen, 11 Irmmshengh Gardens.
1895. Evans, ('hanles li. J., Latham Lmane Brixton, Surrey.
1892. Eyre. The Most Rev. Chables, D.1), R.C. Archlishop, 6 Dowmont (Farletus, Glasgow.

18so, *Fiulds, A. Wilson, Knocklatckle Housc, Beith.
1541. Ferutis, Uswind, 27 Blythsweot Sil., Glaszow.
1890. Fergerson, Prof. Johis, LL, D., Ubiversity, Glasgow.
1890. Fercters, Iters Johy, D. D., Manse of Aluerdalyie, Porth-4ire.
1892. Femusun, John, Writer, Duus.
1880. Fersithon, hichard S., M.A., LL, M., Lowther strect. C'arlisle.
1875. Fereuson, Fobert, Morton, C'arlivle.
1872. Ferguins, Whllam, LL.D., of Kin. munly, Mintlaw, Alurdecushire.
1883. Fergetssins, Alexinder A., 11 Grosvenor Terrace, tilasgow.
18s7. Feril'sson, J. Girant, jun., of Balellmund, Pitlochry.
1575. Fergrisson, Sir James C., Part. of Slitalhangh, West Linton.
1873. Findlay, 1031 . Jitrehie, is liothesay Terrace
1892. Findliy, John Ii., jun., 3 Rothenay Tamace.
1859. Finliy, J, F., Bengal ('wil harvire-
1880. Finlay, Johin Hure, W.S., 19 Glem. cairn Crescent.
1885. Fingay, Kirkman, of Dublunsit. 1Nay.
1875. Fisher, Edward, Ahotslury, Newtom Abhot, Devonshire.
1885. Fleaung, D. Hay, 16 North Bell street, St Andrews.
1888. Fleming, James, jum., Kilmory, Skelmorlie, Aymbire.
1895. Fleminte, James Stark, Folicitor, Stirling.
1893. ${ }^{*}$ Fleminc, Rev. Jimes, M.A., Mmister of Kettins.
1875.*Foute, Alexinder, Bromley, Muhtrone.
1880. Fullosa, Major-(fenh. J. 18. Mioche, 11 Douglas C'reseent.
1890. Fohnester. Itenry, Morton Madl, Liherton.
1897. Futlis, James, M.I., 31 letiot Row.
1883. Fox, Chables Henry, M.D., 35 Heriot Row.
1862. ${ }^{*}$ Friser, Alexinder, Canommills lootge, ('anommills.
1586. Fraser, James L., 5 (astl. Street, Inverness.
1891. Fraser, Willlim N., of Fitulaack, Torphins, Aberlemstire
1 $>51$. Fr.iser, Sir Willi.is, K. ('. E., LL. D., 32 Castle Street.
1883. Fraser, liev. William Fuxton, M.A., Minister of Maryton, Hontrose.
1884. Galbrathe, Thomas L., Town-Clerk, 24 Park Terrace, Stinling.
1587. Galliwiy; Aiexinder, Dirgarve Honse, Alerfelly.
1890. G.arnen, Farqecharson T., 4 Rubjishaw Temace, Ahericen.
1891. Galisun, William, W.S., 5 Albyu Place.
1891. GAkeros, Johl Fibtaes, D.L., M.A., Bextmstown, C'a-thm lifigham. Co. Lonti, Irelans.
IS66, Gebbie, Rev. FriNuts, 26 Chahmers Street.
1S87. Geddes, (ieurge Hutton, s Donglas Crescent.
1895. Ghbr, Ateminuer, 12 Antigna Street.
1877. Gibb, John S., \& Rucdemeh llace:
1856. Gille, A. J. Mitchell, of Savoik. Alerdennstire.
1807. Gilleaple, Dartd, of Mountquhanie. Cupar-File.
1885. Gilen, Rubert, 10 Dumionalit Street.
1893. Ghad, (ikomie, Brafoot, Liherton.

1S90. (iordon, Liev. Arther, Monzievaird, Crieff.
18s1. Gurdon, James, W.S., \& Eant Castlu Foad, Merchiston.
1877. Gomdos, Lev. Fubert, of Frec Bu-cleuch Clurch, 11 Maytirhl faritens.
1883. Gurdon-tilamour, (apit. Kobbirt, of ('raignillar, The Inth, Liberton.
1872. "Gurdon", WiLliam, M. 1)., 11 Maytielit Gardens.
3nsa. Gordon, Willas, of Tarvie, The Wyand, sit Amarews.
1869.*(foupie، (illbert, 39 NorthmburlanI Street.
 Nitholate Irive, Follokshields.
IXis. Gow, Jiames M., Chion Bank, 66 George sitrect.
1882. Graham, James Maxtone, of CuItoquhey, Crieff.
1802. (irnama, Robert ( $\%$, Skiphers, Argyll.
15ヶ\&, Grist, F. J., W.S., 42 Amm Street.
1032. (Iras, George, Clerls of the Peace, County Buildings, (Haxgow.
1894. Graf-Buchanan, A. W., Parkhill, Polnont.
1891. (ireen, Cinalies E., S Kilmauts Tertace
1887. Grefi, ANdrew, C.E, Bellevue, Tayport.
1886. Greig, 'T. Watson, of (ilencarse, Perthshire.
15S0. Grieve, Symington, 11 Lander Road.
 Brachtur.
1571. 'arub, Rev. (ikomge, Rem:illy Trinity, Ayr:
1883. Gevisisha, Ilis Excellemy Imbebt 11.hblid.sy, M. D., LL. I), 12 Aldisou Cresent, Komington, London, W.
1881. Giuthmik, C'insmes J.. ANorate, 13 Royal Cirens.
1878. (inthrie, ILev. D). K., 49 (lmy ( Aarictes.
 Taybank IIouse, Dundec.

1Nif. Haddinitos, Right 110n. The Earl ot

 firtaur, Dmutermine.
 M.A., The Parsomage, Alhom.
1.75. Hamiltos, liight Hon. Lord, of Dalaell. Motherwell.
1691. Hamilon, James, flaften, Lombun Road, Kiluarnork.

1shz. Harmison, Juhn, Rockvillo, Nappier Rowl.
1886) Hart, Gentaf, I'momator-Fincal of Pewfermslife at Paisley.
1875. Hax. Gemme, ILS.A., 7 Ravelaton Terrace.
1882. Hax, fikunge, The Sungery, Arbroath.
187. IIax, J. T.. Blacktall (astle. Banchory:
186.7. HIAy, Robert J. A., Florenco.
1893. Hedley, hobert (. Chevioth, Cin-furigeoon-Tyut.
1095. Heitun, Andukew Graiscier, Arvhitect, Perth.
1858. ${ }^{*}$ II Pexderson: (io). George, of Ilevers. wood, Prastenl, Kent.
1892. Hendersios, James, Thumime.
1889. Hendermin, Jimes Stewalkf, 1 Pomd Street, II:mpsteaI, Lombun, N. W.
18Rin. Hemby, Divid, Architert. 2 Lockhart Flace, st Andrews.
1891. HERHAES, WiLLLMM D., J1. al Spottes Hall, Datleattie.
1887. Hewisun, fiev, J. King, The Manse, Rutheraly.
1890. Hill, Fuv. (ieuffat, M.A., The Vicarage, Ilamban, Salinhmy:
18S1. 1HLl, (iforge W., 6 Princes 'rerrace, Dowanhill, Glasgow.
1877. Huate-1nummuxd, C'ol. H. S., of Blair Drnmenoml, Stirling.
1874. Hose, IIENmy W., of Luffines, Drem, Hadhingtomsbire.
15\%4.* Hunntman, Fredertck Juhs, fimmey Monat, Forest Hill, Lomton.
1892. Houston, liev, A. M. Neill M. A. . B. D., Anchterlerran.
1889. Howden, ('Harles I. A., Alvacate, 25 Mc
1:86. 110wDen, John M., C.A., 11 Eton Turnace.
1861. Nowk, Alexander, W.K., 17 Moray Hace.
1880. Huworte, Diniel Fuwler, Grafton Place, Ashton-under-Lyne.
1887. "Hunt, 11. Eirfale, 1 11yrle Park Gats, Lomdon, S. W.
 Llautair P. U., Anglesea.
1891. HuNtRE, Rev. JamEs, Falit Mause, Blackshick.
18sti. Hunter, Ruv. Josefh, M. A., rinckJurnsiath.
188こ. Hetchesion, Atexisimer, Architect, Heraliel Hanse, Lromghty Ferry,
1855. Jutchiann, Jambe T'.. of Morelatm, 12 Dongla Crescent,
1871. 1 Hutuhisox; John, Ii.s.A., 19 Manor Place.
1891. Hotemisun, liev, John, D.D., Afton Loige, Loumantom.
1872.+11YsLOP, JAMES M'ADAM, M.J.. Surgeon-Major, 22 Palmerston l'lace.

10!1. 1xtili, Al\&xasDEk Wood, secretary, Buarl of Manafactores, 30 Alercrombly Place.
1887. Inglis, Rev. W. Masion, M.A., Auchterhouse.
15S゙2. INNES, ('HAKLES, Solicitor, IHvernens.

1stif. "1ievine, James 'I., Arelitect, 16 za Cromwell Romi, Peterborough.
1881. IsLhs, James, St Nimiths, Blairgowrie.
1805. Thekson, liev. J. W., M.A., F.C: Minister, Cromulale, Strathiley.
1883. JACKson, Maju Randle, Sworlale, Evauton, lusss-shire.
1867. ${ }^{*}$ JAMEs, Ruev. JOHN P, Lynton, 11kley, Leerls.
1885. JAMESON, ANDREW, H.A., Sheriff of P'erthalire, it Muray Place.
1891. JAmbion, Andrew, Fivertank 1lumac, Newmilns, Ayrshire.
1859. *JIMHESON, GEURGE AULDJU, :37 Drumshengh fiardens.
1871. *Jamesion, James Auldjo, W.S., 14 Buckinglau Terrace.
1892. Johnston, 1.avid, 24 Huntly Garlens, Kdvinside, (ilaxgow.
1~49. Johnston, Thomas B, 9 (laremont Crescent.
1892. Juhnstune, Flenki, M.A., 93 Comely Bank Avelue.
1877. Johis, Willinsi, 11.M. Inspector of Schools, (irectabeal House, Govau.
1893. Kixe, Walter J., jun., Gimberton Hatl, Spalaling.
1s\%0, "Keltie, John S., Servetary, Royal (iengtap)lisal Soolety, filamlevon Thasce, Compayne Gaddens, Hampsteal, Lomlon.
1877. Kennedx, Hugn, Fedclyffe, Partick Hill, Glasgow.
1850. Kranedy, Juhn, M.A., 25 Abingdon street, Wentminster.
1889. Kermode, 1'ullip M. (., Alvocate, Hillsile, Ramsey, lale of Dim.
1893. Keirr, lev. ('ithel, M.A., F.C. Miake, Melness, Lairg.
1889. KErr, Andrew Willilim, Royal Bank 1lunse, St Andrew Sipare.
1889. Kerk, liev. John, Dirleton, Drem.
1878. KLNG, Fir Jamex, Bart., LL.D., 115 Wellinhton Road, Glaroow.
1884. Kinloch, Sir Iohn G. S., Bart., M.P., Kinloch House, Meigle.
1892. Kinross, John, Architect, A.li.S.A., 1 West Saville Terrace.
1887. Kirkwoud, Henri Bruce, 68 Tlistle Street.
1882. Laing, Alexinider, S.S.C., 59 Manor l'lace.
1894. Laing, J. II. A., M.B., C.M., 11 Mel. ville Street.
1S90. Laing, J.mass, H. W., M.A., B.Se., M.B., C.M., 9 Tay Square, 1mulec.
1804."Lavg, Simeel, LL. D., Lomlon.
1878.*Lamb, Alexinder C'rawford, 3 Liml/* downe Place, Dundee.
1884. Limb, James H., The Lateh, Brechin.
1892. Lang, James, 9 Crown Gardems, Dowanhill, Glasgow.
1893. Lanowill, Robert B., The Miuse, C'urrie.
1885. Law, Thomas Graves, Lihmorian, Signet Library,-Foncign Nictury.
1894. Liwhor, Rew, HeriH Jacksus, B. D., 50 Palmerstan Place.
1882. "Leadmetter, Thumas, Arwhitect, 17 Younc strect.
1859. Lees, The Very Rev: J. C'imbrun, D.I., LL. 1)., 33 Blacket 1lace:
1871. ${ }^{\text {L }}$ Leishmin, liev. Thomas, D. D., Linton, ijelsi.
1853. Leith, Rev. William Fombis, Selkirk.

1bst. Lexnox, James, Eden Mank, Ghme fries.
1857. +Lfslif, (iliarles Stephen, of Lialynhain, 11 (Manonry, Aleddectl.
18til. Lindmay, Leasimd (.., 1eat Park, ILomiton, Devon.
 fesmor of Divinity, Free Clume h Collesc, (:laszow.
1892. Lavtux, Simus, Dakwonl, Silkink.
1893. Lathow, Surgeon Miti.-Gen. S. A., M.D., (: B., superintembent of thu. Linyal Iulirmary, Mealow Walk.
18S1."Litule, lionert, 26 Church liow, Hanpstianl, Lomlon, W.
1878. Liviniston, lostah, 4 Minto Street.
1883. Luckhathe, lien. Whatim, M. A., D. D., Minister of Colinton.
18S2. Lorimer, Geurge, 2 Abbatsforl C'rescent.
1870.*Lothian, The Most Honomrable the Marquess of, K.T., LLi)., Presultint.
1873. ${ }^{\text {Lumsden, }}$ Lt.-Col. Hemry Willitim, Langley Park, Moutrose.
1873. ${ }^{5}$ Thasden, Ittoh Gurdon, of Cluya, Lumsden, Alerdeenslite.
1880. "Lumsden, Jares, Aralen Honse, Alexaulria.
1993. Liny, Francos, Livingstone Turmee, Galashiels.
1892. Macanam, Joserh H., 9. Leith Strect.
1875. *Macadam, Stevenson, 1h.D., Lecturer on Chemistry, Surgom. Hlall.
18s7. Macadam, W. Ifison, Lecturer om Chemistry, Surgeons' Hall.
1882. Macandrew, Sir Hexry Cuckbtis, Royal Bank Buiflings, Inverness.
1885. M'Bans, James M., Banker, Arlmath.
1877. Micbeatif, Juaies Mainlind, Lyimfieh, Kirlwall.
1893. MacBrayne, D.ivid, Aurlintiel, Hehnshurgh.
1885. M'Call, Jiames, 6 St Joh's Terme, Hillheat, Glasgow.
1859. A'C:ali, Hardy Bertra3s, (Marlese fiehl, Midalder.
1890. M'tombie, Peter Doguid, 13४ U'uion Strect. Alweveen.
1889. M. Comulk. Riv, Fleminut II. J. Hlkuton. Derloy-hire.
1884. Macdonild, Alexinverk, ! Mant gomery Drive, Kelvimike; (iliagow.
1885. Macdunald, Cidl Re:1siait, M.1). Kim•hnil, Ayr.
187. Jmposimp, Jimes, LL. D., 19 Foun

 Street.
1890. Macdunald, Fimen The Fam, lluntly.
1890.*Maconnaid, Juhn Matheacs. 95 Harley Strect, Lomion, W.
1882. Macdunald, Kenneth, Town (lerk of Iuverness.
1890. Mlicdunald, William fae, 1 Fortes Street.
1887. H-DuNall, James, of Logan, Strammer.
1872.*M•Dowall, Thomas W., M.D., East Cottingworl, Morpeth.
1860. Macemen, Jomn Cuchrine, Thaffor? Bank, Invernes.
1892. M'Ewen, Rev, John, Dyke, Forres.
1862.*Macerbeon, Darid, Architent, 65 Frelerick Street.
1878. Macgilliviay, William, W.今i, 32 Charlotte Syuare.
1895. MGLashin, Stewart, Senfitor, 5 Braudon Street.
1889. M llardy, Lt. Col. A. B., 3 Favelston Park.
1876.* Mack.iy, Æaness J. G., LL. I., Sheriff of Fife and Kinross, 7 Albyn Place.
1890. Mackir, dimes, Tromle, Trowbrilge.

1sC8. Mackis, J. F., W.S., Whitehonse, ('ramonl.
1592. Mackay, Thomis A. Banker, 14 11emlervon Row.
1882. Mackay, William, Solicitor, Inverness.
1852.*Mackenzie, Aliex.inder Fincaid, 19 Gronvemer Cresent.
1887. Mackrazie, D.ivid J., Sheriffsuhstitute, Wi.k.
18i2. Mackenzie, Re:. Jimes B., Kemmore, Alertiny.
1891.* Mackenzie, James, 2 Rillhank ('rescent.
1S89. MLicken/IE, R. W. R., Stormontlimh, Perth.
18\%0. Hisckenzab, Thomas, Sherithsubtitute, Ohd Bank, (Eoh-1pie.
1873. * IT Kerlie, P, 11., 2t Pembrilee Villas. Bayswater, London.
1876. M'Kie,Thomas, Advocate, 1 (iloneester Place.
1888. *Markinlir, J. M., M.A., \& Wrest. bonme (iambus, (iliasow,
1888. Mackinnen, L., jun., Adrocate, 261 Union Street, Aberdeen.
1891. Mackinnon, sir W. A., K.C.B., 28 Evelyn Gardens, London.
1864.*Mackintosh, Charles Fraser, of Drammond, Lochardill, Inverness.
1893. Macktitosh, Wieliam Fyfe, Solicitor, Manlesbank House, Arbroath.
1865. * Mackison, Willlam, Architect, 8 Constitution Terrace, Dunilee.
1878. Maclagan, Rubert Craig, M.D., 5 Cuates Crescent.
1885. MacLehose, James J., M.A., 61 St Vincent Street, Glasgow.
1893. Micleod, John N., of Kintarlert, Glensudell, Argyllahire.
1890. Macleud, Reginald, C.B., Queen's and Lord Treasurer's Remembrancer in Excluequer, - I'ice-Persilint.
1889. MacLeckif, Joan Redpoch, Brachide, Falkirk.
1875. Macmite, William, 16 st Audrew Square.
1879. M.acmillan, Alexinder, M.A., 29 Belford street, Covent diarilen, Lowdon.
IE54. Macmillis, Rev. Hugh, D.D., LL. D., T) UThion Place, Greensek.
1555. * Maciab, Juhn Munbu, Killin Honse, St Thomas Road, Grange.
1839. Macniughton, Allan, M.D., Achabuie Ilonse, Taynnilt.
187. M'Neill, Malcolm, Secretary of the Board of supervisinn, 53 Manor Hace.
1882. M.kranil, Rev. J. C., D.D., Pilrig Mause, Pilrig street.
1890. Macthersun, Alexinder, bolicitor: Kinsusuie.
1886. Mumbeliany, Archimald, Architect, 7 Young Street.
1895. Machimetons, Capt James F., United Service (lal), Quech Strert.
1s78. Misthersun, Normin, LL.I., 2 Buckingham Terrace.
1852.*Micmachie, David, C.A., 4 Archibahd 1lace.
1878. ${ }^{\text {Makhat.ar, Rev. William, } 8 \text { Charlotte }}$ Sipuare.

18i2．＂Marshall，David，Lochleven Place， Kimross．
1885．Marshall，William Hunter，W．S．， 25 Heriot Row．
1891．Martin，Francis， 207 Bath Street， Glasgow．
1886．Dhatin，Thomas Johnstone，Alvo－ （＂ate， 13 Shandwick Place．
1873．＊Martink，William，M．D．，Hadling－ ton．
1861．＊Marivick，Sir James David，LL．D．． （Iity（＇Jerk，City Chambers，（tlar－ gow．
1886．Masson，Prof．Dayid，LL．D．，Ilisto－ riograplee for Scotland， 34 Melville Strect．
1892．Matheson，Augustos A．，M．D．， 41 fienrge S＇puare．
1884．Maxwell，Sir Herbert Eestace， Bart．，M．P．，of Nonreith，Wigtown－ shire．
1892．＊Maxwell，Sir John S．，Bart．，of Pollok，Pollokshiehls．
1891．Mixwell，Wellwoud，of Kibkenarn， Datheattie．
1889．Maxwita．，Wellwood H．，of Munches， betheattic．
1887．Mixwehi，Willitam，of Donavourd， Pitluchry．
1889．Mayhew，Rev．S．M．，M．A．Vicar of St l＇aul＇s，St Paul＇s Vicarage， 83 New Kent Road，Lomdon，s．E：
18．7．MEarss，Rev．D．G6，yr．of Divhair， B．I）．，Manse of Oyne，Aberdectr－ shinc．
J以7．Merdrum，Rev，A．，M．A．，Loxierait， Ballinluig．
1887．Meiville，The Right IJom，Visamat， Mclville Castle，Lasswale．
$187^{\circ}{ }^{\text {a Mendin，Jams，}} 43$ Drmaheugh （iankens．
1893．MExhiss，D．P．， 257 St Vinent strect， （i）aーゥow．
1878．Mercer，Whalim Lindsiy，of Ilant－ ingtower，Baleraig．Serne．
1885．Metchthe，Liew．W．M．，D．1）．，Sonth Manse，Paisley．
 Iluse，（Jepiugton linal，Dumbee．

1876．Millar，William White，S．S．C．， 16 Regent Terrace．
1878．＊Miller，Geurue Anderson，W．S．， Knowehead，Perth．
1889．Miller，Hugh，Geologieal Sursey， Gcorge Fourth Bridge．
1866．＊Mtllet，Pefer，Dameny Lodge， （raiglockhart．
1885．Millidge，Edina，is Viewforth Ter－ race．
1890．Hilne，flev．Andrew Jamieヶon， LL．D．，Fyvie，Aberdeenshire．
1867．＊Mitchell，Sir Arthutr，K．C．B．，M．D．， LL．D．，Commissioner in Lunary， 34 Drmmond Place，－Foreign sitre－ tury．
1886．Mitchell．A．J．，Alvoente，（6） Frelerick street．
1888．Mitchetl，Charles，C．E．， 34 St Antrow Sipuare．
1884．Mifehell，Hugh，Solicitor，Pit－ forbry．
1890．Mitchell，JuHN Oswitld，B．A．． Ll．D．， 67 Enst Howaral strect，Gilas． gow．
1886．＊Mitchell，Pichard Blunt，of Pol－ wnoil， 45 Allsayy Street．
1890．Mitcheli，Sydney，Archituct， 34 Drumuond Place．
1890．Moncrieff，C＇ol．Sir Alexander， K．c．B．，Banclirran，Perth．
1851．＊Montcomery，Sir（trahima G．，Bart．， Stnlo Cantle，Pecllesshire．
1882．Mohas，James Archibabd，Architect． （1）Sambrate，Ayr．
1882．Monutan，17em，Lilharian，Eifinhum I＇ublic Lilorary．
1887．＊Monbray，John J．，Nacmoner，Fam－ Wing Pridge．
1877．Mudik，James，C＇riganwan，Itwinhty Fary．
1804．Mutis，Juhx，Galstm，Aywhire．
1577．Mriuhead，Axdrew，\＆Muraytiold （izathl Ivemue．
1859．Membead，（ieorge Mains of tladio， Aluencernhtire．
1891．MuxRn，Al．Exindple M．，Accomatant， Town House，Alaction．
1874 M1 NBt），（＇Hables． 18 （icorge Strent．
1879. *Munbo, Robert, M.A.. M.D.. 48 Manor Place,-Sirretary.
1881. Munro, Rev. Robert, M.A., B.D., Oht Kilpatrick, Glasgow.
1890. Munro, Rev. Whlllam, Collegiate School, New iort, Monmouthshire.
1885. Murdoch, Rev. A. D., All Saints' Parsonage, 26 Browham Street.
1879. Murdoce, James Barclax, Capling, Mearns, Reufiewshire.
1878.* Mtrray, Divid, M.A., LL.D., 169 West George Street, Glasgow.
1887. Murray, Johns. Ils.D., LL.D., of the "Challenger" Expedition, 45 Frelerick Street.
1881. Murbar, Patrick, W.S., 12 Aun Street.
1.855. Naismith, Ronkrt, Stonehouse.
1891. *Nellsun, Grumee, 34 Granhy Terrace, Glasyow.
1887. Newtos, 12. N. H., 3 Eglinton Crescent.
1889. Nicholson, J. Shield, M.A., D.Sc., Professor of Political Economy, \&c., Eden Loige, Newbattle Terrace,
1861.* Nicol, Erakine, R.S.A., The Dell, Feltham, Midellacex.
1875 . NionL, Gennge HI. Tay Beach C'ottage, West Ferry; Dumlee.
1892. Nicolson, Arthit Bidenach, jum, Glenbervic Honse, Fonloun.
1885. Nicolsin, D.ivid, M.D., Broatmoor, Crowthome, Berks.
is95. Nisbet, Ifameton More, University Hatl, Hamsay Loige.
1577. Niven, Alexinder T., C.A., 28 Fome tamball fional.
1995. Nixon, Whlinm, Solicitor, 2 Đudhope Ilace, Dumlee.
[sen1. Noble, Fobfrt, Ilerouhill, Ilawick.
186if. Nobthemberland, His Grame The Duke of, Alnwick Castle, Aluwick.
1877. OGH.MIE, Whatum M., Bank House, Lachee. Dundee.
1890. Onilyt, Henry J. Nisbet-Hamiltun, Biel, Prestonkirk.
1885. Parker, Charles Arundel, M.D.. Gosforth, Cumberland.
1883. Parlane, James, Applely Lolge, Eusholme, Manchester.
1880. Paterson, Alexander, M.D., Femfiell, Brilge of Allan.
1859.*Paton, Sit Joseph Noel, R.S.A., LL. D., 33 George Square.
1891. Paton, Victor Aldert Nuel, W.S., 22 Young street.
1870.*P.trice, R. W. Cochran, LLL.D., Woodsite, Deith.
1880. Patterson, James K.. Plı.D., President of the State College of Kentucky, Lexington, U.S.A.
1871. ${ }^{*}$ Padl, George M., W.S., 16 St Andrew Square.
1879. Paul, J. Balfour, Alvocate, Lyon King of Arms, 30 Heriot Row.
18s2. Paul, ilev. Robery, F.C. Manse, Dollar.
1874.*Paxton, William, 62 Fountainhall Froal.
1891. Peace, Thomas Smith, Architect, Junction Rond, Kirkwall.
1879. Peddie, J. M. Dick, Archite t, 3 Sonth Charlotte Street.
1893. Peel, Frink, Walkley C'uttage, Heckmondwike.
1855. *Pender, Sir Jobn, K.c'M.G., is Arlington Street, London.
1889. Petbie, Lieo., 52 Nethergate, Dumiler.

1sy?. Pillans, Hugh llindyside, hoyal Bank, Hunter sopuare.
1885.* Pures, Ronerr, 9 Ifuckingham Terrace, Ilillheat, flasyow.
1883. Pitt-Pivers, Lieht-dieneral A. H. L. Fox, f) (:L., buspector of Anciont Monnments, Fushmore, Salismary.
1881. Prucinad, Rev. Hegh, M.A., Dinam, Gaurwen, Anglesea.
1960. ${ }^{4}$ Primrase, Hon. Bouverie F.. (2.B.. 2:2 Moray Place.
1878. Pringle, John, M.D., Dep.-InspectorGeneral of Hospitals, 13 Absotsford Park.
1886. Pullar, Al.fred, M.D., 111 Demmark llill, London, S,E.
1889. Purves, Auexinder I'., W.s.s, Esk Tower, Lasswade.
1865.* Ramis, Linbert, D.D., Princijal and Professor of Theology and Church History, New College, Elinburgh, 23 Douglas Crescent.
1873. R.ampint, Chables, LL.D., SheriffSubstitute, Springlield llouse, Elgin.
1891. Fismsis, Wileram, of Bowland, Stow.
1879. Rinkine, Johs: Profesnor of Scots Law, University of Eliuburgh, 23 Ainslie Place.
1874. Ristray, James Clerk, M. D., 61 Grange Loan.
1893. Read, Charles Hfrcules, British Museum, London.
1882. Reid, Alexasder George, Solicitor, Anchterarder.
1888. ${ }^{\text {² lieid, Sir George, }}$ I'R.S.A., LL.D., 22 Royal Terrace.
1891. Rhind, W. Bimnie, A.R.S.A., Sctlptor, St Helen's, Cambridge Strect.
1891. Richards, Rev. Wilter J. B., D.D., St Charles's College, Notting Ilill, London.
1880. Riciamdsox, Adiai B., 27 Mamor Place,-Curetor of Cioins.
1892. Richmoxd, Willam, 17 Milferfield Place.
1856. ${ }^{7}$ Ritcuie, Charles, S.S.C'., 20 IIill Street.
1883. Roberts, Andrew, St Agues, Giffnock, Renfrewshire.
1885. Robertson, Charles, Redfem, Colinton Road.
1887. Robehtson, D. Argyll, M.D., President of the Royal College of Surgeons, 18 Charlotte Square.
1893. Ronertson, D.ivid, 12 Windsor ('ircus, (Hlasgow.
1879. Rubertson, George, Kepper of the Abbey, Dunfermline.
1881. Robertson, J. Stewart, Elralynate, Ballinluig, Pertlashire.
1886. Robertson, Robert, Allion Villa, Dollar.
1889. Robertson, Thomas S., Architect, Riverview, Broughty Ferrs:
1879.*Robertson, W. W., Architect, II.M. Board of Works, Parliament square.
1865. ${ }^{* R o b i n g o n, ~ J u h n ~ R y l e y, ~ L L . D ., ~}$ 47 Westgate, Dewsbury.
1880. Robsen, Willlam, S.S.C., Marchholm, GillsLand Road.
1854, Phoger, Jimes C., Friats Watch, Walthamstow, Essex.
1571. Rullo, Right Hon. Lord, Ihuncmi, Ilouse, Dumning.
1874. Romanes, Robert, Haryborm, Latuler.
1872. - Rosebery, Right Fon. The Earl of. LL. D., Dalmeny Park.
1876. Ross, Alexander, LL.D., Architect. Queensgate Chambers, Euverness.
1581. Ross, Joserh Carne, M.D., Parsonage Nook, Withington, Manchester.
1891. Russ, Thomas, Architect, 14 Sixe Cobug Place.
1867."Ross, Rev. Whlliam, Cowcalllens. Free Church, Cliabhan House, Hill Street, Garnethill, Glasgow.
1894. Sandemin, Colonel George Glas, of Fonah, Pitlocliry.
1891. Saunders, Frederick A., M.D., Graham's Town, S. Africa.
1889. Scott, Adexinder, Ashbank, Newport, Fife.
1892. Scott, J.mes, J.P., Rocl: Knowe, Tayport.
1895. Scott, Joins, C.B., Hawkhihl, Largs, Ayrshire.
1893. Scott-Noscrieff, Sir Colin, UnlerSecretary for Scotland, Fover llonse, London.
1893. Scott-Muncrieff, David, W.S., 24 George Square.
1889. Scott-Moxchieff, W. G., SheriffSubstitute of Stirlingshire, Weedingshall, Polmont, Stirlingshire.
1881. Semple, Andrew, M.D., United Service Cluh, Queen Street.
1848.*Seton, fieunge, M.A., Alvocate, Ayton Ilouse, Aluemethy, Perthshire.
1895. Seton, Major A. D. of Mounie, 36 Buckiugham Terrace.
1869.*SHand, Fight Hon. Lorl, 32 Bryanston square, Lontou.
1864.*Shand, Robbrt, 1 Charlotte Pl, Perth.
1892. Shiells, Hexby K.. C.A., 141 George Street.
1879. Sibeald. Jonn, M.D., Commissioner in Lumacy, 3 St Margaret's load.
1879. Sibbald, John Edwald, S Ettrick Road.
1871.*Smeson, Alex. T., ML. D., Professor of Millwitery, Unisersity of Ediaburgh, 52 Queen Street.
1890. Sinison, II. F. Dlorlaid, M. A., Rector of the Cirammar School, Alnerdeen.
1891. Simpson, John, M.D., Springfieit, Inverness.
 field Crencent.
18s1. Simpson, Sir Walter G., Bart., University Club.
1578. Skeete, Homace, Solicitur, 42 Tay Street. Perth.
1489. Skeltus, I. I1., 2 Vine Terrace, Thornton Renal, Bradlord, Yorkshire.
1576. "Skinner, William, W.S., 35 George Square.
1577. Skhming, Adam, of Croys, Dalheattie.

1sig. Shall, James, Secretary, Commercial Bank of Scotland, 7 Brtutstield Crescent.
1850. Smale, J. W., Architect, 20 Forth street, stirling.
1874. Smart, John, 1L.S.A., 13 Brunswick Street, llillside.
1891. S3ith, Cectl R. Gilliem, is Atholl Crescent.
18i2. Shith, G. Greciory, 9 Warrender Park Crescent.
1893. Smith, George, S.S.C., 21 St Anùrew siquare.
1874.*Smith, J. Livine, 20 Great King Street.
1877. Smith, James 'T., Dułoch, Invelkeithing.
1889. Smith, Robert, Solicitor, 9 Ward Road, Dundee.
1891.*Suith, W. M'Combie, Persie, Hairgowrie.
1886. Ssith, Miaj.-Gen. Sir R. Mutroch, K.C.M.G., Director, Edinburgh Mnseum of Science and Art.
1888. smith, Thomas, 18 Moray Place.
1890. Smith, Thomas IIenry, Corrie Lolge, laveruess.
1592. *Smythe, Colonel David M., Methven C'astle, Perth.
1593. Somerville, Rev. J. E., B.D., Villa Jeanne, Mentone, France.
1893. Sorley, James, 18 Magdala Crescent.
1882.*Southesk, Right IIon. The Earl of, K.T., LL.D., Kinnaird Castle, Brechin.
1890. Fipence, Charies James, Sonth Preston Lodge, North Shields.
1882. Sprague, Thom.is B., M.A., Ll.I) . 29 Buekingham Terrace.
$1872 .{ }^{*}$ Stair, Right 11 on. The Earl of, K.T... Lochinch, Wigtownshire.
1675. Starke, Jimes G. H., M. A., Advocate. Trogueer Holm, Dumfries.
1885. Stebdman, Thomas, c'lydesdale Bank, Kimross.
1874. *Steel, Lt.-Col. (i. Mure, 33 North. umberland street.
1891. Steele, William, 12 Wendover Crescent, Mount Florida, Glasgow.
1889. Stevart, John, Ballechin, Tullypowrie, l'erthshire.
1587. Stevens, Veu. C. Ellis, LL.D., D.C.L. Archdeacon of Brooklyn, 2217 Spruce Street, Plilitulelphia.
187.."Stevensun, Alexinder Sbannan, Oatlands Mere, Weylridge, Surrey.
1895. Stevensun, John Horne, M. A., Advo eate, 10 Albyn Place.
1807. *itevenson, John J., Arehitect, 4 lorehester Gardens, Lonton, W.
1887. Stevenson, Rev. W., M.A., Achtertuol Manse, Kirkcaldy.
1888. Stewart, Maj. Gen. Hon. A., Corsbie, Newton Stewart.
1876. Stemart, Eev: Alfyander, L1.D., Manse of Mallachulish, Nother Lochaber.
1879. Stewart, Charles Poyntz, Chasfield Park, Stevenage.
1893. Stewart, Doyald W., 151 Bruntsfield Place.
1871. *Stewart, Maj-Gen. J. H. M. Shaw, R.E., 61 Lameaster Gate, Londom, W.
1885. Stewhlit, Robert King, Murdostom Castle, Newmains, Lanarkshire.
1881. Stematr, Sir Thomas Grainger, M.D.; Professor of Practice of Physic and Clinieal Medicine. 19 Charlotte Syuare.
1894. Stewart, Walter, 1 Murrayfield Gardens.
1880.*Stirling, Capt. Patrick, Kippenross, Dumblane.
1882. Stoby, Rev. R. Herbert, D. D., Professor of Ecclesiastical History, Uhifversity of Glasgow.
1583. Strachan, John, M.D., Gladstone Terrace, Dollar.
1889. Sthathern, Robert, W.S., 13 Eglinton Crescent.
1867.*Strathmore, Right Hon. The Eul of, Glamis C'astle, Forfarshire.
1884. Strong, W. R., C.A., Glasgow.
1891. Struthers, John, M.D., LL.D., 24 Buckingham Terrace.
1894. Stuabt, Alexinder, Mciville House. Portobello.
1883. Stuart, George Balling.al. M.B., Surgeon-Major, Grenadier Ghards, 7 Carlton Street, Elinburgh.
1s91. Stuart, J. A. Erskine, Singem. Heckmondwike, Yorkshire.
1895. Stcart, Morton Gray, 2 Belforl Park.
1892. Sturrock, Peter, London Road, Kilmarnoek.
Is 76 . Sutherlind, Rev, Geobaf, The Parsonage, Portsoy.
1887. Suthert.ind, J. B., S.S.C., 10 Windsor Street.
1884. Swallow, Rev: II. J., M.A., Hawthorne Rectory, Sunderlant.
1863.*Swithinbink, George E., LL.U., 1 New Sifuare, Lincoln's Inn, London, W.e.

1SSt. Thir, Gifuge, 71 Lotlinan homi.
1890. "TaIt, G. Lawton, M.D., LL.D., The Crecent, Birmingham.
1892.*Tistor, J. Pbingle, W.S., 19 Young Street,
1884. Temple, Rev: Whlliam, M.A., D.D., St Margaret's, Forgue. Huntly,
1870.*Tennixt, Sir C'Harles, Bart., Thu Glen, Innerleithen.
1874. Thoms, George Hexten MacThomas, Advocate, Sheriff of Caithness, Orkney, and Shetland, 13 Charlotte Sil.
1888. Thomson, Rev. A., D. D., Bible llouse, Constantinople.
1885. Thomson, Alexinder, Trinity Grove. Trinity lioal.
1856. Thomson, C: W. Wodrow, C.A.. $11 \%$ Lemmox itreet.
1894. Thomson, Edward Docolas, Chiof Clerk, General Post Otlice, 50 Qusen Street.
1892. Thomson, Rev: Juhs, The Parsomaz", Rosslyn.
1867. *Thomsos, Lockhirt, S.S.C., 114 George street.
1882.*Thomins. Mitchell. 6 Charlotte Sil.
1575.*Thumsos, Robert, LL.D., \& SciembRomil.
1893. Thutrtra, Lient.-Col, F. A. V̌., Kirkfell, Highlaut Rost, Upler Norwonl, London, S.E.
1891. Tillbrook, Rev. W. J., M.A., StrathTay Parsonage, Grantully. Pallinhuig.
1895. Tod, Hexry, jr., W.S., 23 Lemmox st.
1892. Torphichen, Right Hon. Loml. Calder House, Mil Cahler.
1889. Tralle, Johs, of Wootwiok, $\because$ North Strect, St Andrews.
1865. 'Trour, William, Eastwell, Bridan of Allan.
1877. Tuke, Jonn Batty, M.D., 20 Charlotte Square.
I887.*TURNbell. W.a. J., 16 Grange Terrace. Isso. Tluxer, Frederick J., Manefield Woodheuse. Mansfield, Notts.
1S65.*Turner, Sir Willim, M.B., LL. J., D.C.L., Professor of Auatomy, University of Edinhurgh, 6 Eton Terrace.
1881. Tweeddale, The Most Honourable The Marquess of, Yester Honse, Haddington.
1878. Ubquhart, James, 15 Damube Street. 188.. "Usher, Rev. W. Neville, Spring. hill House, Lincoln.
1895. Vallance, David J., Curator, Museum of Science and Art, Chambers Street.
1862.*Veitci, George Seton, Baik of Scotland, Paisley:
1874. Walker, Alexinder, LL.D., 64 Hamilton Place, Aberdeen.
1879. Walker, James, Limefielh, West Calder.
1871.*Walzer, Peter Geddes, 2 Airlie Place, Dundee.
1881. Wilker, R. C., S.S.C., Wingate Place, Newport, Fife.
1861.* Walker, Sir Willlim Stitart, K.C.B., of Bowland, 5 Manor Place.
1879. Wallace, Thomas D., Rector of High Schooi, Inverness.
1885. Wansop, Ruv. Canob, M.A., Haddington.
1876. Waterston, Georee, 56 Hanover Street.
1891. Watsoy, Rev. Alexander Duff, B.D., F.C. Minister, Castle Kemelly.

IS90.*Watson, D. M., Bullionfield, Dundee.
1895.*Watson, Robert F., Briey Yards, Hawick.
188.1. Watson, W. L., Ayton IIouse, Alier. nethy, l'erthathire.
1893. Watsun, William, Dep.-SurgeonGeneral, Waverley House, Slateforl.
1886. Watt, Rev. J. B. A., The Blanse, Catler, Bishopriggs.
1887. Watt, James Crabb, Advocate, 46 Heriot Row.
1879. Wedderbern, J. R. M., M.A.. W.S., 82 Albany Street.
1877. Weir, Hugh F., of Kirkhall, Ardrossan.
1893. Weld-French, A. D., 160 State Strcet, Boston, Mass., U.S.A.
1877. Welsh, John, Moredun, Liberton.
1872.*Wemyss and March, Right Hon. The Eari of, LL.D., Gosforl, Long. niddry.
1880. Wenley, James Adams, 5 Drumsheugh Gardens.
1854. White, Cecil, 23 Drummond Place.
1869. White, Col. Thomas Pllkington, I.E., 1 C'astle Terrace.
1885. Whitelafy, D.ivid, Eskhill, luveresk.
1868. *Whyte, R (obert, Procurator-Fiscal, Forfar.
1894. Williams, Frederick Bessant, 3 Essex Grove, Upper Norwood.
1895. Whlllams, liev. George, Minister of Norrieston Free Chureh, Thornhili, Stirling.
1871. ${ }^{\text {T}}$ Willlams, William Edward, Arehitect. 46 Leicester Siquare, London.
1884. Willlamson, Rev. Alexinder, 2 Minto Strect.
1887. Willlamson, Georae, 37 Newton Street, Finnart, Greenock.
1888. Wilson, Rev. W. H., The Farsonage, Dingwall.
1983. Wood, Thos. A. Douglas, Viewforth, Brunstane Roari, Jopria.
1875. Wondburn, J., M.A., Drmagrange, Patna, Ayr.
1878. Woodward, Rev. John, LL.D., Melville Honse, Montrose.
1892." Wordie, John, 42 Montgomery Drive, Glasgow.
1884. Wright, Join P., W.S., 6 Grosvenor Crescent.
1867. Whight, Rev, Robert, D.D., Woodlands, Spylaw Road.
1889. Wron, Allan, 2 Langham Chambers, Portland Place, London, W.
1887. Yeats, Whliam, Adroeate, Aquharney, Beaconhiil, Martle by Aberileen.
1889. Young, IIUGH W., of Burgheat. 27 Lauder Romd.
1881. Yoeng, John Willlis, W.S., 22 Royal (ircus.
1891. Young, William Laurence, Belvidere, Anchterarder.
1878. Younger, Robert, 15 Carlton Tortace.

## LIST OF HONORARY MEMDERS

# OF TIIE <br> <br> soctery of ANTIQUARIES OF SCOTlANI, 

 <br> <br> soctery of ANTIQUARIES OF SCOTlANI,}

NOYEMIBER 30, 1895.
[Actorelimy to the Laws, the number is limited to TWFXTY-FIVE.]
1862.

His Rozial Mifianess Almert Edward, Prixce of Wiles.

$$
1465 .
$$

Sir Hexry Dryones, Bart., ('unoms A.hloy, Bytiedd, Northamponshire.
15.4.

Sir John Luebock, Bart., LL.D., D.C.L., M.P., IIgh Elms, Farnburongh, Kent.
sir John Evans, Ki.C.l:, D.C.L.. LL.D., \&e., Nashmills, Hemel-llempr. stead.

$$
1 \sim \pi 7
$$

5 Rev. James Rinne, M.A., D.C.L., Chancellor and Canon Revidentiary of York.

$$
1879 .
$$

Rev. Camon Wildiam Greentweli. M.A., D. ('L., Durham.
sir Augustus Wollaston Franks, K. C.B., British Mmsemm.
1881.

Professor Olaf Rygh, Christiania.
Professor Rudolf Virchow, M.D., LL.D., Berlin.
1885.

10 Dr Hans Hildebrand, Royal Antiquary of Sweden.
Dr Erseat Chantre, The Museum, Lyons.

1892
William Frazer, F.R.C.S.I., 20 Harcourt Street, Dublin.
Whitley Stokes, LL.D., C.s.I., 15 Grenville Place, Cornwall Gardens, London.
Professor Leigi Pigorini, Director of the Royal Archacological Museum, Rome.

15 Alexandre Bertrand, Conservateur du Musée des Antiquités Nationales, Saint Germain-en-Laye, Seine et Oise, France.
Professor Gabriel de Mortillft, Ecole d'Anthropologie, Saint Germain-en-Laye, seine et Oise, France.
Dr Ilenry (: Les, 2000 Wahut Street, Philadel

## LIS' OF THE LADY ASSOCTATES

UF FHE

## SOCIETY OF ANTIQUARIES OF SCO'TLAND.

 Novemberi 30 , 1895.[According to the Lurs, the number is limitul to TWEXTX-FIVE.]
1870.

The Lally A. A. Junn Scott of Spottiswoode, Berwickshine
1871.

Mis (C. Maclagan, Ravenscroft, Stinling.
1873.

The Baroness Burdett Coutts.
187.

Lady Dunbar of Duffus, Elginshine.
5 Lady Clark, Tillypronie, Alerdeenshine.
Miss Margaret M. Stokes, Dublin.
1883.

Mrs Ramsay, Kikealton, Islay.
$18 \div 8$.
The Right Hon. The Countess of Shlikiek.
$189 \%$.
Mr I'. H. ('halmers of Avochr
1591.
11) Mrs ANvie (hambers Dowie, Edinbugh.

1s:94.
Jiss Eman Swasa, Walton Manor, Oxford

189\%
Miss I1. J. M. Messell of Ashiesteel.
Miss Amy Francls Yele of Tarradale, Rus-shire.

## 1ROOEEDIN(AS

## SOCTETY OF ANTIQUARIES OF SCOTLANI).

## HUNDRED AND FIFTEENTH SESSION, 1894-95.

## Inniversam Meeting, 30th Notemhin 1894. <br> JOHN RITCHIE FINDLAY in the Chair:

A Hallot having been taken, the following Gentlemen were duly clected Fellows:-

```
Capt. W. 1I. Drumaond-Moray of Ahercaimey.
Henry T. Donaldson, Solicitm, Nairn.
John Edgar, M.A., Classical Master, Rinyal Migh School.
Charles R. J. Evans, Latham Ledge, Bixton, Surcy.
James Stark Fleming, Solicitor, Stirthes.
Henry Ton, Juhior, W.S., 23 Lemmes Street.
David J. Vallance, Curator, Elinburgh Musem of Sicience and An
```

The Secretary reportal the election ly the Comencil of Miss Emaa Swann, Walton Manor, Oxford, as a Lady Associate of the Suciety.
vol. XXVIII.

The Ulite-Bearers for the ensuing year were elected as fullows:-
Putron.
HER MAJEsTY THE QUEEN.
President.
The Most Hos. the Mareuess of Lothian, K.T., LL.D.
1 Tic-Presidents.
R. Rowand Anderson, LL.1).

Reginald Macleod. James Macdonald, LL.D.

Councillors.

|  | The H (men. Ifew Ialrymple Alexanier I. S. Brook. |
| :---: | :---: |
| $\begin{aligned} & \text { Juin Fitchie Find- }\left\{\begin{array}{l} \text { the Bencrel } \\ \text { Lis Trustes. } \end{array}\right. \end{aligned}$ | John Tayor Lrown. The Hon. John Abercib |
| Balfour Paul. | Charles J. (iuthrie. |
| Maj.-fien. Sir R. Murdoct Sm k.c.M.G., R.E. |  |

## Scereterics.

1.avid Chrestison, M.D.

Fionert Munro, M.A., M.ID.
Juseril Anderson, Ll.I)., Assistant siccrtury. Sir Abthur Mitchell, K.C.L., M.D., LL.D., (Sicveterizs for Forign Thomas tiraves Law, $\quad$ Comespondence.

Tretsurer.
James Henry Conninaham, 4 Magdala C'rescent.
Curutors of the Musethu.
Robert Carfrae.
Professor Duns, D.D.
Curator of Coins.
Adam D. Richardson.

> Librurian.
> J.mes Curle, Jun.

The following list of the names of members decomed, -nnee the date of the last Annual Mceting, was real by the Secretary :-

> Hanorary Memturi.

| Combl Giovinni Batusta de Rossi, Rome, | Elected |
| :---: | :---: |
| Lurly Asisociete. | 1885 |
| Mrs Morbisun Duncan of Nitughton, |  |

> Felluws.

Alexander Boax Armitame, 14 Dick Place, 188 .
Archlbald Broun, I'.C.s., 10 Inverleith Row, 1877
James C'hisholsi, 15 Claremont C'rescent, . 1876
John Christison, W.S., $\ddagger 0$ Moray Place, . 1890
Robert C'lazk, 42 Ilanover Street, . 1867
Edmund Goldsmid, 10) Fettes Row, . 1885
J. Mhleer (iray, ('urator of National Portrat (iallery, 1884
J. Willie (iulld, 65 St Vincent Street, Clasgow, . 1880

Alexander Marris, + Millerfield Place, 1867
Andrew Hetton, Architect, Perth, . . 1871
John Fowler 1 Islop, Cantlepark, Prestompan, 1ss:
Willias Hunter, Waverley Cottage, Portulello, 1867
Robert Hutchison, Brolick, Armah, 18so
Robert Kirke, Giemmome, Bmontislaml, 1881
William Mackean, Provost of Paisley, 1582
Rev. Alex, Mickenzie, D).1), Westerlea, Nairn, 1 Mse
Cinarles Mitcinell, Kintmekat, Brechit, 18so
Arthur D. Morice, Alyonate, Aberileen, Astis
David E. Ot tham, 16 Cirosvenor Terrace, (Alagow, 1881
Rev. W. Peters, Mininter of Kinaross, . 1878
J. Guthrie Smeth, Muglock Castle, Milmgavie, 1 D
(4eorge Nteusht, 3 Forles Road, . . . 1ssi
('harles S'tewart of Tigh'n Duin, Killin, . 1 ssis
Willam S. Thomson-Sivelatr of Dunleath, 18nt
Rev. T. II. Turnbule, Minister of Lesmalnugow, 1888
Prof. John Veitch, LL.I)., The University, Glasgow, $187: 3$
Edwin Weston-Bell, Behmont, Dunlee, . . 1891
The mecting resolved to record their sense of the losis the Society haml sustained in the deaths of these members.

The Treasurer read the $\Lambda$ hastract of the Society's funds, which was ordered to be printed and circulated among the Fellows.

The Sceretary real the Anmual Report to the Board of Trustees. approved hy the Comeil, and ordered to be forwarded to the Board for transmission to the Lords of II.MI. Treasury, as follows :-

Annual Report to the Innourable the Board of Trustees for Mamfactures in Scotland ly the Suciety of Antiqnaries of Scotland, with reference to the Scottish National Alnseum of Antiquities moder their charge, for the year ending 30th September I894:-
During the gast year the Musemm has hen open to the public as formerly, and has been visited ly 25,149 persons, of whom 23,864 were visitors on free days, and 1285 on pay days.

The number of elbjects of antiquity added to the Museum during the year has been 289 hy donation and 122 by purchase; while 108 volmmes of books and pamphlets have been added to the Linary by donation and 13 by purchase.

1. Cimbistison, sicretary.

## Mondar, IOth December 1894. <br> The IION. JOHN ABERCROMBY in the Chair.

A Fallot having been taken, the following Gentlemen were duly elected Fellows:-
('inarles Butler, D.L., 3 Connaught Place, Londom.
Major Alexander 1). Seton of Mounie, 36 Buekingham Terrace.
The following Donations to the Museum and Library were laid on the table, and thanks voted to the Donors :-
(1) By Miss Agnes C. Itowden, St Lawrence IIouse, Hadilington.

Perforated Stone Mammer of peculiar form, well polished, found ly the late Robert Howiden on the farm of Longnikdry alwout 1800. This hammer has heen alreaty deseribed and tigned in the previons volume of the Procerelings, when it was exhilnited ly Miss Ilowden at the meeting of May 14th, 1894.

## (2) By Jomin Nicolson, Nybster, Caithness.

Cast of a perforated Stone Axe-Hammer (fig. 1), found in a cairn at Preckigo, Thrmaster, Caithness. The hammer itself is of grey grimitr, 5 inches in length, $2 \frac{1}{4}$ inches in width at the rounderl end, 1 inch at its narrowest part near the midnle, and 2 inches across the face at the cutting end, the thickness in the middle being 17 inches. The shaft hole, which has leen pierced from both sides through the narrowest part of the implement, is 1 inch in width at the outside, on each side narrowing to $\frac{3}{4}$ inch in the contre. This axe-hammer was found about the year 18.18 in demolishing a very large cairn at Breckigo, which was entirely removed for buidding material, with the exception of some of the large earthfast stones of the chamber, whieh now stand alone in the fiell. At the same time there was found in the deloris of the same cairn a very remarkable Stone Cup (tig. 2), which is now also in the Museum. It is of a hard, coarse-grained sandstone, somewhat globular in shape, and
vertically ribbed or fluted on the exterior surface, the flutings running down to a cireularly ornamented space on the bottom. It is $3 \frac{1}{4}$ inches


Fig. 1. Perforated Stone IIammer of Granite from Breckigo, Thrumster, Caithness. (i.)
high, and $33_{4}^{3}$ in diameter at top and bottom, buging in the middle to $4_{4}^{3}$ inches diameter. Its cavity, whieh is cireular in outline and rounded


Fig. 2. Stone Cup found in a cairn at Breckigo, Thrumster, Caithness. (\%.)
in the bottom, is $\mathfrak{a}^{3}$ inches in diameter, and 2 inches deep in the centre. Along with the hammer and the cup there was also found an irregularly
rounded Stone Ball, not of the elalorately formed and decorated type, but more like a pounder or loruiser, which is also in the Muscum. These three oljects were found in the course of the demolition of the cairn, lut it is not known that they had any delinite relation to each other as regards their several positions in the deposit, or even whether they were all found in the chamber. But the occurrence of a perforatert hammer of grey granite in the chamber of the neighbouriug cairn of Ormisurill renders it probable that the Breckigo hammer did come out of the chamber, whether the eup and the ball may lave belonged to the hurial teposit or not. See also the Piompertinets, vol, viii. p. 232, amt Vhatm. Journal of Amlumbo!!!, vol. ii. 1. 107, and plate.
(3) By Rev. Douglas Gordon Barron, M.A., Minister of Thinottar.
Large Cinerary Urn of elay, 17 inches in height by $13 \frac{1}{2}$ inches across the mouth, coarsely made and unomamonted, the lip boing slightly everted and partially imperfect on one side, found at the heat of Culla Voe, in the island of Papa Stour, Shetland, in 1884. [Sior the subsequent communication by Ruv. I). G. Barmen.]
(4) By (iendge Kinghorn, st Rollox Werks, filasiow.

Axe of porphyritic stone, linely polishod, two oval Kinives of porphyry, and fragments of a large vessel of steatite, dug up with a number of other axes and knives of the same kind (subsequently acquired for the Museum) at Molesty, Bridre of Wills, Shetland. [אow the subsequent comumnication by Mr G. Kinghorn.]
(5) By Mrs Mackintusin, Ben Wyvis Motel, Strathpeffer.

Sowl-shaped Vase of reddish clay, $4 \frac{3}{4}$ inches diameter, with romuled bottom and horizontal looped side-handle immediately undot the rim, and convex cover, the exterior both of the vessel and its cover beines ormamented with slight parallel horizontal flutinss, elug up at Sum.
(6) I'y IIis Grace The IUue of Sutherland.

The Sutherland Book. By sir Willian Fraser, K.C.B. There vols. 4to. Privately printed, $1 \times 92$.
(7) By Mardy Bertram M'Call, F.s.A. Scot., the Author.

The IIstory and Antiquities of the Parish of Mid-Calder, with some account of the Religious House of Torphichen, founded ujon Recorl. 4 to, Elinburgh, I894.

The following articles, aequired by the Purchase Committee for the Muscum and Lilnary, luring the reeess I 4th May to 30th November 1894, were also Exhibiterl:-

Axe of felstone, $4 \frac{3}{4}$ inches in length hy $2 \underline{2}$ inches across the entting


Fig. 3. Gold Penamular Omament. (1.)
dedp, with romuled sides, the butt slightly fractured by chipping, found at West Kilhride, Ayrshire.

Axe of folstone, $4_{8}^{5}$ inches in length by 2 inches across the entting ondse, with truncated lutt, and nearly circular in the cross section-foumd at Ardross, Ross-shire.

Irreguhar circular Dise of dark greyish coloured flint, 3116 inches in longest diameter, and 3.1 inches across the lesser diameter, ground to a sharp euttiug edge romul the greater part of the ciremmerenec-fomm at Arilross, Russ-shire.

Gold prommular ()mament (fig. 3), with the two ends torminating in
enp-shaped dises-foum on the farm of 1ligh 1rummore, parish of Kirkmaiden, Wigtownshire. Oljeets of this class in gohl have rarely been fond in Scotland, though they aro not uncommon in Ireland. An example in bronze, which was found sone years ago at Poolewe, Wuss-shire, amt presented to the National Muscum by Sir Kemneth Mackenzie of Gairloch, is here given (fig. 4) for comparison.


Fig. 4. Bronze Penannular Ornament. (3.)
Urn of cinerary form of steatitic clay (imperfect in the upper part), filled with a mass of lumit bones and harelened clay-fumed at Culla Voc, Papa Stour, Shetlaud.

Axe of porphyritic stone, 4$\}$ inches in length lyy ${ }_{2}^{3}$ inches arross the cutting edge, polished, with roumbel siles; the butt and eutting edge slightly fractured-found in Perthshire.

Axe of mottled grey flint, 5 ? inches in length by 3 inches across the entting end, groum at the cutting end only-fomm in Perthshire.

Axe of micaccous stone, 9 inches in length by 3 inches in browth across the middle, from which it tapers towarls the butt and eutting cmol -found in Perthshire.

Axe of wentherel felstone, $6 \frac{7}{8}$ inches in length by 25 inches across the cutting end, polished, hat imprefect on one face-found in Perthshire.

Socketed Knife or Dagger of hronze, 8 inches in length, with cireular socket, ${ }^{3}$ inch in diameter ant lorken off at the rivet holes. The hate
is only $\frac{7}{8}$ inch in width, imperfect at the point, and is similar in form to the leaf-slaped swords. Found at Falkland, in Fife, about 1820. This form of socketed knife is rare in Scotland, lut is more common in Eugland and Ireland.

A Collection of Flint Implements from Cullin Sands.
A Collection of Flint Implements from Cilenluce Sands.
Keary's Vikings in Western Christendom, A.D. 787 to A.il. 888. Lomben, 1891,8vo.

Bamwarth's Crania Itelvetica Antiqua. Leipzig, 1894, 4to.
Eonwick's lrish Druids and Old lrish Religions. London, 1894, svo.

Cameron's Reliquip Celtice: Texts, lapers, and Studies in Chaelic liturature and P'hilology. 2 vols. 8 vo, Invemess, 1894 .

Reinach's Antiquités Nationales, I escription Raxomnée du Mus'́w de Saint-Germain-en-Laye. lromze Figures de la Gaule Romaine. Svo, l'aris, 1895.

The following Communications were read :-

## I.

NOTES ON SOME NON-BIBLICAL MATTER IN THE MS. OF THE FOUR GOSJELS KNOWN AS THE BOOK OF MULLING. By REv. H. J. LAWLOR, B.D., F.S.A. Scot.

The Book of Mulling is a Latin manuseript of the Four Gospels, written in the Irish character, and preservel in the Lihaty of Trinity College, 1mhlin. The name by which it is usually known is justified by the colophon found at the enl of the Gospel according to St John, which contains the statement:-"nomen autem scriptoris mulling dieitur." There can be little duestion who this Mulling was. The most dis-tingnishet-so far as I know, the only-ecelesiastie mentioned in the ancient Irish Annals bearing the name is Dairchell or Molling, who, after having presidel for some time over a mouastery in the place still known as St Nullins in the Co. Carlow, Irelanl, died in the last decale

[^0]col. a dinit amen ginit
o tv quicín: Seripseris
$t$ serntatus fueris $t$ etiã
videris h nolumin $\underset{a}{ }$ din orí
col. b.
$\ldots \ldots-$ [mi]sscricordiã suit
. . . - $s$ pi eliwosur mondi in -

-     -         - lnsin : altissiumm:-
[11]omen hi seriptoris nulling
dicitur finiunt quatuor enan gelia

Of special importanee are the words "h (=hace) nolumina" in l, 4, printel " h nolnmen "hy Westwood, and more grammatically, but less eorrectly, "hoc wolume" " hy others. The expression areords with the fact that the book eonsists (hessides introductory matter) of four distinct nolumina or gatherinse, one for cich Genpel. We see, therefore, that the seribe (if he was not St Mnlling linuself) not only made a transeript of Mulling's text, lut further imitated the for'm of his mamuseript as regards the division into quires. "Cliuosū" in 3.7 should perhaps be " "linosin."
of the 7 th century. The extreme rarity of the name makes it highly probable that this is the Mulling referred to in the colophon. On the other hanl, palæographers tell us ${ }^{1}$ that the date of the mannscript is at least a century later than Dairchell. The true reconciliation of this apparent conflict of evidence seems to be given by the supposition that Mulling wrote a copy of the Gospels; that a century after his death an anonymons scribe made a transcript of this book, including the colophon; and that this transcript is the "Book of Mulling," which has survived to the present day. ${ }^{2}$ Thus much, at least, appears to be certain, that, by whomsoever pennet, every part of our manuscript must have been written in the monastery of St Molling at St Mullins ; for until near the end of the 18th century it was in the enstody of the family of Kavanagh, to which St Molling belonged, and whose family seat at Borris-in-O.sory is within a few miles of the site of the monastery. ${ }^{3}$

The peculiar way in which the manuseript is written has brought about the result that several pages have been left hauk. These have berm in some cases usel for the tratuseription of ecelesiastical docmments. Thus at the end of St Matthew we find a single blank leaf. The reeto of this and part of the sceond column of the jreceding page ${ }^{4}$ contains-not in the same haml as the hody of the manuscript, if I jultre correctly ${ }^{5}$ the Office of the Visitation of the Sick, published by Warren, Liturgy ame
${ }^{1}$ Bergar, La Tulgerte, 11. 84, 380: Serivener, Introductim, Eil. 4, ii. p. 78.
${ }^{2}$ Cy. I'rofessor Abhott "On the enlophon of the Book of Durrow" (IIrrmethena, vol. viii, p. 199), where reasons are given, almost amomating to demonstration, for lelieving that the Book of Durrow (inchuling the colophon) is a transcript from a copy hastily written, possilly in a cursive hand, by St Colmmba. On the other hand, Bishop, Reeves (Life of St Culumbir, P. xiv.) asserts that "the eolophon in Irish manuseripts is always peculiar to the actual scribe, and likely to be omitted in transeription."

* Mr Warren appears to overlook the importance of this fact when he writes in the Acculcmy, Jan. 26th, 1893, p. 83, "But who is the "Mnlling Seriptor" of this volume ? and where was his cicitas? The proposal to itentify him with st Mulling of Ferns (who died 697) . . . must now be finally nbandoned."
${ }^{4}$ Not as Westwool says, in his very inexact aceonnt of this MS., "the last and purt of the preeeding pages" (Tul. Suc. Irish Miblical MSS., Il. II. 1. 4).
${ }^{5}$ But Westwood emphatieally says : "the migincel scribe hall" written this Office (the italies are lis own).

Litual of the Celtie Clutech, p. 171 squ. ${ }^{1}$ Again, the concludimg verson of it John, with the colophon, are written on the recto of the last luaf of the (quire assigneel to that Gospel, and the versn thus left idle has been made the receptacle of matter to which I now ask your attention.

I may here remark that when I mndertook to write a pajer on the non-biblical matter of the Book of Mulling, 1 entertainel the hope that I might le ahle to present you with a full transeript of several pages, incluling that which I am now about to deseribe, which lave hithert, been only partially deciphered. It the last moment, however, an unexpectel difficulty has arisen: I have been unable to apply chemicals to the manuscript-as I had hoped to do-and have lwen obliged to content myself with what my eyesight could reveal to me, assisted only by gool light and some little patience. It is possiblu that at some future time I may be able to supply the deliciencies of my paper necessarily resulting from this cireumstance.

Two facts at once strike us when we proceed to examine this page of the manuscript,-first, that the writing is in the sime hand as the main portion of the book; and serontly, that it follows the colophon. Combining these two faets, and assuming the correctness of the hypothesis which I have advaneed as to the arigin of the manuseript, we are entitlel to infer that, unlike the liblical text, this page has no elaim to represent an exemplar coeval with St Molling of Ferns, but that it was written by an inmate of his monaster!", abont the close of the eighth or beginning of the ninth century.

Of the contents of the prage Mr Westwool writes, "There is (1) an inscription on the verso of the last page (sic), in the same hand as the text, containing the Magnificat, part of the Sermon on the Mount Apostles' Creed, 'Patricins Epis', and (2) a circular table, with inseriptions." We will examine these two in orker.
"One or two misprints may be noted: In the first prayer read "r mbertio"; p. 172, 1. 3, the number of illegible letters is not more than 10 or 12: 1. 4, Welete et, and note that 8 or 9 illegible letters follow omnipotens ; in 1. 5, the MS. hats an illegible word before tui; 1. 25 real caclurum for chlo; $1.173,11.6,8$, read cuchuriifian, cuchoritis: here, as elsewhere, peculianitics of spelling are not very carcfully Ireserved.
I. The Lituryical Frayment.-Of this Mr Westwood's words are an approximation to a correct description, bat they are no more. The document rontains neither Magnificat nor Apostles' Creed, though both are referred to ; it rloes contain "Patricits Episcopus", though a word of explanation was needeld in the case of this somewhat mysterious title; and finally, it refers to several other pieces of interest which Mr Westwood has not mentioned. All this will be evident from the transcript which I now give. The document is written in one column of about thirteen or fourteen lines, each containing some thisty-five letters, towards the left of the page, as if room were left for a second narrower column to the right, which has not been added. ${ }^{1}$ The exterior margin is very narrow. In the transcript, I have underlined letters which are not distinct enough to be read with entire confidence. Those which have been conjecturally supplicd are enclosed in square brackets. The title (if any existed) is illegible, with probably a line or so of text.

$\ldots \ldots \ldots$. . . . . . . . . . . .
INr — - rm. Benedictus usid ; ioh[annem laptis]ta
pecursure dini] Uidens lt ilis turbas ascendit t

[dead 1] memoric utne Parricins epis orat
[pro nobis ommilus] ut deleantur protinus peccata
['qua commisimus] INuitiata op feramus pee
[tora Exandi donec d]icis peceata plurima.-
10. [Maiesta] $\left.{ }^{[ } \mathrm{em}\right]_{1}$; imensam corici dead et conghu
[ria Uni]tes [n]sq; i finem.Credo i dmen nat
[noster - . . . . -] . .-

1. 2. "al" perhaps $=$ "alleluia": but possibly the letters are "al" (? = " $[d e]$ ] $d, "$ as below).
1. 3. "I" is very mucertain: the mark so read may be merely an accilental stain and not an ink-mark: "r" may be "n". The letter " $t$ " at the end of the line is in the margin, and does not appear to he part of the text.
${ }^{1}$ The length of a line of writing is 5.8 cent., the breadth of the page being about $10+5$ cent.
1. 4. The line over "dni" and perhaps the "so" of "precursorem" atw legilile.
1. 5. "1)" shouk perhaps be read as " $u$ ", the downward stroke of " U " just above making it look like "l".
1. 10. The last letters are very difficult to read : see below.
1. 11. There is possibly one letter between "[Uni]tas" and "[u]syut" (? = " i ": see below).

For the benefit of those who, like myself, are jignorant of the brish tonge, I may note that Rev. T. Olden tells me that "eonrici dead"= usigue in linem. For this information, and for much valuable help, I desire to make grateful acknowledgment.

A glance through this document will suffice to show that it is liturgical in character, and that the ecclesiastical office which it represents contained at least the following parts: (1) "Magnificat"; (2) $I^{\prime} \%$. . . rem ; (3) "Benedictus", \&c.; (4) "Uidens autem", dic.; (5) "Christus illum", de; (6) "[In]memoria", de.; (7)"Patricins Episcopus", \&e.; (8) "Inuitiata quod", \&c.; $(9)[\ldots]$ cis peceata plurima; (I0) "[. . .] q ; immensam", de. ; (II) "[Uni]tas," 心火. (I2) "Crerlo", dv.

Can any of the prarts thus deseribed be ilentified? Some with the greatest eise. For example, that which is called "Magnificat" (I) is beyond doubt the hymn of the Blessed Virgin, as used at Vespers in the medieval Chureh of England, and at Evensong according to the Reformed Anglican usage. That this Canticle was used in the early Irish Chureh we need no futher assurance than that which its presence in the Litwr $H_{y m}$ morum $^{1}$ afforls. Again, "Uidens autem", $\mathbb{N} \cdot,(t)$ is obviously a leetion from St Matt. v., "Jesms" being insertel after "autem" in agreement with the majority of Mss. of the Irish recension, includims the Book of Mulling itself. Once more, "Credu", \&e., (12) is the Apostles' Creed, which we know to have been commonly employed in Celtic worship.

[^1]One word more before we leave 1. 11 as to its last word. It is natural to read "pat" as the fourth word of the Creed, "patrem." And this is not impossible, for the abbreviations in our MS. are sometimes quite arbitrary. Thns "patren" is represented hy " $p^{\text {"a }}$ " at Matt, xv. 4,6 , while the same letters stand for "patri" in the intervening verse, not to mention other instances. But, on the other hand, $t$ is ahmost always used for tio. I have therefore ventured to regard "pat" as the first word of the Lord's Prayer (13), and to conjecture " noster" as the first of the illegible words in 1. 12. That the Crelo should be followed by the Pater Noster is just what we might expect. The same sequence occurs in the Book of Dimma, the Visitation of the Siek in the Book of Mulling, the Antiphonary of langor, and the look of Hymns fo. $30 \mathrm{v}^{\circ}$, i.e., apparently in all the Celtic offices, not strictly Eucharistic in character, in which the Creed is found ; ${ }^{1}$ the Book of Deer (Wirren, p. 166) being, of course, no exception. The word "noster ", especially if written $\overline{\mathrm{nr}}$, would fill only a small part of the vacant space in 1.12 , which appears to have contained twelve or fourtecn letters. The remainder was possibly taken up with the first words of the embolismus (14) "Likera" or "Liln>a nus" (f. Warren, pp. 164, 170, 172, 177, 223, 242; hut see also Mr Warren's letter in the Acatemy, Jan. 26th, $1895, \mathrm{p} .83$, and below p. 45).

After these, perlaps the phece most easily recognised is that commeneing "Patricius episenpus orat" (l.oret)-(7). This was written in full, and enough remains legible to place leyond question its identity with one of the couplets alded in the Antiphonary of Bangor (fo. $15 v^{\circ}$ ), and in the coply of the Dook of Hymns preserved in the Francisean Monastery, Merehants' Quay, Inblin, to the 11 ymm of Secundinus in honour of st I'atrick. The couplet runs as follows ${ }^{2}$ :-
${ }^{1}$ Compare the Ohd Irish Tract De Arwis, elited by Mr Kuno Meyer (Fiv. Celtique, Oct. 1894), in which the recitation of Paters is frequently enjoined withont the Credo (capp. 1, 3, 10, 13, 20, 31, 33), while the Credo never stanls alone, being always either followed ( 14 [cet ercolo is here left untranslated], 26) or preceded ( 21 ) by a later.
${ }^{2}$ I quote from the Antiphonary, with which our MS. agtees. In the Franciscan Book of Hymus there are some variations:

Patricius sanctus episcopus oret pro nolis ommilnes et miseriatur protinus peceata yute commisimus.

> "Jatricius apiseopus oret pro nolis ommibus "t deleantur protinus peceata que commisimns."

The inentification of these lines leads to the anticipation that the Hymm of sit Secundinus itself, to which they are subjoined as an appendix in the only other MSS'. which are known to contain them, may form one of the earlier parts of the office. And this anticipation will be strengthened when we remember that we are dealing, brobably, with a monastic sfrrice and recall the contemporary words of the Book of Armagh, "Patricius ses Eps honorem quaternum omnibats monasteriis et aeclessizs per totam hibermiam debet hathere . . . . H1. I mnum eius per totum tempus cantare . . ." If this "Hymn of Sit Patrick" forms part of our office, it will most probably be"Christus illum," dee. (5), or the following mumber. Now at first view it may appear impossible that it shoutd lee (5); for on a reference to the Liber I!!mnorum we discover that neither the Hymn of Secundinus, nor, indeed, any other poem in the whole collection commences with these words. The supposition, however, must not be at once set aside, for we find that the hlial last stenza of the hymn, which is alphahetical, hegins with the very words of which we are in search. No other liturgical form which I have come across commences with the wonds "Christus illum" ; these worls occur in our office just at the very place where we might expect to have the Hymn of Seemdims, or possibly an extract therefrom ; we may feel fairly confident therefore that in the concluding stanzas of this hymm (Liber Ifymnortm, i. 1. 2i), which I now transeribe, we have hit noon (5) of the office.
$\mathrm{N}^{\mathrm{p}}$ illum sibi legit in terris uicarium
qui de gemino captinos liberat seruitio
plerosque de seraitute ghos redemit hominum
innumeros de zabuli olsoluet dominio.
Ymos cum apocalipsi $p^{\text {salmosque cantat hei }}$
'fuosque ad editicandum dei tractat ${ }^{n}$ npulum'
quam legem in trinitate sacri credit nominis
tribusque personis unam docet!ue substantiam.
${ }^{1}$ On the words "dei populum" the Leabbar Breac has the gloss "popuitrine," which Dr Tomid, (Lib. Hymu, i, 22) "takes to mean "purmil trine, the people of the

> Zona domini precunctus liebus et noctibus sine intermissione deum orat domimm cuius ingentis laboris pereepturus premium cum apostolis regnabit sanctus sujur israel.

We must now pause for a moment to consider a possible oljection of a seeptical critic. Is it pussible, at least is it likely, it may be asked, that the last three stanzas of a pepular hymm should be chantel in an office such as that which we are consilering, apart from the preceling portion? The likelihood does not appear to be increased by the circumstance that the verses when separated from their context to not make very olwious or very good sense.

A complete answer to this difficulty is found in a story given ly $\mathrm{D}_{\mathrm{r}}$ Tould, in his notes to the Liber H!mnorum (i. p. 33), from the Lealhar Breac. The story is interesting, albeit somewhat frivolons; moreover, it not merely serves our immediate purpose of annihilating the sceptic, but throws out a hint which we shall tind valuable by and by. I need scarcely apologise therefore for quoting it almost at full lewth.
it Secuntinus (or as the marrator calls him, Sechmall) had read his alulatury hym to st latrick, in whose honow it had been written. "When the recitation of the lyymn was concluded, Sechnall said, 'I nust have rewarl for it,' said he. 'Thom shalt have it,' said Patrick, 'the number of days that are in a year, the same number of souls of sinners shall go to heaven, for the making of this lymm.' 'I will not accept that,' said Rechnall, 'for I think that too little, and the praise is good.' 'Thou shalt have then,' sail I'atick, 'the number of the hairs that are on the casula of thy cowl, the same number of simers to

Trinity, or the people of Gud, as in the Latin." This note receives coufimation from, while at the same time it ilhstrates, a phrase in the collect, "creator naturarum," preserved in the Book of Mulling (Warren, P. 172), viz. : "has trintatis promit tui. . . preces." In the Book of Deer (fol. 2sh, Warren, p. 164) this runs "tromentis poputi twi." Probably the Book of Mulling gives us the earlier form of the Colleet, composed ly one who thought, if he did not write the rough draft, in lrish, and translated into too literal Latin an idiom of the vernacular spuech which has lieen removed in the reeension given in the book of Deer. The ehange would befacilitated by the clom resemblance of the two words "trementis " and "thinitatis" in the minusule Itish character.
go to heaven, for the hymn.' 'I will not aceept it,' said Sechnall, 'for who is the believer who would not take that number to heaven, although he were not praised by myself, nor hy anyone, as thou art.' 'Thon shalt have,' said Patrick, 'seven every Thursday, and twelve every Saturday, to go to heaven, of the sinners of Erimn.' 'It is too little,' said Sechnall. 'Thou shalt have,' said Patrick, 'every one to go to heaven "tho simgs it lyiny clorn and risiny up.' 'I will not aceept that,' said sechnall, 'for the hymn is too loner, and it is not every one that can commit it to memory.' 'I\%s "hole Irtare then,' saill l'atrick,' 'shath be upon the last three stancas of it.' 'Deo gratias,' said Sechmall. ${ }^{1}$
"The Angel promised the same thing to l'atrick apon the Cruach. viz., heaven to every one who shall sing the last three stanias of it at lying doun, ant at rising up, as is [said by the poet],
"A Hymn, which, if sung when alive, Will be a protecting Lorica unto all."
I do not guarantee the historical character of this tale. It demonstrates, however, two facts to which 1 ask special attention:- 1 . That it was customary to substitute for the hymn of Secundinus it: last three stanzas, exactly as appears to have been done in our office. 2. That the usual time for reciting the hymn, in whole or in part, was before retiring to rest at night, and after rising in the morning.

We have now advancel so far as to have identified (5) and (7) with the hymn of Seeundinus, and a supplementary stanza or antiphon adled thereto in two manuscripts. It is natural to gness that the intervening number is another similar adilendum to the hymn. Four such supplementary couplets are known, ${ }^{2}$ anl one of them, found hoth in the Lealhar
${ }^{1}$ The introdnction to the Hymn of Secundinus is wanting in the Trinity College linok of Hymns, a leaf having probably been lost at the begiming of the MS. The Franciscan copy, however, has an introluction, in which this story is told in a somewhat abbreviatal form-the latter portion, on which our argument is built, loing identical with what we lind in the Leablar Breac (see Whitley stokes, Tripartiter Liff, p. 382 sqq.)
? The variety which exists anong the five authorities for these four stanzas in remarkable. Numbering those in the Trinity College Book of Hymns 1, 2, 3 respectively, and "Patricins Episcopms" 4, they are given in the following rarions relative positions in the anthoritien. T, (: 1 ). Lonk of 11 ymus, $1,2,3 ;$ Antiphonary

Breac and the Liber Hymnorum (T.C.D. MS.), is sufficiently attested by the few letters still remaining legible to have stood at this place in our MS. The couplet is as follows:-

In memoria eterna erit iustus.
ab auditione mala non timebit.
The Book of llymms has done us excellent service. We call it in to help us once more in ilentifying "huvitiata quod," Sc. (8). No hymn in the lrook las these for its first words. But we discover that of which we are in search in the thite last stanzas of the hymn of St Cummain Fota (Lil. Hym. i. p. 80), which are as follows:-

> Inuitiata quo (sic) feramus pectora regi regmanti ab acuo in secula alleluia.
> Gloria patri atyue unigenito simul regnanti spiritu cum agio alleluia.

Nimis honorati sunt amici tui deus ${ }^{1}$ nimis confortatus est principatus eorum allehia.
Again, be it notical, the last three stanzas stand in lieu of the whole hymn, - a striking confirmation of the conclusion which has been alrealy reached in the casc of St Secundinus' poem. The most sceptical will saucely take refuge in the supposition that three verses as a substitute for the whole was an indulgence lermitted only in the case of a single lorica, and not extended to less famons compositions.

As to the identity of number (9) "[. . .]icis peccata phurima," th which I now proceed, I have no doubt. Its position, following the of Bangor, 2, 4 (the order here is not quite certain) ; Leabhur Lrete, 1, 2; Franciscen Book of Hymoss, : , 3, 4; Book of Mulliny, 1, 4.
${ }^{1}$ Dr Todd points out (Bk: of Hymus, i. 80) that the last stanza is unmetrical, and is merely Ps. cxxxviii. 17, with one varions reading, and therefore cannot have been intended by the author as part of the hymm. It was certainly so regarded, however, by the scribe of the Lib. Hym., as Dr Todd shows, and also, if I have reasonel correctly, hy the scribe of the Book of Mnlling, whose evilence is probably wher hy some centuries (see Whitley Stokes, Giuhlclica, ごnl e4l., 1. 61).
concluding stanzas of the hymn of Cummain Fota, renders it probable, if any other indication is found pointing the same way, that it is one of the collects written at the end of this poem in the MSS. And such an indication we have in the words "peceata plurima," which stand as the concluding words in the antiphon-
"Exaudi nos deus per merita apostolorum optima ut deleantur pessima nostra peccata plurima."

$$
\text { Lither Hym., i. p. } 80 .
$$

Our only difliculty is to explain "icis." If my conjecture is correct, these must lee the concluling letters of a phrase equivalent to "as far as." We may ghess either "donec slicis" (a construction quite common in Mmelieval Latin prose), or "eonricis" = "until thou reachest," as Mr Olden suggests. I have supplied the illegible letters in my transcript in accordance with the former conjecture. The latter imleed apprars to me, in itself, more likely, and perhaps fits the slace loetter ; but the traces of the letter $\}$ receding "icis," which still remain, suit "l" better than "r." However the letters "icis" he explained, it is interesting to observe that our MS. here agrees with the Francisean Corlex in omitting the collect "Per merita," (Ne., which follows "Exandi nos" in the T. C. D. Book, though the form of expression- " [. . .]icis peecata plurima," for "conrici dead," or "usque in finem "-seems to indicate a consciousness on the part of the seribe that in some copies a second collect, or some other sulsidiary matter, was found in addition to " Exaudi nos."

Why St Cummain's hymn should have been recited in St Molling's monastery is not very clear, as there appears to be no notice in listorical documents comnecting him either with Molling or with the district in which he lived. He was, however, famous throughout Ireland, and an plder contemporary of our saint (ob. 662. Aunal. Ulton.). ${ }^{1}$

[^2]Number (10)—" [. . .] que imeusam," \&c.-has next to be considered. We have to look for a stanza whose second word is "immensam," and we at once perceive that the stanza of which we are in quest cannot be the first of a poem. No hymm could have for its first word a substantive followed by the conjunction "que," and in this place $q$; can scarcely stand for the relative "quae." Thus we have one further proof, if such were needed, of the custom of reciting the last stanzas of a canticle in place of the whole. A search through the book of Hymms will quickly convince us that number (10) is an extract from the prem "Ymnum dicat," ${ }^{1}$ ascribed to Lilary of Poictiers (Todel, Boold of IIgmens, ii. p. 151). Here are its last three stan:as:-

Maiestatemyue immensam coneinemus iugiter
ante lucem nuntiemus christum regem saleculo.
Ante lucem decantantes christo regi domino et yui in illum recte crelunt regnaturi cun en.

Gloria patri ingenito gloria unigenito simul cum sancto spiritu in sempiterna secula.
loriea within thiity years of his death, in a monastery with which he had no direct connection ; still less likely that the principle of three stanzas for the whole should have been applied to his poem so soon.
${ }^{1}$ This foem appears to have been used as a lorica. See Whitley Stokes, Lives of Saints from the Book of Lismore (Alcedlote Oxonicusia, 1890), p. viii. sqq., a reference which 1 owe to I'rofessor Bernard. Compare alse the Book of Leiuster, fol. 282a (quotel hy Dr MacCarthy, Truns. R.I.A., xxvii. 183), and the ancient tract De Arreis published in the Revue Celtique for Oct. 1894, capp. 26, 32 . In both these passages from the Treatise It Acris, the Hymu of St Hilary is enjoined for recitation with the "biait," which Mr Kuno Meyer (p. 492) takes to mean Ps, exviii. (A. V. exix.). In this he follows Mr Whitley stokes (Book of Lismore, P. 406). But throughont this treatise the Psalms are regnlarly cited by their first words in Latin (eapp. 10, 18 [Ps. 1., A.V. li.], 33, \&e.) ; and to understand "liait" of this l'salm seems very unhapy in cap. 3-"laulaךhiait 7 pater after each psalm." Here we should have P's. exviii referred to ly an $I$ rish title in the same sentence with "lauda" and "pater," with the ditection, in itself improbable, that Ps, exviii. shonld be recited after every $1 \times$ alm. If " biait " iu capp. 26,32 were equivalent to the Beatitudes of St Matt. v. (cf. Book of Lismore, p. 323), we should have "Ymnmm dicat" in juxtaposition with this passage (with Credo and Pater in cap, 26) as in our fragment. The "chapters" of the "hiait" De Arrcis 32, Book of Lismore, p. 180, may seem to favour

It will be wherved that what we reekon-in this fullowing hoth Mss. of the Book of Hymus and the majority of copies of the Fimum Dicat —as the last stanza is a doxology. This doxology is in reality not part of the hymn, as the seribe of the Bangor Antiphonary seems anxious to lint to us by his punctuation (fo. $4 \mathrm{v}^{\prime \prime}$ ). And indeed the same thing is evident from the fact that two other hymms in the Antiphonary close with the same words, namely, "Ignis Creator," fo. 11r", and " Mediae noetis," fo. $11 \mathrm{~s}^{\prime \prime}$. A st "all manuswipt of the Hymm, in fact, omits the doxilogy, as Profesoor Bernard, to whom I am indelted for much of my knowletge of this poem, has heen gnot enough to inform me.

To make up, the customary thre stanzas, however. it is necessary to include it : and this appears to be the explanation of the words which 1 have read "et "ongh[ria]." The letters are difficult to decipher, partly beeanse of imperfect formation in the ease of the first two or three, and partly because of a rent in the vellum which crosses the last three lotters of 1. 10. It is thus pusizilie that for $c$ we should reat $a$ or $o$, for $o, a$; $n$ may just as well he $r$; ! I had for some time read as $t$, ant 14 ma!! he $k$. Niיvertloless, 1 am pretty confident that the reading in my transcript is correct. By way of explanation it is only necessary to say that " con" =" with" (sec Whitley Stokes, C"alentar uf (hmulus, in Transactions of R.I. Academy, Frish Manmeript series, vol. i., ]. eexxxriii.), and that "shuria " = "gloria," ly a common substitution of $u$ for ${ }^{1}{ }^{1}$

We have already seen that the $11 y m$ of sucmentims is followed by two antiphons. In like manner the antiphon "Exaurli," \&c., follows the Hymn of Cummain Fota. It may therefore be regarded as not improlable that number (11) is one of the antiphons belonging to the Ilymu of Hilary (10). Now three such antiphons are known to exist, and all
the application of the wont to the psalm : lut the "chapters" may mean cither a verse of a psalm or a single beatitnde: see the Prefare to Ultan's Hymu (Lih. H. i. 60), where the word "ehapters" is applied to the stanzas of the poem- "Thure are three chapters in it, and four lines in each ehapter."
 Many examples might be cited from the Book of Mulling, the most noticeable being the name of the scribe, the first syllable of which is elsewhere commonly written Mol. "filuria" seems not to oceur elsewhere in the MS.
of them are preservel in the Trinity College Book of Hymms. They begin respectively, "Te decet ymmus," "Canticis spiritualibus," " Unitas in." The Francisean empy has the first two of these, while, as Professor Bemard tells me, no other known MS. of the Hymn gives any antiphons. We may fairly expect-though, of course, it must not be assumed as certain-that number (11) is one of the three just mentioned. In deciding among them we lave not mucli to guide ns. The space before "usque" is ocenpied with letters for the most part illegible. However, the letter " t " is fairly distinet, aml is followed hy (apparently) two letters, firminy fart of the same trorl. This last consideration disposes of the claim of " $\mathbf{T}$ c decet." loth the remaining antiphons lave the letter " $t$ " in a suitible position, lut the pererence must be given to the latter, as the marks following " $t$ " may well represent "as," lout can searcely be "icis." If, as is jossible, another letter is obliterated hetween "[Uni]tas" and "usuce," it was probahly "i" $=\mathrm{in}$. I am inelined, therefore, to believe that number (11) is the antiphon whith I now transerile :-

Unitas in trinitate te deprecor Domine ut me semper trahas totum tibi untum unuere (Todh, ii. p. 161).

Number (2) has up to the present baffled all my efforts to identify it.

I have left for the last number (3) " Denedictus," ©e., because I cannot lo quite eonfident that my itentification of it is correct. At first, one might feel inclined to assume that it is the canticle still usually designatel by this name, and used in the Ancient Irish Church (Liher IIymnorum, ii. 190). This supposition, however, is rentered untenable ly the words "usque ioh . . .," i.e., as far as the word "iohames," or some case of this word, or the line beginning therewith. For, though the lenedictus has St John the baptist for its sulject, he is not mentioned in it by name. I would suggest that what is meant ly the words which I have noted is an extract from the Itymn, attributed to St Colmmba, leginning "Noli Pater." (Lil, H! mm., ii. p. 262.) It consists of seven stanzas, the fourth, fifth, and sixth of which I transeribre.

[^3]Benelictus in secula recta regens regimina iolames coram domino adhuc matris in utero

Repletus dei gratia pro uino atque siccera
Elizabeth et Zacharias uirum magnum genuit iohannem haptizam precursorem domini.
The words of the last line, allowing for enstomary abhreviations, would about suit the spaces of lines 3 and 4 of my transeript, and, if they are inserted there, we have an exact description of these stanzas. Agsin, as before, three stimzas for the whole is the principle of selection. All this points to the correctness of our hyputhesis that we have in these stanzas the passage referred to in number (3).' One difficulty only has to bee met. In all the other eases in which threw stanzas were chanted as a substitute for the entire hymn the three last were chosen ; and in the ease of the liymn of St Secundinus, the legend to which I have already appealed implies that this was the regular and enstomary practice. Is it likely that the usage was different with the "Noli Pater "?

I answer that, whether a primi likely or not, a departure from this usage does appear to have taken place in the present instance. For the words " Benedictus usque ioh . . . "imply that only a portion of a canticle was to be sung, and that this portion lid not conclude with the last verse of the hymn. Had it been so, the ordinary formula which oecurs elsewhere in the office conrici deat, or its equivalent usque a finem, would have heen used. ${ }^{2}$ And, moreover, good reason oan be given why precisely the portion of the hymn "Noli Pater" above quated should he sung in preferenee to the last three stamzas. It is possible that for onee the compiler of our office may have paid attention rather to the meaning of the words which he put into the months of those who used it than to traditional eustom. At last this much is clear: the three stanzas just cited make gool sense, and are in themselves a complete poem on St John
${ }^{1}$ It ought to lie added that the combination of letters which I have read as "tā" is not exactly similar to anything which I have observed elsewhere in the mannscript. For this reason no argument can be based upon it. 1 have not noticel any other $p^{\text {lace }}$ in which "tam" occurs at the end of a line: but off, the combina. tions used for "tio," Mar. vii. 8, xv. 41 ; "triam," Mar. vi. 1: "tia," Mar. ix. 20 ; "tiam," Matt. xii. 42, Joh. i. 16; "sti," Matt. xxv. 24, xxvi. 25, \&se.

2 Yet see p . 21 .
the Baptist. They are, moreover, the only stanzas in which he is mentioned. Had the last three stanzas been chosen, the extract would have hegun in the midlle of a sentence, and have been absolutely unmeaning as regards its first three lines, while the last stanza would have introluced an entirely new thought, apparently altogether unconneeted with what immediately precedes it, and in the liymn itself (supposing that we have it in its oriminal form) more closely associated in its inea with the opening verses. This last stanza runs thus :-

Manet in meo corde dei amoris flamma ut in argenti uase auri ponitur gemma.
I think, then, that the probability is that the hymm deseribed as "Benedictus usque ioh . . " is stanzas 4, 5, and 6 of st Columba's "Noli Pater." The prohability will lee either destroyed or transformed into certainty when a few more letters of the MS. can be real. Heanwhile we must be content to gness.

Assuming then, for the present, the correctness of our gness, we turn now to the introduction to "Noli Pater" ${ }^{1}$ in the Lilwr Hymnorum (ii. 259 ), in order to diseover what the compiler of the collection has to tell us of its origin and use. He ascribes it to the time when King Aedh granted to St Columba the site of a chureh at Derry. No sooner had the gift been presented than " the town was burned, with everything that was in it . . . The fire, however, in consequence of its greatness, threatened to hum the whole Daire, so that it was to save it, at that time, that this hymn was composed. Or it was the day of Julgment he hat in view, or the fire of the festival of John." Rather a liberal choice ! and none the less so because the only allusions to fire in the entire hymn are the worl "fulgure" in the first, and "amoris flamma" in the last stanza. It is obvious that all this is mere eriticism and guess-work. Clearly the only thing in it all which rests on tradition is the ascription of the poem to St Columba. But we stand on firmer ground in the
${ }^{1}$ The introduction in the Franciscan copy is in some respeets differcnt. But it has the important words, "Whosoever repeats it on lying down and rising up it saveth him from every fire" (Stokes, Tripartitc Life, 1.civ.). The story is preserved, with the mention of lying down and rising up as the speeial times of tecitation, in the Elinhurgh MS. of St Colnmba's Life. Skene, C'Itia Siotland. ii. p. 482 s\%.
next sentenee, in which the writer tells us of the customs of his own day, and which quite accounts for his anxiety to diseover or manufacture allusions to fire in the hymn. "And it is sung," he adds, " [as a protection] against every fire, and every thunderstorm, from that time forth; and whosoever sings it at bel-time and. at rising, it protects him against lightning, aml it protects the nine persons whom he desires [to protect]." It was, then, a lorica, and it was used night and morning.

We have now acquired some general information as to the character of the office which forms the subject of our consileration-not such information as we might have desired, or as we may hope for in the near future, lut still sufficient to make a further question worth asking: What was the purpose of the office? when was it used?

If we could restore the first line or two of the page, speculation would probably lie needless. The title would supply us at once with the knowledge which we seek. Meanwhile, it will have been noticed that the story from the Leabhar Breac, which I have cited in connection with the hymn of St Secundinus (5), as well as the note with which it concludes, with regarl to the angel at the Cruach, conveys delinitely the information that the lymm was to be saill, as a lorica, at bet-time unt rising. A similar statement, as we have just seen, is made in the Liber Hymnorme about the "Noli Pater" (3). These two hints are sufficient to lead to the conclusion that the office was sail daily, either at bed-time, as was Compline in the medieval Church, or in the early morning, like Matins, or rather, perhaps, at hoth these times. ${ }^{1}$

[^4]For this conclusion we find some confirmation from the "Ymoum Dicat" of St Hilary (10). This hymm is marked off by its eoneluling stanzas as one eminently likely to have bren used at an early morning service. The two immediately preceding the doxology, with their twicerepeated "ante lucem," have been quoted above. Before them come the following, not less appropriate for morning use :-

> Ante lucem turba fratrum concimemus ghoriam 'fa docemur nos futuri sempiterna seenla
> Galli cantus ralli plausus proximum sentit diem nos cantantes et preeantes yua futura credimus.

It is therefore no more than one might expect that, in one of the mannseripts containing the Gomem Dirat, it is one of two poems which follow a collection of fourteen prayers and hymas, expressly stated to lee intended for use in the morning.

Evidnee, however, which seems at first view to indieate that this peem was used at another time of the day, must not be overlooked. In the Trinity College Mannscript (W. Stokes, Gioidmita p. 98, Tonld, Lil. H!m. ii., pp. 151, 162), two accounts of the emposition of the pem are given. The first, which is somewhat obseure, is as follows :-"Hitarius . . . fecit hunc ymmum xpo in monte gargani, after eating the finner (naprainme $=$, randium) illic in the robber's louse. And after giving thanks to God, the sons of life dwindled post till they were not bigger than infants, as that seemed unto the priest who was with them. An argel came and said to them, Nisi penitentiam pgoritis in infermum ilitis, egerunt ergo penitentiam et dedit deus induls. The last words may seem to indieate that it was customary to sing this lymm, after the suppmsed example of llilay of Poictiers, at the comelusion of a meal, rather than at led-time or in the early morning. This, however, must not be too readily assumed, for several reasons. First, there can be no doubt that the passages already eited in comection with numbers (5) and (3) bear witness to an established usage. To me it scems that the sentence just quoted does not go so far as this. It does not so much justify what is done, as state what, in the writur's
opinion, ought to be done (conuenit). It has rather the sound of an apulogy for the practice of a few persons of special piety, than of a defence of a settled monastic rule. Sicondly, it is a little doultful how we are to understand the word "canere." It may seem natural to take it transitively and supply "istam laudem" (i.e., the hymm of St Hilary) from the preceding clause. It is, however, equally possible that it is used intransitively, in which case no reference whatever is made to the recitation of our hymn. And so Dr Todd appears to render it. ${ }^{1}$ Thirell!, it is to be noted that the Trinity College copy lere lacks the support of the Franciscan mamuscript. And lastly, admitting that we have here proof of the recitation of the hymn of St Hilary, "post prandium," as a regular practice, this does not in any way conflict with the supposition that it was chanted at other times as well.

And, in fact, we have detinite proof that this was the case. The poem is mentioned in stanza xxiv of the metrical rule of Ailbhe of Emly as follows :-

> "The Hymmum Dicat should be sung At striking the bell for Canonical Hours, All wash their hands carefully, The brethren assume their habit."
> Irish Ecclesiastical Recorl, vol. viii. p. 183.

Thus the regular use of the hymn was not restricted to the conclusion of meals. It docs not, indeed, scem very likely that it was recited before every hour, as the first two lines here quoted seem to imply. The mention in the third and fourth lines of the monks performing their ablutions and donning their habit points rather to the first uflice of the day. And with this the context agrees. The stamza (xxii) next hut one before that just quoted runs :-

The perfect olservance of the Canonical hours
Is reckoned the chief rule;
Correct Matins, according to the Divines,
Is at the close and the beyinning of day.

[^5]Then, in stanza xxiii, the direction is given that no one is to speak "till the hour of one." This leads us to interpret stanza xxiv as referring to the "striking of the hell" for the first Canonical homr, viz., Matins. And, in accorlance with this, we have in stanza xxix, -

It is not permitted to the brothren to depart Until the hour of Tierce, \&ic.

What seems to be meant is that, at the soumd of the bell, the monks recited the Fimmum Dirat, ant then assembled in the Oratory for Matins, and that they remained there till Tierce had concludel. Thus we have here further reason for believing that the hymon of St Hilary was used after rising from bed in the morning. Would it be too much to draw the additional conclusion that our oftice was meant to be used loy the monks in private, in their several cells, hefore they met in the Oratory for united worship at the first Canonical hour? However this may be, our conviction as to the time of recitation of our office, in spite of the statement in the T.C.D. manuscript, may remain unshaken.

Setting aside the question of the time, there is one particular in which all the passages which have been cited agrec. They all go to show that the office, whether used in the morning, after meals, or in the evening, was said claily. And this appears to receive some confirmation from two considerations which I shall now mention.

1. Allusion is marle by Adaman (F'if. S. Col., ii. 9.) to a certain "hymnorum liber septimaniormu sancti Columbae manu descriptus." This, according to Reeves (eul loc.), was "a volmme containing hymns for the various services of each day in the week." ${ }^{1}$ If this be so, we may infer that the daily services consisted in large part of hymns or canticles. And the inference is borne out hy another passage in the same work. Nt Columha, as is well known, diet just after the bell for matins had rung. The service proceeded as usual. And then we are told (iii. 23 : Recves, p. 239),-hymmis matutinalibus terminatis-the brly of the saint was horne to the hospice. Again it is implied that a daily service

[^6]consisted mamly of hyms. Such is the character of the office which we are considering, and so far our supposition is confirmed that it was intendel for taily use in the monastery
2. In the Life of St Molling, preserver in Marsh's Library, Duhlin, and dating, accorting to Reeves, from the Itth century, the following narrative occurs. ${ }^{1}$ "The King [Fianachta, from whom it Molling hawl procured the remission of the Borromean tribute ly a trick] sent the amy with anger after St Molyng to kill him together with his people. The holy senior Molyng, knowing this, bate his own people to proced more spectily on their way, praying to the Lom; and he himself bengan a satcel from in the scotic (hish) languace, in which he named many saints, praying to them and singing their praises, commencing with a virgin and finishing with the same-that is, tirst making mention of the most Blessed Virgin Brigil, and at the ent using the name of Mary the Muther." A little further on the writer aulds, "That sacrel cantiche of St Molyng is always kept with honour in Ireland, and men of goorl will, undertaking a journey, sing it: and through the favour of sit Molyng, aml the rest of the saints whose memory is sung in it, the Ommiphent God sets them free from divers dangers." -

If the hymn (of which there is no trace in the Liler Hymmemm) was, as the writer of this Life asserts, kept in honour throughout the whole country, it must have been ahove all sung in st Molling's own monastery at St Dullins. Why, then, is no mention male of it, so far as can now be liscovered, in our oftice? Perhaps because it was in the Irish tongue, which may have heen sufficient to exclude it from the service

[^7]of the Church (cf. Warren, ubi sup., 1 $\mu$. I55, siqu.). A more probable reason, however, may be assigned. It was a lorica intended, not for daily, but for occasional use, namely, at the commencement of a journey. It would therefore be excluded from a daily office. Such then, we again infer, was the nature of the service which we have been consilering.

To sum up. We have recovered in these obscure, scarcely legible lines of the look of Mulling a sketch of-or, to use a more technical word, a kind of directory for-what appears to have been a daily office used night or morning in the monastery of st Molling of Ferns, in the early part of the 9 th century. It is, I believe, the only sample of a daily service of the Ancient Irish or Sottish Church known to exist. It is, undoubtelly, unlike the Irish Missal, of home manufacture. It certainly does not inspire us with much respect for the liturgieal instinet of our fathers in the Faith, but it las its interest as one of the not numerous examples of their work in this department.

It may be well to add a scheme of this service, so far as I have succeeded in restoring it. It consists of the following parts (following an illegible portion at the beginuing) :-

1. The Song of the B.V.MI. (Magnificat).
2. ? Ps. 1kx. (lxxi.) i-3 : see p. 45.
3. Stanzas 4, 5, and 6 of the Hymn of St C'lumba (Noli Puter).
4. A lection from the beginning of St Matthew r., followed jussibly ly a formula not yet identified.
5. The last three stanzas of the Hymm of St Secundinus (Auditc Ommes. .
6 and 7 . Two stanzas supplementary to this hymn (In memoria and l'atricius Episcopus).
6. The last three stanzas of the Hymn of Cummain Fota (Celdore $J_{u(d a)}$.
7. The Antiphon "Exaudi," \&c., appended to this hymn.
8. The last three stanzas of the Hymn of St Hilary of Poictiers (Hym nem dícet).
9. The Antiphon "Unitas in Trinitate," \&c.
10. The A postles' Creed.
11. The Lord's Prayer, followed possibly ly
12. The Embolimut, or "Ascentat otatio," ©ce.: see p. 45.

All the parts of this ollice, so far as they have loeen identified (with the exception, of course, of 4), are fount in the Liber Hymnomm, while, of It Latin Ifymms in the two fasciculi of this hook published ly Tonkd, at least five are recited : a valuahle pronf of the use of the collection in Ireland a century or two before either of the MSS' of it now extant was written. At the same time, the copies used at St Mallins in the 9 th century must have differed considerably from both of those which we now possess. Thms, our manuscript agrees with the Francisean cojpy against its rival in the insertion of "Patricius ephiscopus" (thongh wifh a different text) after the IIymn of Secmondinus, while it siles with the T. C. 1)., and against the Franciscau copy, in adding "In memoria." Again, with the Franciscan eopy it omits "Per merita," de., after the Hymn of Cummain Futa, while it differs from buth, but must widely from the Franciscan, in giving "Unitas in Trinitate" as the only Intiphon after the Hymn of St Ililary.

One or two worls may be added before leaving our Liturgical Frasment. It will be olsersel that I argue for the existence of a practice in the ancient Celtic Church of singing three, usually the last three, stanzas of certain hymos in place of the whole. Amd I imagine the proof alrealy given is sufficient ; but 1 am tempted th quote one further passage, which not merely corrobrates my reasouing, but itself receives a fresh meanitg when the prevalence of the practice referred to is bome in minc. It is from the I'reface to the Hymn of Ultan in praise of Brigis (Tomm, Bowk of $I!!m m s$, i. 60). "Autite virgines haules," says thu writur, "is its begiming. The alphahetical order is in it. . . . Iticunt alii, that this hymm was originally long, but (that) there remain hero only four chapters of it, viz., the first chapter and the last therep chapters, cansia brevitatis." ${ }^{1}$ This is exactly as it should be. The first "chapiter" woukt be cited, no doult, as giving the title; the last three as bring, in some sort, equivalent to the whole.

That this was actually the case we are further assured when we glance at the hymm as printed by Dr Todd. ${ }^{2}$ First come three stanzas begimning
${ }^{1}$ In the Franciscan copy the first two sentences are foum as hore quoted, but the last sentence is omitted. Whitley Stokes, Tripertite Life, p. civ. sq.
$\because 1.57$.
VoL. AXIN.
respectively with the letters $\mathbf{X}$-("Nips in nostra insola ")- - $\mathbf{I}$ Z, and then the stanza-

> Audite uirginis landes saneta quorne merita
> \&c. \&c.

This stanza Dr Todld gives excellent reason for helieving not to have Inlonged to the original prom, in spite of the assertion of the scholiast that some reported it to lo the original first verse. How, then, are we to account for its presence here? Most readily. The end of a poem in the Book of Hymms is renularly indicated ly reporting muler its last line the first word or two of its first stanza. Thus, after the stanza "Zona," \&c., of the Hymm of Secundinus are written the words " Aulite Omnes," ${ }^{1}$ separating the prem itself from the supplementary verses which follow. In like manner, the close of Ultan's Itymn would be marked in the MSS. by writing "Aulite," with or without some of the following worls of the first stanza, muter the last line. When the custom of reciting only the last three stanzas produced its matural result, and the serites only wrote, and fimally only knew, these stanzas, in all likelihood the worls "Audite" or "Audite virginis" wouk still be preservel as indicating the title of the hymn. Some scrite, seeing the words in his exmplar, and knowing another poem hegimning with tho sime wrords ${ }^{2}$ (though not written with the same metre or assonances), supplied, as he supposel, the missing portion of the stanza by tacking on to the phrase which remained works from the other hymn.

Dr Tonk, it is true, will not aulmit this explanation. "The sugggestion," he says (p. 5N), "of the seholiast's preface, that the hymn originally consisted of a capitulum for every letter of the alphahet, is munecessary." He forgets that the scholiast, by lis " dicunt alii," informs us that he is not making a suggestion, lut handing on a tradition. And the tradition, especially when supported by the considerations which I
${ }^{1}$ The Francisean eopy has the one word "Audite."
${ }^{2}$ Hymms heginning with "Audite" were not uncommon. Ont of twelve poems in the Antiphonary of Bangor, two hegin with this word, and another has it for the first word of its second verse, the first verse heing prefatory (ff. $13 \mathrm{v}^{\circ}, 15 \mathrm{v}^{\circ}, 17 \mathrm{v}^{\circ}$ ). These threo hymns are the only strietly alphabetical compositions in the book. (\%) Mone, Latcinischo Hymnen, iii. 242, "Mehrere irischo Hymnen fangen mit Andite an. S. Muratori anecdota 4, 136 flo., vielleicht nach Denteron. 32, No. 671, 1."
lave alrealy adduced, is excellent evidence for the fact. At the very least, the passage cited shows this, that to the writer of the Preface there was nothing strange in a poom heing abheviated by the very peenliar method which we know was applied to St Secmedinus' Hymn. ${ }^{1}$ The statement" that "Alphalretical proms containing stanzas for the last three letters of the alphabet only were common" does not in the least invalidate this testimony, unless we have direct evidence that these are complete, and not merely "albreviatel" hymus. It is, indeed, very likely that many of them are in their original form ; hut this is exactly what one might expect, for when it became fashonable in repeating the hymms to neglect all the stanzas but three, the fashion would very quickly follow among hymn writers of economising lahour by writing no more than the three stanzas which were all they could expect to be sung. The very existence, in fact, of a large number of hymns, sueh as Itr Tond refers to, is a signal confirmation of the thesis which I have endeavourel to establish, rather than an argument on the other side.

But In' Told's main proof, that the writer of the preface was incorrect in his account of Ultan's Hymm, is of much interest-none the less so hecause it completely breaks down in view of the results at which we have arrived. IIe appeals (p. 55) to the Bash. MS. A. vii. 3 (deserihed alsn by Warren, Litur!!!y (eme Ritual, p. 185), in which ocenrs what "is prolahly a part of an ancient office" in which St Vltan's IIymu was reeited. After two lyyms recited in the office have heen given at full Jugth, the words follow:-

$$
\text { "jtem } x \overline{1 s} \text { in nostra insola rue nocatur." }
$$

[^8]This is proof, according to Todd, that by the compiler of the office the line "Christus in nostra insula" was regarded as the beginning of the hymn. Those who have assented to my reasoning with reference to the use of the hymms of SS. Secundinus, Columba, Cummain, and Hilary, in our office, will at once perceive that this argument is absolutely worthless. All our experience tends to show that it is quite unsafe to assume that lyyms, when used in the Offices, were reeited in their entircty. ${ }^{1}$ And in fact we have here a fresh and most unexpected instance of the principle for which I have been contending. The hymn of Ultan is represented in the Office preserved in the Basle MS. by its last three stanzas only.

Having gone so far, it is worth while to notice how closely our Office and that of the Basle Ms. agree in character. Both consist principally of hymuns; in both we find three stanzas of a hymn usel instead of the whole ; in hoth the hymns are followed (in some cases at least) by appropriate eollects; and in both there are lections, in ours from Holy Scripture, in the other from the apocryphal Epistle of Christ to Abgarns. Our Office, however, is elearly the fuller and more claborate of the two.
II. The Circular Derire.-Of this I have little to say beyond deseribing it as accurately as possible, and suggesting one or two questions, which I shall be obliged to confess my inability to answer satisfactorily. Unlike the Liturgical piece which we have been considering, this device was clearly intendel to oceupy the whole width of the page, the common centre of the two circles, whieh are its most prominent feature, being ouly alout $\frac{1}{2}$ centimetre to the left of the middle of the fage. In the diagram which I now give, the dimensions of the original are preserved. It must be understood, however, that it is only a diagram and not a facsimile, though no doult it will be found sutfieiently aecurate for practical purposes. I have replacel the Irish charaters hy letters of a more familiar form, and in the writing outsile the eireles have inserted no letters or marks which I have not actually read, with more or less certainty.

[^9]In the manuscript the diameter of the imer circle is $3 \cdot 6$ centimetres, of the outer, $4 \cdot 2$ centimetres.


Inow transerils the varions lines of writing, numbering them for comvenionce of reference, and conjecturally supplying illegible letters where it seems certain that such letters existed.

1. (Outer circle of writiny). +eros maire [ande]s +matt aniar
$+\operatorname{cros}[$ iio] $]$ hen $[\mathrm{h}]$ weith $+\operatorname{cros} \ln [\mathrm{c}-]^{-}$

$$
\text { [ani] } r
$$

$\therefore$ ( Imer circle of writing). Lanolioles+cros heremis. et aniardes+ilanied
 aid+cros [esaile]
Taking next the lines within the cireles in their urder we lave-
3. $+[\mathrm{c}]$ ros i spirta [n]uil
4. -- - yon danaib+
5. .... - onigkitamicis
6. $U \cdots-t$.
7. +[c]rist conaapstalaib
8. $-\cdots-h-$ - s

1. 2. At the word [ande]s is a tear in the velhm, which the hinders have remedied (!) by pasting a piece of paper over the word. It consists of about tive
letters and the tail of $f(s)$ is distinct. In very good light the last five lettels of [b]uaith are almost eertain.
1. 2. There are five or six letters after "ezechicl," but "tis" is most uncertain, espeeially the two last letters; $t$ may be $c$. See further lelow.
1. 5 . ni may be $m$ or $x i$; ci is possibly $u$; $l$ scc. may be $b$; ci may be $a$.

The following is a translation :-
$\begin{array}{llll}\text { 1. +Cross of Mark } & \text { Sunth } & \text { +Matthew } & \text { West } \\ \text { +cross of John } & \text { Nurth } & \text { +crons of Luke } & \text { Eust }\end{array}$
2. On the south-east+cross of Jeremiah, and on the sonth-west + Daniel, and on the north-west + Ezekid [---], on the north-cist + cruss of [Isaiah].
3. +C'ross ol the Holy Spirit.
4. . . .......... with gifts+
5. ?
6. ?
7. +Christ with his apustles.
8. ?

The most olvious thing to remark about this device is that it in a map or plan of some kind. This is mate quite clear hy the wrifill: outside the circles, in the inner line of which the positions of the prire of crosses are marked as south-east, de., while in the outer the cardinal points are noted. That our figure, then, is a map or plam appears to be cortain, and this is alnost the only fate which one can hold to have been established with any strong probability as to its purpose and character. I mention it here for the sake of its bearing on a prollem which at once sugrests itself. At what proint ought we to begin io read the two outer circles of writing (11. 1, 2) ?

In answer to this question, we ulserve, first of all, that two startins$\mathrm{l}^{\text {nints }}$ are exclnded: those, mamely, which are marked as S.W. and N.W. respectively. The word "and," which in cach of these cases precedes the designation of the $1^{n \times s i t i o n}$ of the crose, at once dieposess of their claim. Our choice, therefore, is limited to the S.E. amd N.E. points. Taking the former, in reading line 1, we begin with the cross of Mark, and find the evangelists named in the order, Mark, Matthew, Johm, Luke. In the ofher case the order will low Luke, Mark, Matthew, John. Now in the louk of Mulling itself
the Gerspel of St Jolin was ecrtainly intended to be placed last, as we know from the fact that it is followed hy the colophon. This may seem to decide in favour of beginning the realing with the cross of Luke, and it may appear, moreover, to yield evilence on the question of the order of the Synoptic Gospels in the Book of Mulling -of which, apart from this, we know mothing.

On the other ham, it must be observed that if this conclusion loe correct, the order of the fonpels in our manuseript is most unusual —absolutely unique, I helieve, among Irish codices, which, with the exception of the Codex Usserianus, ${ }^{1}$ agree in this particular with the A.V. Again, we must bear in mind that the device under consideration is a plan, and that the crosses marked on it, no doubt, represent actual stone or wooden crosses erected on the ground. Now it is prolahle that these erosses were planted in the order which the person who erected them was accustomed to regard as the correct order of the evangelists after whom they were mamed. But it is quite pmssible that, in setting up his errosses, he proceeded from right to left, while the scribe who indicated their places on his map could only write from left to right. If we reckon from right to luft we get the conventional orler, Matthew, Mark, Luke, John, which appears much more likely than the other to lave been that alopted lyy the seribe of our manuscript. The result of our argument, then, is this: The question to which we aldressed ourselves is left unanswered; it is impossible to decide whether the scribe began 11. 1, 2 at the S.E. or N.E. point; bat on the more important probleru of the order of the Ciospels in tho Book of Mulling we have shed some little light: it must either lave been Luke, Mark, Mathew, John, or Matthew, Nark, Luke, Jolm, and more probally the latter. I shall pasesently adduce evidence which will, as I think, convent this probability into something very nearly approaching to certainty.
 (Inubliumsi), \&口: (Dubliu, 1881), p, iv. In this Ms. the ordet in that usual in "Western" authorities: Matthew, Juhw, Luke, Mark. Tho waler, Lake, Mak, Matthew, John, is not mentioned by Gregory, Prolegoneme to Tischenelorf's Ni, T., 1. 137 s\%.

One other fact may be noter with reference to 11. 1, 2. It is obvious that some sort of parallelism is suggested between the four cvangelists and certain Old Testament worthies-probahly the four greater prophets. It is not very easy to guess what may lave loeen the speeial features which suggested a companison between is Mark and Teremiah, between St Matthew am Daniel ; but that the fashom of pairing together saints of diflerent eras, "who were of one mamur of life," was congenial to the Celtic mind is manifest from the lists preservel in the Book of Leinster and elsewhere (see Olden, The churrh of Irelanit, in "The National Churches" series, 1. 425). In these lists prominent Irish saints are compared with saints of the Universal Chureh, especially those mentioned in the New Testament. ${ }^{1}$ It is quite possible that similar comparisons may have been instituter between saints of the Oll and New Covenants, and that of these comparisons the device before us supplics one example. Possibly those who are verset in the literature of the early Celtic Churches may be alle to eite other similar instances.

1 must content mysulf with a reference to one passage fur a due appreciation of the importance of which the preceding paragraphs will have prepared us. It is the prayer of Collya $U$ a I minechla given in the Vellow Book of Leem (T.C.I). I1. 2. 16), col. 336. This mannscript lelongs to the fourteenth century, but the prayer is mueh older -probably contemporary with its reputed anthor, unt long aftor whose leath the Bowk of Mulling was written. This at least apmars to be the view of 1)r MacCarthy (Truns. Re.I.A., xxvii. 156, 178), who gives the following translation of its first two clanses:-

I bereech with Thee, O Jesus holy, thy four Evangelists who wrote thy Goyjel livine, to wit, Matthew, Mark, Luke, Johm.
I besecch with Thee thy four chief prophets who foretold thy Incarnation, Daniel, and Jeremias, and Istias and Ezechicl.
The whole structure of the prayer makes it clear that, ly naming in suecession the evangelists and the major prophets, the writer
${ }^{1}$ It is wor thy of remark that one Old Tustament saint-"Job of the Patience "is mentioned.
intended to suggest a parallel between them. The prayer is, in faet, made up of a long series of paings of the same kind. Thus, in the three following clauses we have the nine groules of the heavenly aml earthly churehes set over against each other, and immediately afterwards the twelve patriarcls, the twelve minor prophets, and the twelve apostles, de.

Next let us observe that the evangelists are named in the usual orler, which we have already eoncluded to he probably that of the Book of Mulling, viz. : Matthew, Mark, Luke, John. Moreover, the prophets are named in the order, 1miel, Jeremiah, Jsaiah, Ezekiel. This can only be because, the evangelists heing eompared indivilually with the prophets, Matthew corresponded to Daniel, Mark to Jeremiah, Luke to Jsaiah, and John to Ezekiel ; or beeause, the two groups being compared torgether as groups, Daniel, Jeremiah, \&c., was the customary order of the greater prophets in Bibles of the periol. In either case, Daniel standins under Matthew in our figture and Jeremiah unter Mark, we may safely infer that I saiah stood under Luke and Ezekiel under John. When we turn lack to the MS. we find this conjecture verified in the case of Ezrkiel (as shown above 1. 2), thongh none of the letters of this name could have been read without the assistance of the hint derived from Colga's Prayer.

But further, this prayer helps us a gool deal towards understanding the purpose of the exterior pairs of erosses. They must be erpuivalent to an invocation of prophets and evangelists. On the hypothesis that the device is a plan, we may well believe that the erection represented by the circles and the interior crosses was, as it were, placed under their protection by planting round it crosses in their honour.

Yet auain, there can now remain no doubt as to the order in which the crosses were erected: whoever planted them proceeded "left-wise"i.e., in a direction contrary to the diurnal course of the sum. ${ }^{1}$ " We should certainly not have expecterl this. The Cathach of the ( 1 ] hamells was $t_{0}$ lee "sent thrice riyht-rrise round the army of the Cincll Conaill" in order that they might be assured of victory in battle (OD) Onnell, quoted

[^10]ly Reeves, Vit. Col., p, 250). And this is only one instance of a superstition widely prevalent. Other examples may be found in Reeves, lit. Col., p. 250, note $c$, and in the first passage quoted on p. 308 from Martin's II'stern Isliouds.

A slight difliculty remains to be noticed. The extract from Colga has enabled us to read the name of Ezekiel muder that of St John ; but we might have exprected to find the word Ezekiel without any addition, just as we have Jmiel and Jeremiah. On the contrary, between "ezechiel" and "anoir" there are ahout six letters, namely, ' $t$ ' (or 'e') and (but these are very duubtful) 'is'-this group of three being preceded and followed ly one or two which are illatible. This may be the name of a second person coupled with Ezekiel, or more probably a descriptive epithet of the latter. What the epithet may be I am unable to guess.

But to proceed. We have seen that the device under consideration is a malp or phan. But a map, we at once ask, of what ? To this guestion 1 can give no answer which commends itself to me as altorether satisfatory. A suggestion, however, which has been made to me by Mr Olden is phasible, and at least deserves mention. Ite is inclinel to think that the eircles represent the Rath of St Molling, within which were his ceclesiastical buildings; the concentric cireles perhaps indicating a double or even triple rampart, as in many royal residences. The settlement of an ecelesiastic, he says, his "eity" (cralutir, ciritas), was exactly like that of a mative chicftain, except that it would be furnished with erosses as an inlication of its purpose. In support of this statement he kindly refers me to the Life of St Fintan or Mumu, in which we real that, when the Saint was in the woods (in the Barony of Forth, Co. Wexfort), he saw three men, elothed in white garments, who tohl him, "Incre will be your city," and they marked out in his prescnce seven [haces, in which afterwards the chief buikings of his city shond be erected, and Fintan placed crosses there. (Whet. of Nutional Biofraplly, xix. 1. 43 of. Olden, Choureh of Irelant, 1, 57).

All this is very interesting. It suggests that the crosses in our diagram mark the sites of monastic haidings at st Mullins; and if this can be established, the diagram itself will, it would almost scem, lead to the further inference that the buildings within the rampart were
derlicatel, like morlern churches, to the Persons of the Blesal Trimty, or to the Saints. True, on this theory we should expect to tind at least four crosses within the eireles, this being the inferior limit to the number of buildings within the enclosure (Holen ubi sup.), and I have only perceived three. But I have little doubt that one, two, or perhap's three crosses will come to light when 11. 5, 6, and os are fully deciphered.

One primat farie oljection to Mr Ollen's suggestion may he brietly referred to. Is it probable, it may be asked, that the monastery would be eircular, or ne:nly so, as, on the supposition that our diagram is its groundphan, it must have been? Reeves indeed asserts generally (1 it. ('ol., p. 361) that the vallum in Irish monasteries "was of a cirellar figure." Ibut he gives no proof. Possibly the statement is founded on Dr I'etrie's definition of "Cathair," as, in its primary signilication, " a cirrular, uncemented stone fort," ${ }^{1}$ which appears to rest on the somewhat precarions foundation of philolosy, but which has been accepted by lh: Stuart (Bewh of Deer, p. exly). But whatever view may be held as to the normal shape of the vallum, I believe that at least two instances of monasteries, expressly stated to be circular, may loe eited.

The tirst is the cicites of st Cuthbert, in Farne Island, which is deserileed for us lyy Bede (I'it. Cuthe, xvii.) in thase worls,-"Cunlidit civitatem suo aptam imperio, et domos in hac aeque eivitati congruas erexit. Est autem aediticium situ pene rotumhum," "de. The seenul is 1erliaps open to greater doubt. Adamman, in the title of the fiftecnth chapter of the third book of his Vita Columlia, mentions a cortain brother who fell "de monasterii culmine rotumli ${ }^{2}$ in Roboreti Campo," -from the roof of the round momastery at I hurrow. In the account of the incident in the text (which is taken from Cummian), the lrother is said to lave fallen" de summo culmine magne domus . . . tuae his in diebus in Roboreti Campo fabricatur." The two phases evidently
${ }^{1}$ Orduance Survey of the County of Londonderry, i. 213.
${ }^{2}$ With most unusual inaceuracy Reeves has in his glossary " monasterii culmen rotuutum." He was probalily misical hy letrie's argument: "Not certainly that the monastery itself had a rotund roof," \&e. Certainly not, but there is no mention of a "rotund roof" in the Latin.
describe the same building. What was it? Petrie (Round Towers, p. 382 sq4.), followed by Reeves and Fowler ${ }^{1}$, has little doulit that it was the Round Tower of the Mmastery. Nor does there seem to he good reason to dispute the interpretation. The two later writers, however, in this advancing a sitep beyond Petrie, identify the "magna domus" with the "monasterium rotunhlum." This is, I renture to think, umecessary and unwarranted. Nowhere else in Adamnan is the word "monasterium" applied to a single buiding of the ciritas, and du Cange gives no instance of the word used in this sense. Even at iii. 8 the "fratrum monasteria," which at first view might appear to mean the cells of the monks, are shown by the context to be several monasteries in the island of Tiree, in one of which lived the "congregatio" of Baithene. "Monasterinm," therefore, in the present passage must have the same meaning, unless it is impossible so to take it. I conclude that in "monasterii culmen rotundi," occurring, as it does, in the heading of a chapter, where we might expect to meet compendious phrases, we have a short way of expressing "enlmen domus qua in monasterio rotundo est." The buikling so deseribed was certainly high (" masna," " major," "altissima," " enormis," so high that a fall from it meant almost certain death; see Reeves, at lue.); it was probahly or possibly round ; but the thing which concerns us is, that the monastery at Durrow, with which it was commected, was round, like the civitas of Cuthbert in Farne Island, and the monastery, if such it was, depicted in our manuscript.

One test only occurs to me as applicable to the hypothesis. Does our supposed plan suit the topograhy of St Mullins? Can we point to prohable sites of ancient huiklings or sacred spots marked lyy the crosses of our seribe? In secking an answer to these inguiries much help, will, no doubt, be derived from an excellent description of the site of the Monastery of St Molling, with plans of the present ruins, published by Rev. J. F. M. ffrench in the Journul of the Rompal Sincinty of Antiquaries of I Ielant, part iv. vol. ii., fifthe sprirs, p. 377. Sut actual trial has convinced me that this paper, by itself, does not supply sufficient material for our purpose. The hypothesis that the scribe of the Book of Mulling gives us a plan of his monastery ean only be proved or dis-

[^11]proved-if even then-when the ground has hem surveywl afresh, with this olject in view.

Meanwhile, some help may he given by comparison of devices in manuscripts-especially, of course, Irish manuseripts-which have some appearance of being similia in character to that which is now before us. I an not aware that anything exactly analogous to it has been observed in other coliees ; but some of which representations have been given in Cilbert's National Mamustripts of Irelant are worthy of mention. The curions circular diagram from an Astronomical Treatise (part iii., pl. xxiii.), which is used to prove that the sun is greater than the earlh, will not help us much. But the plans of the banqueting-hall at Tara, formd in the Book of Leinster (part ii., pl. liii.), and the Yellow Book of Lecan, fol. 243 (part iii., pl. xxiv.), will perhaps prove to be of some service. And the device from the Corpus Christi Gospels, fol. $5 \mathrm{v}^{\circ}$ (part ii. pl. xlvi.), may throw some light on the sulject in hand. The "wheel-like figure" in the Saint Germain Manuscript (Wordsworth, Oll-Latin Billical Texts, i. p. ix) appears to he of quite a different character from that in our codex. See Rendel Ilarris, A Sturly of Cimpere Boace, p. 8 sq.
[Since writing this ]raper I have reecived a letter from Professor Bernard in which two valualle suggestious are made. They appear to me to be highly prohable, and 1 very much regret that it is not at present in my power to test them by inspection of the manuscript. They relate to the liturgical fraguent, and are as follows-
I. Number (2), which I had read " 1 No ...rrm," he takes to be Ps. lxx. (A.V. lxxi.) 1-3a, a common versicle in 1 ish collections of verses from the Psalter. Thins might be written "IN te nsin ; fitectorem," or "IN te sperani," the former of which arrees alnust exactly with my reading, while the latter (so far as I can judge withont secing the MIS.) is sulficintly near it, and suits the space rather hetter. ui, it shomh twe remarked, is very readily confused with $/ m$ in Irish minuscule writing.
$\therefore$. He directs my attention to an in-edited page of the Liber Hymenerrm ( $\mathrm{fo}, 30$ $v^{\prime}$ ) where we find "Crelo in dum patrem ompipotentem usinue in finem et pater noster. aseendat oratio" \&e. Hence he concludes that number (14)="Asembat oratio nostra" \&e. (Warren 1. 227). If the traces of J. 12 in the MS. do not disprove the correctness of this suggestion, I deem it preferable to that which I have oflered above, p. 16.]

## II.

NOTIGE OF A SMALL CEMETERY OF CREMATED BURIALS, WITII CINERARY URNS OF CLAY, RECENTLY DISCOVERED AT CULLA VOE, PAPA STOUR, SHETLAND. By liev. DOUGLAS GORDON balihon, M.A., Minister of Dunottar.

In July of last year, while a party of crofters were engaged in cutting turf on the summit of a small hillock situated near the head of Culla Toe, on the east sicle of I'apa Stour, they uncovered, almost at the very surface of the ground, a flat stone, which on being raised disclosed a large clay urn, containing burned bones and ashes. At the distance of a few feet a similar stone was encountered, and beneath it a second urn. Unfortunately the Papa mind associates such disenveries with hidden treasure rather than with sepulture. The inlablitants retain many traditions, more or less trustworthy, of hoards of Viking silver having, from time to time, been met with on the island, and they are contimually on the look-out for such. Consequently, in the scramble which ensued to secure the possible contents of the different vessels, both were hopelessly Iestroyed.

Nothing might have been heard of the ncourence had not two coopers, employen at the fishing station of Messrs T. M'Adie \&s Sons, which is situated on the island, retermined to explore the groum further, on their own account. Procerling to the knoll, they speatily liscovered, at a short distance from the former finds, and barely protruling itself above the turf, a small circle, composed of stones set on edse, and having a diameter of ahout 2 feet. Here they resolvel to rlig, and, at a depth of 18 inches, came upon another flat stone, under which there proved to be a third urn. This, with commendable care and patience, they suceceted in removing in its entirety. Subsequent shaking during transit resulted, indeed, in its also groing to pieces, and in the loss of a portion of the upper part of one side. Otherwisp, the urn, as now restored and presented to the Muse um, is practically complete.

Since then, the knoll has, I helieve, yielded varions wrne, all of them marked on the surface of the ground by the significant ring of stones.

In course of conversation with one of the conpers, whose interest in the matter did not rest with the discovery which he and his friend hat made, I learned that these circles are not confined to the knoll in question, but occur elsewhere and frequently throughout the island. Questioned as to the position and shape of the urns, he informed me that they were all firmly imbedded in the earth, were all large, and of practically the same form. The first urn diseovered, however, was of fincr clay than the otlers, and bore marks of ornamentation round the rim. Lo likewise assured me that he kept a careful watch while digging round the urn he himself unearthed, but is positively certain that no stone implements or artieles of hronze or other metal had been buried with it.

The urn, which is now reeonstructed, stands $17 \frac{1}{2}$ inches high, and is of the usual einerary form, ennieal or flower-pot shape lelow, with a slightly bulging shoulder, and a slight contraction at the neck, from which the lip is again slightly everted. The total diameter at the mouth is $13!$ inches, narrowing to 12 inches at the neek, and wikening again to nearly 15 inches at the shoulter, from which it tapers conically to a base of $4 \frac{3}{3}$ inches diameter. It is, of course, haml-male, and has heen burned in an open fire. No attempt at ornamentation of ony kind has theen made, lut the exterior is fairly well smoothel, and the paste has hern slightly mixed with broken stone to prevent cracking. It is interesting as leing the thind urn of elay from Shetland in the Mnseum. Cinerary urns of stone, mostly made of steatite or soft micaceons schists, have been frequently recorlad from the shetlimd Isles, hut the only previous examples of cincrary ums of clay are two found on the lamds of kergorl, in the parish of Weistale, by the late Mr I). I). 1lack, F.S.A. אecot., and ly him presented to the National Museum in 1866. They are described ly him in the Proceetings, vol. vi. p. 325 , as found respectively on the farms of IIousegord and Flemingtom; and he adds that, so far as he is aware, no clay urn has ever previonsly been diseovered in Shetland ; at least, he has not been able to hear of any such discovery.

Subsequently, the writer of this notice received another urn found in the same place, which was also acquired for the Museum. It is much broken in the upper part, the interior being a solid mass of hurnt bones mixed with hardened clay. It is of the same wide-mouthed, conical, and
nearly flower-pot shape as the other, and, like it, quite devoid of ornamentation. It afpears to have been originally also about the same size as the other one. The finder, Mr IIugh Hughson, jun., gives the following account of its discovery:-"This urn was fomnd on the same hill as the last one, but there was no circle of stones round it. Like the last one it was not in a cist, but simply placed down in the earth, with about 6 inches of clay over the thl of it. No stone tools were found with it, or any trace of metal; nothing but burnt stones and ashes of woot."

## III.

NOTES ON THE DISCOVERY OF A DEPOSIT OF POLISHED STONE ANES AND OYAL KNIVES OF PORPHILY, ETG., AT MODESTY, NEAR IRHME OF WALLS, SHETLAND. by GEORGE KINGHORN, Sir Rullox Wurks, Glasgow.

When spending my holidays in Shetland, and residing at the house of Mr Laurence Laurenson at Modesty, about 4 miles north of Bridge of Walls post-office, I was shown three stone axes and three large, oval, and polished stone knives found by his boys in a grassy knoll in front of his house. The knoll is about 20 yards long and 10 yarts hroal. On the east and west it slopes gently and on the south abruptly, the ground leing broken where the axes were fomme.

Ther strata are comprosed of -
(1.) Crats, turf, and sandy peat, about 8 inches.
(2.) Yellow peat ashes, alout 5 or 6 inches.
(3.) Hecomposed charred wood, about 4 or 5 inches.
(4.) Subsoil, red gravel, and rock.

The axes were found in the charred wood layer.
About eighty or ninety years ago, previous to his house being built, a brak of prat, about 4 feet thick, had been removed from the site of the house and the knoll, and this may account for the shallow depth at which the relies were found.

As Mr Laurenson intended making a garden on the knoll, I prevailed on him to make a further starch, and in doing so he discovered a burial urn of steatitic clay, erushed llat and broken into small pieces. It was
partly covered hy a flat stone of mill-stone grit, 17 inches by 11 inches by $4_{2}^{1}$ inches thick, on the top of which is a semicireular eoncavity $\frac{1}{4}$ inch deep, with parallel sides tapering to the ends. In close proximity he found another stone, nearly cireular, $7 \frac{1}{2}$ inches loy $6 \frac{1}{2}$ inches ly $2 \frac{1}{2}$ inches thiek, which fitted exactly to the hollow in the large stome. They had evidently been used for erushing or griming grain, and were found cmbedded in the charred woot.

Ahout 18 inches behind the urn, the apex of a stone axe showed itself in the sandy peat, and on pmiling it out we found it thickly covered with peat and a netting of fibrons roots. It measures $\delta$ inches by 3 inches ly $1 \frac{1}{2}$ inch thick, and weighs $1_{4}^{3} \mathrm{lb}$., and is in a hoautiful state of preservation.

At Engamoor, one quarter of a mile to the west of Monlusty, a similar discovery was made about seventecn years ago hy the late Mr Peter Irvine, who sent the relics to the National Museum, Elinburgh.

The broch at West Burrairth is about half a mile to the north-west of Morlesty. The ruins entirely cover a very small island ahout so yards from the shore, from which there is a sulmarine causeway or steppingstones, which are 2 feet deep below lour-water mark. They are now covered with seaweed, and can only be seen with dithiculty.

The perforated circular dise was picked up on the margin of Loch Houlma, north of Modesty.

Ahout 20 yarls to the west of the house are the remains of tumuli, the stones from which had been used for lowilding the house and fences.

I have just heard that the remains of other two urns lave been foum in the knoll.
[Mr Kinghom having generously presented to the Musemm the portion of this interesting find which was in his possession (sce the previnns List of Donations on P .7 ), and the remaining portion having been also acyuired for the Museum from Mr Laurenson, the following is a detailed description of the objects:-

The whole find consists of nino stone axes and the same mumber of oval knives of prophyritic stone, and of that peculiar form which is known only in shetland. This correspondence in the mumber is vol. xyix.
suggestive of the original association of a knife with each axe, whether that association may have been one of personal possession or of sepulchral deposit. The occurrence of three separate clusters of broken fragments of steatite vessels is sugurstive of a sepulchral deposit; for


Fig. 1. Axe of hornhlende, foumd at Modesty, Walls, Shetland.
though these steatite vessels are not always sepulchral, they are so in must cases. The stome axes are :-

1. An axe of hombtende, sparsely mixed with crystals of felspar (lif. 1). It measures $7_{4}^{3}$ inches in length by 3 inches in greatest width
across the entting face, which is rounded ofl to a tine edge. It is oval in the cross section in the middle of its length, and tapers upwards to a hluntly conical butt, the whole surface being tinely tinished and highly polishet.
2. An axe of porphyritic stone, $9 \frac{3}{8}$ inches in length and $3 \frac{1}{8}$ inches in greatest breadth across the cutting face, the cross section a long oval, and tapering to a conical butt. It is somewhat irregularly formend, having some hollows in the surface imperfectly ground out, but the whole surface is well polished except where these hollows occur.
3. An axe of diorite, $8 \frac{1}{8}$ inches in length by $2_{8}^{5}$ inches in greatest lreadth across the cutting face, oval in the cross section, and tapering to a bluntly conical butt. The whole surface is highly polished, but somewhat irregular in outline. It has been broken into five pieces, the breaks being old. Two of them are directly across, at a distance of $1 \frac{1}{4}$ aml 3 inches from the cutting edge. The others are splinters taken ofl' the thickness of the implement on both sides, as if to prepare it for a new cutting edge.
4. An axe of porphyrite, 6 inches in length ly 23 inches across the cutting face, oval in section, and somewhat tlattened on one face, so as to be rather more adze-like than axe-like. It is also somewhat irregular in shape, and abruptly conical towards the hutt, hut well polished. On one of its edges, near the shoulder of the cutting face, there is an abraded portion, 2 inches by 1 inch, which has been caused by use of the axe, either as a hammer-stone or an anvil-stone.
5. An axe of diorite, 6 inches in length by $2 \frac{1}{4}$ inches across the eutting face, the cross section an irregular oval, the hollows not ground out, and the butt irregularly eonical.
6. Aize of porphyrite, 6 inches in lengtl by $2 \frac{1}{4}$ inches across the cutting face, and tapering to a bluntly rounded butt. It has one side flat, the other convex, the edges roundel, and the cutting edge ground mostly from the convex side.
7. Adze of diorite, $6 \frac{1}{4}$ inches in length and $2 \frac{1}{2}$ inches in greatest breadth across the cutting face, tapering irregularly to a bluntly rounded butt. The implement is flat on one side, and irregularly convex on the other, the edge being mostly ground from the convex site.
8. Short stumpy adze of dionite, 43 inches in length ly 3 inches in greatest hrealth aeross the cutting face, the cross section a long oval, the greatest thickness being $1 \frac{1}{2}$ inch. It has a slightly shonderel and truncated lintt, and the cutting edge is ground nearly all from the (anc fice.
9. Axe of porphyrite (fig. 2), of which mly the butt end remains entire. It is 6 inches in length and 23


Fig. 2. Axe, ahm math by was as a hambuel atone, from Minlesty, Walls, Shetland. inches in breadth at the lower end, tapering to a bluntly conical butt. The lower portion, with the whole of the cutting edge, having been broken away, the fractured part has either been used as a hammerstone all round, or there has been a partial re-making towarls a new cutting elge, by battering the fractured edges away.
10. Flat oval knife of porphyritic stone, $7 \frac{3}{4}$ inches in length, $37 \frac{7}{8}$ inches in greatest breadth, and nowhere exceeding half an inch in thickness, ground to a uniformly smooth surface all over, and having its thinner edge retouched ly chipping on one side only.
11. Flat oval knife of porphyritie stone (fig. 3), 7 inches in length lyy 4 inches in breadth, and nowhere exceeting half an inch in thickness, thiming towards the cutting alpe, which is slightly retonehed liy ehipping on one site omly.
12. Flat oval knife of porphyritic stone, 6 inches in length by $3 \frac{3}{4}$ inches in breadth, and nowhere exceeding half an inch in thickness, thiming slightly from the back to the cutting edge, which is retouched by chipping on one face only.
13. Flat ohlong knife of prohyrite (fig. 4), $7 \frac{3}{4}$ inehes in length by 27. inches in greatest beadth, and not exceeding half an inch in thickness, the hack noarly straight, somewhat pointed towards one end, and the entting elge retonchal throughout ly chipping on one side only.
11. Fhat oval knife of porphyritic stone of a bluish-grecth colour, ais inches in length by 3 inches in breadth, and nowhere exceeting


Fig. 3. Oval knife, from Modesty, Walls, Shetlaml.
half an inch in thickness, the back nearly straight, the cuttin! cdsen retonched by chipping from one side only.


Fig. 4. Knife of porphyrite, from Modesty, Walls, Shetland.
15. Flat oval knife of greyish porphyritic stome, $4_{4}^{3}$ inches in hoysth ly $2 \frac{1}{4}$ inches in breadth, and nowhere exceeding half an inth in thickness, the hack nearly straight, the cutting edge retouched ly chipping from both sides.

U4 IROCEEDINGS OF THE SOCIETY, DECEMBEL $10,1894$.
16. Half of a flat oval knife of greyish porphyritic stome, $3 \frac{1}{t}$ inclies in length ly $2!2$ inches in breadth, and nowhere exceeding half an inch in thickness, the back nearly straight, the eutting edge retouched by chipping on one side ouly.
17. Half of a flat oval knife of bluish-grey porphyritic stone, 3 d inches in length and the same in breath, nowhere exceeding 58 inch in thickness, and the cutting edge retonched by chipuing from one side only.
18. Portion of a flat and almost qualrangular knife of bluish porphyritic stone, measuring 5 by 5 inches, and not exceeding $\frac{3}{8}$ inch in thickness. It is lroken in a curved fracture diagonally, from within an inch of the one corner to within the same distance of the opposite comer, so that only about an inch of the cutting elge remains, which, lowever, slows the same retonching by ehipping from one side only that characterises all the other specimens from this remarkalle find.
19. Fragments apparently of three vessels of a coarse steatitic clay, about hatf an inch in thickness, mixed with very small stones, and apparently also with stalks of withered grass, of which the impressions are visible on the inner surface as well as in the fracture of the thickness of the clay.
20. Two oval masses of clay, about the size of a man's fist, and apprantly monkled or kneaded by hand.
21. Fragments of charred faggots of branches or roots, from 1 inch to $1 \frac{1}{2}$ inch diameter.

## IV.

## ADHItIONAL NOTES RESPEUTING THE IDENTIFICATION OF THE

 slTE OF BEDE's GUIDI, By PETER MILLER, F.S.A. Scor.In a previons praper I male suggestions respecting the site of Feders ancient city, (iadi. Further investigations on this suliject have enabled me to collect additional evidence from charters and other historical records.

Ohe of the diftienlties in the way of identifying the localities of phaces mentioned by old writers and in ancient charters, is owing to the variations of spelling that the ohl names have undergone in the course of time, and ahoo to the translation of the name into a different langage from the original. Some writers do not even spell the names two times alike in the same document. The name we are concernel with at present is spelt by Bede, in 730, (imili. In Forbes' Colmulur uf Sinttish Saints it is stated that St Vigeam, or Fechin, built a church at a place called Flar-Gimithe, in Mayo, Irelank. This sant was alive during liole's lifetime. Nennius, in the tenth century, wrote the worl Iudeu. These differences in the spelling of the same worl hy these authors are easily accounted for. Bede's, beins the earliest and hest authenticated, is the most reliable, and his form (indili is obviously the Latinised form of the Welsh worl ; for it is his usual mode to ramer Celtie place-names into Latin, as in the case of urls Coludi, now Coldingham. Two or there centuries after Beale's time one of the continuators of Nemius sisils the word Iuden. Most authoritios are now at one as to the identity of the phace indicated by the variant names, (inidi and Iudeu, - the differnee letween the two being easily explaines on phonetic groumds. It appeas to have its origin in the prommetation of Bede's form of the word with the initial ! aspirated, and Nemins' spelling is simply the phonetie rembering of the word used by Beale. ${ }^{1}$ ln Wichif's translation of the New Testament, 1380 , the place-name (iethsemani is spelt $L$ ssamem!, in all the other traslations into English it is written Cethemmane. This changing of the initial $G$ of the word into $\ell$ hat : doulle significance,
${ }^{1}$ Leland, in his Coflectanca, vol. iii. p. 123, in quoting Iede, uses the word Yidi, and on the margin hats whes Gfuidi.
as it shows that the rule was not exclusively applied in the Celtic languages, but was common to the Anglo-saxon as well; and that it must have ham so used when the name Cariden was first applied to that parish almout the year 1140 .

The earkest form of the Saxom rendering of Caer Guidi and Iuden is foum in the 1Iolyrood Chartulary, 1145, where we have Raventyn and Karroten in the same charter (No. 9).

When we come to the charter history of the district in which the parish of Cariden is situated, there seems to be sufficient evidenee to slow that Bede's city of Guiti was situated in that locality. Besides liche's notice of that city, there is mention made in the book of Lecain, in the 9th contury (as quoted hy luenes in his Britisht-('uldees), of the Ginitun Sia, which has Culen-Ross (Culross) and the Ochills on its north side. The charter history of the locality coulims the idea that ciucili was sitnated on the south-side of that sea. Now, the parish of Cariden is directly oprosite to Cuhoss, and the high-lying land that forms the parish of Cariden lats ahways been called Eryngaith ${ }^{1}$ or Ardyngaith, and is son calleal at the present time. In 1315, when Walter stewart married Marjory, the daughter of King Robert Broce, hesides the other heritages in that locality conveyed in her marriage-contract, there were inchoded the lands called the Brome, near the loch of Linlithgow, the lants of Pondingtom, with the lands of Eryngaith, near Linlithgow. In the C'atentar of state Paprss relating to scotlant, vol. iii. p. 388, it is stated there was no ineme from the lands of Bondington and Amegath, as they were unlet in the year 1337. In 1334, the Earl of Mortom has a charter from Fobert, Seneschall of Scotland, of all the lands of Bondington and Erngeyth. These two lands go landed tugether for a time, and afterwards it is the lands of Bondington and Blackness that are conjoinel, and subsequently the name Eryngaith is dropred altogether, but the lamels of lamdington (now Iomytoun) contime to the present time ; the lands of Eryngaith having ohvionsly become alisorbed under a dillerent arrange-
${ }^{1}$ The sutfix gaith in Eryngaith is not peeuliar to this locality in Linlithgowshire as a place-name. These forms exist in diflerent localities, widdy separate. In Cunberland there is a Culgaith ; in Perthshire there is a Kinguide, Kingath, and a straguith (now Blaekford) ; in Stirlingshire, Auchingaitl, and the Wards of Gudy.
ment, arising out of the repeated changes of proprictorship. ${ }^{1}$ According to the marriage-contract of Marjory, daughter of Robert liruce, must if not all of the property of that district was Crown property, and Blackness apluars to have always been a royal castle.

In the adlitions to Nemius' IListory of the Pritons it is stated that Oswi, King of the Northumbrians, slew Penda in the field of g/ui, and now took place the slaughter of gai C'ampi, and the Kings of the Britons, who went out with Penda on the expedition as far as the city of Indeu, were slain. Bede also gives a circumstantial account of the battle of Winwedfeld, which It skene thinks was fought in the vicinity of the river Carron, near Camelon and Denny. The Pictish Chronicle las the strouyss graii Compi-the Chronicle of Tigernach and the Amnals of Ulatur contirm the victory obtained by (iswi over Penda, while lede says that the war was terminated in the region of Loidis (Lothian).

This place-name yci Compi, where the slaughter of the Soxoms by Oswi touk phace, is obvionsly the rendering in Latin of two foreign words. That event took place, accorling to all the authorities, after the lattle of Winwedfied, anl when the war terminated in the region of Loidis, accorling to Berle, in 656. All the authorities seem now to agree that I'ede's (iutiti and Nemmins' Iuten are one and the same: that being so, the Latin worl yai can be readily traced to its Celtic origin in the name of the district already referred to in the parish of Cariden ${ }^{2}$ Ergmathe or Arilymaith. In the pronunciation of the Gaelic worl the the in the sulfix gaith is not sounded, and accordingly such words, where written phonetically, lose the $t h h^{3}$

[^12]Accorling to Joyee, the word gaith-yei is applied also to an am of the seashore as well as the wind (gecha) - Dun-geha, insteal of Imon-gaith, the fortress of the winil (Joyce, vol. ii. p. 247). As the gai of Nemnius can only be referred to the same rule, it follows that guithi and gaith are only variants of the same name. The earliest form of the name occurs in Nennins' Historia Britomum:-Cair Manum Giuil-the Campus Gai; the field of Guili-the district between the Avon and the river Almond, that is, Liulithgowshire. The idea that fimili was situated on the Islaul of Inchkeith is a mere inference unsupported by any evidence whatever, and is simply a guess at the meaning of an olscure expression used hy Bede in describing the eastern inket or sea, which had Guill in its midst. Now, in opposition to that idea, we have the pusitive evidence of two authorities, we of whom, on the question of lowality in this particular case, is superior to that of even Bede. Bede's statement is susceptille of two meanings. The scribes who wrote the charters conveying the lands of Eryngaith (the lands of the Jill of (taith) as leing near Linlithgow must he held as knowing more about the 11 ill of Gaith than Bede himsslf ; and the highlands between Linlithgow -blackness-and the Guidm Sea of the book of Leeain were as much in the middle of the eastern inlet of the sea, considered lengthwise, as luchkeith is in the opposite dixection ; and the existence of two wh cities of the same name, so near each other, is highly improlahle. Besides, the evidence of the charters is confirmed ly the Book of Lecain, which tells us that Cuhross and the Ochills were situated on the north sile of the Guilan Sea, while the charters inform us that the Ilill of Gaith was on the south side of it, so that there seems ample authority in their united testimony to the exact locality of the city Guiri. Blackness has been a royal eastle from time immemorial, and the presumption is that it marks the site of beale's ancient eity.
shire and Elgin; Balqaith, in Furfarshire, is Baksy ; so, in like manner, Aryngath wouk be Aryngay. There is a place called Mihuravie, not far from Glasgow, that is treated in the same mamme-it is promoned Millgay.

## V.

NOTICES (1) OF A BRONZE CENSER (') OR CH.IFING-DISII, FOUND NEAR BALVENY CASTLE, AND (2) OF A FINI) OF COINS IN THE pailisil of murtlach. By W. CRamond, Ll.D., Cullen, F.s.A.Scot.

Bronser C'mser or Chafiny-Dish.-About four years ago the bronze article which is now sulmitted to this meeting was found near Balveny Castle, parish of Mortlach, Rallishire. It was observed projecting from the gromed at the foot of the slope forming the outer bank of the old moat, abont 20 or 30 yards west of the great wall of the castle. As will be seen from its representation in fig. 1 , it is a shallow vessel of lonze or lorass, standing on a foot-stalk, circular in shape, over 6 inches in diameter at the mouth, and weighs about two pounds. On each side is a small circular aperture, one-fourth of an inch in diancter, through


Fig. 1. Vessel of hronze or brass, found near Balveny Castle, Bumfishire. (3.)
which chains may have passed for suspension. Around the cireumference are six sets of small oprenings, apparently for the admission of air, each set consisting of five openings, arranged in the form of a cross. The upper rim has six indentations, to correspond, it is supposed, with projections in the cover. The cover, however, has not heen diseovered. The only conjectures that have beon made as to its probable use are that it may have heen a conser, or a brazier for hurning charcoal. It may be alded that the ancient church of Mortlach is a considerable
distance from the castle, but it is not improbable that there was a chapel in connection with the castle in pre-Reformation times. The article is now the property of the Catholic Church, Dutlown.

Fints of Coins at Mortlarl.-Tralition assigns a remote antiquity to Martlach as the seat of a hishopric antecedent to that of Mberdeen; but the true eharacter of the early charters in the Register of the Bishopric of Abrdeen being now admitted, Mortlaeh has been shorn of its ancient glory. Its holy wells are ats much aprreciated as ever they were, but it is for a dilferent reason.

From time to time Loman and other coins have been found in this locality, all tending to support its reputation for autisuity. Many of those discovered of late years have again disappeared, aml tho following notes have therefore been drawn up to anticijate the disaplanamee of others.

Last July two small copper coins were found at Pittyvaich House: One now, I understam, in the Musenm of the Society of Antiguaries, Ehinlargh, was identilied by the authorities of the British Museum as a coin of Marcus Aurelins, A.D. 160-I 80 ; the other as having been struck at Alexandria in the middle of the thind century.

A eopper coin now sulmitted and presented to the Juseum was foumd a year or two ago at Irullown. It is a eoin of Antoninus Pins, A.b. 138 , and weighs 210 grains. On the obverse is the hem of the Emperor, with the legend "Armenia." On the reverse is a Foman sullier, with the letters S.C., the rest being illegible. One ments with few Roman coins so old as this. Of those we have recently seen, the best is a grold coin of Vespasian (A.D. 69-79), found at Inverurie, and now in the jossession of Mr Tait.

The next coin here submitted belongs to the reign of Maximinus, $c$. A.D. 236 . It is of copper, and weighs I 40 grains, but the inseription is almost illegible.

Another coin from the district is a bronze coin of Byzantium, of the later perion, of an irresular shape, the cross very distinct, but the inseription illeabible. Weight, 120 grans. By favour of Mr Juhn Sham, teacher, Mortlach, I am enabled to present to the Musemm the two coins last described.

There is here also exhibited a silver penny of Henry 111. (12161272 ), which was found a lew years aqu in the manse garlen of Mortlach, and is now presented to the Museum hy the parish ministrer -lior. J. 1). Cumming.

The chief "finds" of coins in the parish in rocent years were those made in 1875 and 1879 by workmen digging for sand in the sandpit of littyvaich. The coins were close under the surface, and at two different parts of the sandpit. Over the top of one lot was a stone, now lost, with the inseription "M \& W," and some figures cut thereon. One of the "finds" consisted of seven large silver coins lapger than a crown, and four somewhat smaller than a florin. Report has it that there was also a "roupenfu" of small silver pieces, hat I have been mahle to discover any trace of these. There were certainly some small silver pieces foum in riddling the sand, but they have all disappearel. Of the large pieces, the wherrabouts of four is known, and that, 1 luheve, is all that can now be tracel. There is gool anthority for helieving that the wife of Alexander I)ull of Feithmore, ancestor of the I Moke of Fife, hid her treasures in troublons times, some two centuries aro, close to a burnside in Mortlach, and the very spot is still pointed out. It was therefore naturally concluded that this was a similar ease, "specially secing that the coins spemed to be of about the same periol, and some of them, moreover, were spanish dollars, which fitted in armirably with the events in the lives of some soldiers of fortune belonging to this parish. Whe coin from the find which the writer lately disenterel (and which is now submitted) bears a date which altogether overthrows this theory, and compels us to have recourse to a less romantic one.

Of the four large silver pieces one is a 40 s. (Scots) piece of William and Mary, of date 1690-94. On the obverse are the heats of these sowereigns, with the inseription-ghlelemis. et . marla. det . gratha, with " 40 " muler the husts to denote the value of the coin. "n the
 a line coin of Ferdinand 11I, Emperor of Germany, 1637-1657. On the reverse is the inseription-FERminandrs . in . dod. Romano . me. $\mathrm{S}: \mathrm{A}:$, and on the ofversc- 1616,18 . Nova civit [stral ?] suxibesis. The next appeats to me to be a coin of the Archbishop of Cologne,

Elector of the German Empire. It bears on the obverse-max . nes . d. G . arc. Col . prin . el . and on the reverse-co. Lo . ho . ep . et . princ. Leod . dVy . bVL. ma . . . 1671. The last of the four coins is, I presume, a Bolivian dollar. It has on the obverse-por la constitvons, with the heal of Bolivar and the worl bolivar, while on the reverse appears-republica boliviana 1837.

This coin, then, of date 1837, and found in the sandpit of Pittyvaich in 1877 or 1879 along with these other ancient coins, compels us, for want of a more charitalle explanation, to suspect that the eoins were surreptitiously obtained and hid in that spot, but the spot coukd not afterwards be identitied ly the depositor, or circumstuces prevented his calling for his cleposit. It is extremely likely that the coin of Marcus Aurelius, though found at I'ittyvaich House, was carted thither among gravel to that place from the same sandpit. The connection with Spanish history of one family in this comty, and the well-known collection of coins and medals that that family at least once prossessel, puint the way to a possible solution of the mystery.

It would be very curious if it shonk be established that this sandpit of l'itty raich, by disgorging its surreptitiously-ohtained lioman coins and Spanish dollars, las been the means of acerediting Morthach with an antipuity as umreliable as cortainly did, in former times, the pases of Beece and the charters of the Bishopric of Aberdenn.

Whe other coin of somewhat old date has heen found in Mortlich. It is a silver "shilling" of the Conmonwealth, found at Recletich, and now in Ekin Museum. Its date is 1652.

## Monday, 14 the January 1895.

## Professor DUNS, D.D., in the Chair.

A Pallot having been taken, the following Gentlemen were duly eleeted Fellows:-

Wi. Bhlsland, 28 Park Circus, (ilashow:
Wr. Kirk Dickson, Advocate, 19 Dumlas Strect.
Robert F. Watson, Bricry Yards, Hawick.
Jas. T. Hetchison of Moreland, 12 Dimglas ('rescent.
William Nixon, Solicitor, 2 Dudhere llace, Dumbe.
Alexander Gibe, 12 Antigua Street.
John Scont, C'B., Hawkhill, Larys, Ayrshire.
The following Donations to the Mnseum and Litnary were laid on the tahle, and thanks voted to the donors:-
(1) By the late W. S. Thoman Sinclair of Dumbeath, F.S.I. sent.

The Yett or Grated Iron I oor of Dunbeath Castle, Caithness. This is a large and fairly well presersed example of those wrought-iron Yetts or (irated 1)oors which were so generally used in the Sonttish castles of the lifteenth and sixteenth centuries. It measures 5 feet 6 inches in height ly 3 feet 7 inches in width, and has two massive holt.. Junleath Castle was taken by Montrose, after some days' sioge, in 1650, and garrisoned for the King; lout retaken ly Leslie after the defeat of Montrose at Carbisdale shortly thereafter.
(2) I'y Duncan D. Merbura, Mighgate Ramer, London,

Iforse-Pistol, turned up by the plongh on the dieh of sheriffmuir.
(3) By M. (i. Murenead, Swillingtom Iouse, Lecels.
lluman Skull, dug up at the Kirkheugh, St Andrews.
(1) By I. Macfie, 14 Hope Terrace.

Bodle of William LII and Mary.
(5) By John Shand, Schoolhouse, Dufflown.

Small Brass Coin of Maximinus, and one of a late Byzantine comage, fomm in the parish of Mortlach.
(6) L'y Dr Wm. Cramond, Cullen, F.S..I.Scot.

First Brass Coin of Antoninus Pius, found in the parish of Mortlach.
(7) By Rev. J. I. Cumming, B.D., the Manse, Mortlach.

Silver Pemny of Henry 1II, of England, found in the parish of Mortlach.
[See the previons communication ly 1 ir Cramond.]
(8) By J. IV. Cursiter, F.S.A.Scot., the Author.

List of looks and Pamplets relating to Oliney and Shetland. Svo, Kirkwall, 1894.
(9) By the Keerer of the Records of Scotland.

Register of the Privy Council of Sentland, vol. xi., 1617-I9; and Remister of the Gireat Seal of Scotland, vol, viii., 1620-33.
(10) By David Robertson, F.S.A.Scot., the Author.

A Bricf Account of the Clan Momachaidh, with notes on its history and traditions. 4ts, Glasgow, 1894.
(11) By the Trustees of the Museum, Carnac.

Catalogue du Musće J. Miln, ì Carnae, Mombihan, France. Sro, Vimmes, 1894.
(12) By the Trustees of the Museum, Thornhill.

Catalogue of Dr Grierson's Museum, Thomhill, Dmmfriesshire ; compilnd ly (ieo. F. Black, of the Natiomal Muscun of Anticquitios, Elinhurgh, and Joseph Lisset, A.R.C.S. Lomb. svo, 1894.
(13) By the Cxiversity of Aberneen.

Catalogue of the Books in the Wilson Archeological Library in Marischal College, Aberdeen. 1 mp . Svo., 18 pm ., 1894.

There were also Exdibited :-
(f) By Rev. W. L. Cinistie, The Parsonage, Stonehaven.

A Tableman of Bome, with grotusque carving of a Centaur. This (fuaint piece of carved bone, the history of which is not known, is here shown of the full size in fig. 1. The carving is so rude that it is difficult to assign it to any particular style, but in some respects it might be taken either for Irish or Scottish work.
(2) By Dr Wm. Frazer, Mublin, Hon. Mem. S.A. icot.

Bronze Medallion of Oliver Cromwell, which originally belonged to Whalley the Regicide, and was supposed to have been made by Thomas Simon from the wax molel propared ly him for the Munbar Molad.
[See the sulsectuent paper ly Dr Frazer:]


Fig. 1. Tableman of lone, from Stonchaven. (i.)
(3) By John Simpson, Wick, through Charles Bruce, F.S.A.Scot.

Stone Axe-Hammer of lasalt (tig. 2), 43 inches in length, 23 inch in greatest breadth, and 2 inches in greatest thickness oplosite the shaft-hole in the eentre. The sides are greatly hollowed, till the breadth to be piered by the shafthole doms not much exeed an inch, and the hole has been pierced from both sides, begiming with a diameter of about an inch at the outside, and marrowing to abut half an inch at the centre. The edge is nearly semicirenlar, hat not sharp, and the butt- or hammerend is brought to a thattenen oval of about $\frac{3}{4}$ inch in its longest diameter. The form is not a common one VOL. XXIN.
in Seotland. It was found in the bed of the estuary of the river of Wiek, near the hack of the North Guay, a good many years ago. Another form of Stone Axe-Hammer from Caithness is figured on 1. 6 of the present volume, and a thiril will be found figured in the Proceertings, vol. ix. p. 245.

Molar tooth, alparently of Elephas antiquus, found in the bed of the river-month at Wick, Caithness, not far from the place where the


Fig. 2. Atonn Ax- If:mmer, fimud in the bed of the river-mouth at Wick, Caithness. (言.)
stone axe-hammer above deseribed was found. Mr Charles Bruce, F.S.A.Seot., disenssing the prolahle reason of such a tooth being found here, says:-" My conjecture is that it came from the wreckase of a trawler that had been totally lost in Wick Bay, and in the immediate vicinity of the place where the tooth was found, some months prior to its diseovery. Bones and teeth of primeval animals are frequently
brought up from the sea-bottom by trawlers in the neighbourhood of the Doggar Dank, and are commonly sold in the curiosity-shops of Grimsby, Lowestoft, and Yarmouth. A comparison of the tooth with those in the skull of Elephas antiquus in the Forres Museum will, I think, show that it belongs to that species."

The following Communications were real :-

## I.

## a record of the cup. and ring-markings in the stewartry of kirkcudbright. by Fred. R. Coles, Corr. Mem. Soc. Antly. Scot.

In the sixteenth volume of the Proreedings of the Society, Mr I. Romilly Allen contributed an important list of the then "undeseribed stones with cup-marks in Scotland;" but at that date (1882) the Stewartry was erelited with only two sites-the roek at High Arvie and the stone at ligh Auchenlarie, attention to which was dirst drawn lyy the late Sir J. Y. Simpson. The next notice, ly the late Mre fiemge llamilton, marks an epoch in the history of our cup- and ring-marks. In the autumn of 1886, the discovery on a field at Milton, by William Thompson, of a most interesting group of these scribings, drew the general attention of local antiquaries to the subject, and each succeeding month added new sites to our ever lengthening list. The record now submitted to the Soeiety contains a description (as lyief as possible) and am accurate drawing of every important cup- and ring-marked rock or stone which came to my knowledge up to the date of Mareh 1893. (other ohservers, especially Messrs E. A. Hornel, William Thompson, I). Corson, have helped largely towards this result ; lout in every case 1 have measured and drawn the seulpturing myself, frequently paying more than one visit to the spot, so as to examine the markings loy difli-rent lights.

Till quite reently it was hell that these unique rock-scribings were confined to one very narrow strip of the shore on both sides of the river

Dee, all the sites being comparatively near to the sea-say, within three miles. The very remarkable series, e.f/, at Jigh Banks, on the east of the river (casts of some of which are in the Museum), are a bare mile and a half from the nearest tide-mark. Those which occur in the Milton parks are within nearly the same radins ; while, at Balmae, many pecular forms are foum within a couple of hondred yards of the sea. Agrain, on the west of the river, one mile exactly inland, are others on the land of Senwick; and at Auchenlarie and Dardristan in Anwoth, seven or eight miles further west, in addition to the sites mentioned ly Simpson, there are several other groups, occurring on lowse stones as well as on rock. As recently, however, as 25 th June 1892, quite a new group was found at Nether Linkens, six miles inland from Balcary Point, and nearly four miles north-east from the previously observed most inland group at Castle Creavie.

The drawings accompanying this notice are-unless otherwise statal -done to a uniform scale of one-twelfth. In every case I have drawn and measured the sculpturing on the spot, noting also the form, comprosition, and inclination of rock or detached stone on which they oceur. $\Lambda$ feathered arrow indicates the direction in which the sculptured surface slopes, and the orientation is shown in the usnal manner.

The cup- and ring-markings are comprised under several groups, and to treat of them in this style will he simplest and most consistent with their known distrilution.

## I. Tue Balmae (irout.

This, the most southerly group, contains very varied sculpturings, all on solid rock, which here is of the finest-grained glaciated whin-stone, so common throughout many districts of the Stewartry. Fig. 1 shows two concentric ill-formel rings, believed to be the most southerly ${ }^{1}$ in the country. The rock inclines slightly towarls the west. It is about a hundred yards soutl of Ross View Cottage. The "circles" here figured

- With the exception of some discovered (since this notico was written) on rocks below liigh-water mark on the island called Little Foss, at the mouth of the D.e.

Figs. 1-5. The Balmae Gituly
are 17 and 10 inches in diameter, and are much worn down. Fis. 2 shows a group-also very indistinct-cut on a small rock not many vecore yards N . of the first, and containing three concentric and well-formed
rings, with central cup, and cup outlying ; the overall diameter being 13 inches.

Fis. 3, which lies but a few yards from Ross View Cottage, on its N.W., is much more complex, eight cups being associated with four rings and several grooves, both straight and curved.

In fis. 4 we have an interesting variety in the fom of overlapping circles, the rings being specially well formed. This rock-surface is


Fig. 6. Balmae.
much split up by sharp, deep fissures, and its general inclination is south-westwards.

Fig. 5 represents a sculpturing to the $W$. of the last, on an almost flat rock. This was imperfectly figurel in Mr Hamilton's paper (Proceeding/s, vol. ix. p. 157), because at the time that drawing was made, the outermost segment ( 1.1 in diagram) had not been olserved. Wuring funtler investigations, I so frequently found this peeuliar
foature-an untinishel outer groove - that I do not think I am wrong in attaching some importance to its presence. Other "cups" may be seen on rocks close to these, and are claimed by some ats artificinl, hot my opinion is that they are weatherings, occurring, as they do, too regularly in the line of cleavage to be void of sumpicion.

Fig. 6 shows two sets of concentric rings, one having four, the other five amd a central cup. The rock bearing these is some three hundred yards s.E. of Balmae Honse. It is smooth, and slopers to the W. at an angle of $40^{\circ}$. The largest ring is 24 inches in thameter.
7. A rock immediately below, also having a like inclination to the W., bears a group of live concentric rings, the outer one being is inches in diameter.
8. To the N. of Balmat House, on the hanc-fields, is a very much wom cup and partial ring. The centre of the cup is 13 inches from the upper or N.E. corner of the rock. The eup measures 5 inches across, and the ring must have been about 7 inches.
9. Farther N. and W., and higher up, is a single cup on the corner of a rock, in much the same position as the last. It is 2 inches wide, 1 inch deep, very clear and well defined.

## 1I. Tie Kinockshinnie (ihoup.

This curious sculpturing was found by Mr IIomel in February Isa7. It lies on the summit of a hill 300 feet above sea-level, facing N.F. I'robably owing to its position, this scuhturing is extremely wathered (fig. 7).

## III. The Torrs (irour.

Two sepmate localities are included in this.

1. That noarest the seat (on the Well llill) is a mass of mek, measuring 9 feet hy 3 feet, $W$. of and not very far from the Ewehughts. The much worn condition of the seulpturing rembers examination very difficult ; but it appears to consist manly of shallow cups 1 inch wide, very numerously seattered about; a groove follows the
clge of the rock and connects two cups, one of which is surrounded by a ring. The rock has a slight inclination eastwards.
2. This group is on an ahnost flat rock-surface, 6 or 7 yards N . of the wall of Torrs famhouse (see fig. 8). Near it, on the E., are surfaces quite as smooth and far broader than this space, which measures over all but 30 inches by 18 -and yet on none of them is there a vestige of any sculpturing. At $m m$ in the dianram the two ends of an encireling groove touch the adge of the rock, here flush with the summit of the hillock.


ris. 8. Tums.

Fig. 7. Knockshinmie.
3. Two fent three inches eastwarls, on : partion of the same rock, 3 inches higher, and also flat, are two small cups, joined by a straight growe $4 \frac{1}{2}$ inches long, and running E. and W.

1. Three feet S. of this is a vagne, nearty complete, ring, cruce and uneven, with a dut in its centre, on a small flat rock, on a level with the rest.
2. Eistward 66 feet, also on flat rock, are two small and very shallow chus, the N. and S. of each other, $5 \frac{1}{2}$ inches apart. There are other dots and small marks picked out apparently roum these two, which suggest the notion that here a group, was about to lee cut, but abandoned.
3. Next, E.S.E. of the upper of these two curs, and 8 feet 6 inches distant, is a very unusually fine cutting. It oceupies a small, squarish (natural) hollow in the rock, and has, no doubt, for long had the advantage of heing turfed over, hence the remarkable clearness of its lines. It presents a cup 2 inches wide and two rings $5 \frac{1}{2}$ and $8 \frac{1}{2}$ wide. Neither cup nor ring is partienlarly deep, but the sharpness with which the edge of rock is left between each separate grooving is very noticer able, adhed to which is the almost mathematical circularity. Nine incles s.s. E. is a clearly-cut cup, without a ring.
4. Thirteen feet N.N.E, of the ringed eup, just noted is the design


Fig. 4. Turss.
shown in tig. 9, which speaks for itself. The rock has a distinet stop mastwards. The outernost rings measure 10 and 8 inches in diameter.

## 1V. The Girange (iroup.

This group, contaning the somewhat novel dexigns shown in the five following diagtams, was moticed in Angust 1892, when, with the assistance of Mr Dudgeon, I removed several square yards of turf, and brought to light scuppturings scarcely loss interesting than, and quite as well preserved as those at lligh Panks.

The site of the first seulpturing (see fig, 10) is in the remote south
corner of the Dam Park, on the lower part of an extensive bulky ridge


Fig. 10. The Grange.


Fig. 11. The Grange.
of whinstone sloping in all directions; another set (fig. 11) is close to
this, while the summit hears the forms shown in fig. 12 . What most strikes an ohserver in all these groups is the appearance of remarkahly large and deep cups, and the placing of cups, sometimes with rings, within a long elliptical groove. On the summit-rock (fig. l2), however, there is, in adlition, the peculiarly distinet pick-marked groove ( $\mathrm{i}_{\mathrm{i}}\left(i^{\prime}\right.$ ) carried down the slope, then up and romnt, encircling one cup and almost entering another. A second groove, left in the same initiatory stage, is carried from $\mathrm{F}^{\prime}$ to F , also downwards. At its lower end are


Fig. 12. The Grange.
numerous small pieked holes, evidently the first dotting-out of the contour of a cup.

Alout a mile up the roal from the Grange towards Townhead Schow, in a high field ( 350 feet contour-line) S.E. of the cottage known ats Blackhill, ant some 50 yards distant from it, there is a solitary uneven lump, of whinstone, having one fairly flat surface a little more than 3 feet square. On it oceurs the very curions design shown in (tig. 13). The four ontlying cups and rings are almost exactly placel to form a rhomboid, while the distance from the centre of the large saucer-like
depression to the S.E. cup is just twice that to the S.W., the other two cups being equidistant.


Fig. 13. Near Townhead School.
Near Gilroamic, in a fich to the S.E., close on the edge of a quarry, there are the two cuttings shown in fig. 14-an oval and a horse-shoe shape, the latter enclosing a small cup. The rock slopes steeply to the N.E.


Fig. 14. Gillroannie.


Fig. 15. Milton Park.
V. Tife Milton Group.

Under this head I place all the sculpturings, which cover a large number of isolated rock-sufaces, in the fields known as the Milton

Parks. II ere there are six separate localities, fou of them on the cast of the long dike here dividing the fields, bearing each either as simple or a very complex design, and apparently lying, in regard to each other, in no systematic order.

1. The first sculpturing (fig. 15) is on the top of a lumpish rock, and shows four concentric rings, with central cup and three other cups, with a perfectly straight groove connecting two.


Fig. 16. Milton Park.
2. Two very much worn rings, 4 and 7 inches wide, round it small and shallow cup-the whole extremely vague.
3. The very remarkable set of cups, rings, and grooves shown in fig. 16. There are, in addition to these features, two small whlonds close to the largest ring group. This rock slopes downwards and eastwards, nearly one in three.
4. On a rock jutting up some $\&$ feet above the grass. At its W. corner is a cup 1 inch wite, partly surrounded by a groove, prerhaps an intentional semieirele, 3 inches in diameter.
5. On the W. of the dike, and touching it, is the flattish rock hearing the very clear and peculiar design shown in fig. 17. The finding


Fig. 18. Milton Park.

Fig. 17. Milton Park,
of these seulpturings by Mr Wm. Thompson was the incentive to our more thorough searches for cup- and ring-marks in the Stewartry.
6. The last site is N. of Low Milton, but my drawing (fig. 18) does not show these two rocks in their actnal relative positions. They each face westwards, and in each the cups lie due E , and $\mathrm{W}^{+}$. of one another.

## VI. Galtway and Migit Banks Group.

At Galtway, as at Iumrol, we are again on traces of earlier human halitation; for here, too, there was a thriving village, known to have


Fig. 19. Galtway.


Yig. 210. Sculptured Rock, Galtway.
been inhabited during the Irish Rebellion of 1641 . Heaps of its ruins, now all grassy, may be seen in many direetions.

1. Towards the west of the village preeincts there is, on a piece of flat, coarse-grained, sandstone-like rock, a cutting consisting of a central cup, $1 \frac{1}{4}$ inch wide; a nearly complete circle, 4 inches wide; two-thirds of another circle, $6 \frac{1}{2}$ inches wide; and a segment of about a fourth, which lies N. of the rest, and would make a circle 11 inches in diameter. See fig. 19, A. Three short shallow grooves run radially out,


Fig. 21. Seulptured Rock, Galtway.
as shown in the drawing. Associated with this are two other sets of concentric rincs, with central eup ( B and C , fig. 19) -the cireles of the latter loing extremely weathered. This last is almost equidistant 10 feet from $B$ and $A$, and in reality lies due $E$. of $A$.
2. The next gromp ocenrs several hundred yards to the E... at the base of cairn-crowned Galtway llill. See fig. 20, semptured linck.
3. Sculptured Rock-also at the lase of the same hill-shows: wonderful varicty of sculpturings, and is perhaps the richest $ן^{\text {becep }}$ of rock surface in the Stewartry. (hice fig. 21.)
4. Sculptured Roek-occupies a higher site than the last, and to the E. of it. My drawing (tig. 22) shows to what a very differnt result these detacheed surfaces have been used by our archaic senlptors. ${ }^{1}$

The two tine sets $A$ and B are among the most perfect specimens


Fig. :2. Galtway.
we have of clear and regular concentric cutting. A ocempies a "sadillohatk" rock; its greatest diameter is $12 \frac{1}{2}$ inches. In B the largest ring measures 20 inches across. The peculiar incurving of its rings is remy marked.

High Banhs.-The cup-and ring-markings at 11 igh Banks are mow well known ; partly through the excellent casts taken (as mentionoll in Mr Llamilton's paper) and presented to the Musemm.

There are, however, many more senlpturings on a portion of this
? These scribings oceupy in reality a space of rock about 12 ficet spuare. In my drawing they are compressed.
rol. Xxix.


PROCEEDINGS OF THE SOCIETY.
same rock-surface which the easts do not include. The plan next shown (fig. 23) is meant to supplement the illustrations in Mr Hamilton's praper. It represents the ligher, nearly level surface N.E. of those. If the solitary group of two rings and culp, (L), at the extreme left of my plan, were placed 3 feet N.E. of the edge of fig. I in Mr Hamilton's paper, we should arrive at a correct understanding of the arrangement and general disposition of this extraordinary speeimen of cup- and ring-markings. Many of these lie in ant almost direct line (A I F II) N.E. and S.W.; many others are clustered in threes, in a mamer which seems peculiar to the locality.

On a small flat stone unearthed during the excavation of the South Caim in the Woodfield, a single eup, was noticed. The stome was not preserved.

## Vil. Castle Creatie and Bumbie (iroup.

The next drawing shows somewhat musually distriluted eups amd rings, which occupy three separate rock-surfaces on a very hillocky sixty-acre field, known as the Rough Tongue of Bombie. This particular ridge of rock is the one nearest the public road ; and N. of it, and hat a few yards distant, trending N.E., is an old road, marked by a tall hedge and fallen dike. All these seulpturings, except

Fig. 23. High lanks.
the two at K (fig. 24), have been greatly weathered, and are barely visible but at sumrise or sunset. Thick turf has protuctent the two at $\mathfrak{K}$; and as the west edge of this rock has heen inarried, it is possibleas was certainly the case at lligh hanks-that pisces luaring senlpturings have thus leen lost. Close to this very clear group is a deep, small


Fig. 24. Rungh Tongne of Pombie.
pit, and what looks like the leginning of a spiral-a form not hitherto found in falloway: Nineteen free in the direction of the arrow from K is a group of $t$ rings and central cup, greatest diameter being 12 inches.

A few seope yards $\mathrm{W}^{\circ}$. of the loaning at Castle Creavie, and A . of the public road, is a quarry. On the last remmant of its origiual surface, at its eastern elge, and within a foot of the broken rock, is a seulpturing


Fig. 25. Stockerton.
showing four much-worn enneentric rings, with central cup. The inclination of this rock-surface is E.N.E., and at an angle of more than $30^{\circ}$. Ahove it is a single small cup, and 7 inches from it one of those reniform hollows, the result possibly of two genuine eups being run together loy weathering. Still higher up is another of the same.

## 1111. The Little Stockerton Gikull.

The designs next to be noted were discovered by Mr 1). Corson on the 27 th August 1892 (fig. 25). The site is the secomb-highest rock in the upper part of the field known as North Brockloch, and at about 60 yards S. of the long dike going E . The rock is one of the unlikeliest for seulpturings in the whole district, being not only inclined at a very steep angle, but ribbed and rungh in the extreme; much of it is thickly bedded with turf. The site is specially interesting on aceoment of its isolation ; there being no other within miles of it, and no tradition of any ancient habitation or of eairns near it.

## 1. The Nether Linkens Choup.

The isolation of this small group is also noteworthy: from the kemb Tongne of Bombie, three miles ant a half, and in any other direction, the country, for a much greater distance, has yiehded no others. The nature of the rock in this example diflers from all that we have hitherto noticed. It is a rommed mass (probahly a huge half-buried houlder) of smorthish "porphyry," finer in the grain than the bulk of that rock trenting through this purt of the country, hat still much coasser than the familiar "blue whinstone." The rock is a few feet to the N. of the dike dividing the tiedls E, of the farm from the open hillside, amd cluse to a small woorl. My drawing (fig. 26) shows ten separate sots of rings with central cups, and there is no cup without a ring. That at (; appears to start it spiral. The roundedness of this rock is shown on the right lyy a section. At K is the largest circle, on a lump of rock like the first. 1ts central cup is 58 inches distant from J , and 68 from C .

## X. The Newlaw Bern Gruup.

This set of semicircles may be seen and studied by any one travelling by the road between Chapelton and Dundreman. On the north coping of the little bridge that carnies the roal here over Newlaw Burn there is a longish stume, probably from the Oroland shore; it bears the sentpturing shown in fig. 27.


Fig. 26. Nether Linkens.
Intermediate loetween these two lucalities, Newlaw and Senwick, is Conchicton in Burgue, where, in an ancient grave, I found two stones hearing eup-marks. The larger, which measures 24 inches by 16 inches and is rukely triangular, is a thin slab of indurated sand-stone, and may have formed part of the eover of the cist. It has one cup of an inch in diameter not far from the centre. The other stone-of rough-grained
porphyry-is part of one of the siles of the eist : it is rhomboidal, 24 inches long by 12 iuches wide ; and, in addition to one very distinct cup, $1 \frac{1}{2}$ inch wide, has numerous very small cups, the begimings, possibly, of a group.

## XI. The Senwick (irolp.

Westwards of the river Dee the localities of the cup- and ring-marks are less numerous.


Fig. 27. Newlaw burn.


Fig. 28. Clachandolly, Senwick.
I. The most interesting is that shown in fig. 2 s . It is on a very low, flattish rock in a hollow of the large pasture-fied S.W. of Clachandolly smithy, the field itself being known as "the cleagh." The rock is
barely 50 feet ahove sea-level. Each of these ring-groups is worth study, for though all are remarkably symmetrical and neat, each has its special feature. The centre of the four ringed group to the left, eol., is not an ordinary eup, but a hollow dise, and there is a straight, clean-eut groove leetween the sharply-detined points of the incomplete rings. In the middle group, also, none of the five rings meet, but the level of the rock is left bare;


Fig. 29. Senwick Croft.
while in the right-hand group the corresponding space is hound by the outermost ring, and bears also a cup. The small oblong we lave met with previously, but the larger one with its surrounding groove is unique.



Fig. 30. Senwick Croft.
2. The next groups oceupy the summit of a long flattish rock (150 feet alove sea-level), near the middle of Senwick Croft, ahout 100 yards E. of the house. Is the space used measures some 20 feet in length, 1 have nut only mate the diagram (tigs. 29 and 30) to a smaller seale than usual, but contracted the frawing, the space between B and I indicating a chasm of 7 feet, bare of seulpturings. On this long rock-surface there
are other cup hollows which some observers cham ats artificial. I camot, and therefore do not represent them.
3. South of the gamekeeper's house 110 yards, on the Clash tieht, there is, on one out of a seore of equally suitable rock-surfaces, a design of four much-worn rings with central cup, the largest ring measuring 10 inches in width.
4. Ahout 300 yards further south and 50 feet higher up, only a few feet from a dike rmming E.N.E., is a small gromp, which, as shown in fig. 31 , presents a remarkable likeness to a constellation.


Fig. 31. Senwick Croft.


Fig. 32. Laggan Stone, Anwoth.

Nil. The Axwoth Cimur.
Under this I place the futur separate sites known to me up to the present date, viz., Laggan, Anchenlaric (2), and lardristan. $l_{11}$ a district so rich as this in antiquities, fresh seuppturings may be found at any moment; lont up, to 1887 the only authentic example was the fine group tescribed by simpson.

1. The Laggan Stone (fig. 32) was, 1 believe, tirst notieed hy Mr Kimma, of Newton-Stewart. Through him I was led to see it. The site is a stony, thorny, whin-grown slope near the base of Laggan IIIl, almost exactly 660 yards W.N.W. of the Four standing stones of Newton. It is merely a thimish block of whinstone, rudely shaneed
into a pentagon, placed on the top of a low irregular heap of stones, in such a position that its apex points direct to the Four Standing Stones. In size and arrangement its rings are very like those at Torrs (fig. 9), and its cutting is very clear,-so distinct, indeed, as to lead one to the conclusion that its present resting-place is only recent, and that it has been for long under cover.
2. The Bardristan slab (see fig. 33) was removed from amongst the stones of an old drain in 1889, and, through Mr Kinna's care, it is now preserved at Bardristan. The evident attempt to square the stone itself ;


Fig. 33. Baddristan.


Fig. 34. High Auchinlarie.
the extreme smallness of the rings ; the direct connection of the grooves, in all cases lont one, with cups; and lastly, the vivid sharpuess of the whole sculpturing, in which the tool-work is clear much heyond the ordinary, all combine to remder this Bardristan slab unusually interesting and valuahle.
3. High Auchenlarie.-The rock-seulpturing here brought under notice (see figs. 34), and which I discovered in 1886, is ahout 51 feet S.W. of the tallest stone in the stome circle on the uplands of this farm. It is the rock nearest to the circle, a low-lying pointed picce, with only a
couple of feet exposed to light and weather. Below the turf (see dotten line in diacram) I foumd the eups and rings as here shown.
4. The slab now noticed as the Auchenlarie slab has been beautifully illustrated in Simpson's Archaic Soulpturings. Its general appearance (see Appendix to Promorlinys, vol. vi. p. 30, and pl. xiii. fig. 3) is not unlike the Bardristan slab. It has been empared hy Stuart, who figured it, to the cist-cover at Coilsfield. Like the Jardristan example, its exact relations to any cist or other stone were not noted at the time of its discovery. Many years ago it was removed from the hillside to the garden at Cardoness, where it may still be seen.

## XIII. Ihlly Stoxe-Cibcle Gikoup.

This locality, far inland, is on the farm of Itills, ahout a mile N.E. of the railway station at Lochanhead. There is here a good example of a stone circle, and on the stome lying due E . in the circumference of ten stones there are three very small cups, in a perfectly straight lime, on the top of the stone, two of them 3 inches apart and the other two $7 \frac{1}{2}$ inches. Another stone, that nearest the N . stone on the $\mathrm{W}^{\text {. }}$, bears a single cup. There are no rings in connection with these cups.

Summing up all the localities comprised under these thirteen groups, we have in this recond not less than 49 separate surfaces on which cupand ring-marks are found in Kirkendbrightshire; and these surfaces vary in size, direction of slope, texture, and pesition, to such a decree that no safe conclusions can be drawn as to the meaning or use of these mysterious incised markings, oceurring, as they do, not only on solid rock, but upon thin slabs, as at Auchenlarie anl Bardristan; on bouldors, as at the stone-circle at Hills; and even on the very apex of a piece of rock, as in one of the Nilton Parks examples ; and also on stomes within a cairn, as at Conchieton and High Banks. At the present date Inverness heads the list with 120 sites, Kirkcudbrightshire is second with 51 , and Xairn and l'erth have 46 each.

## II.

NOTICE OF THE DISCOVERY OF CUP AND R1NG-SCULPTURINGS AT DUNCROSK, NEAR THE FALLS OF LOCHAY, IN GLENLOCHAY. By D. HAGiARRT, Killin.

A very remarkable set of incised rock-sculptures was discovered lately in this neighbourhood by Mr John M'Naughton, of Messrs M'Namghton Irothers, graziers, Duncrosk. The rock is situated in a low-lying fied on the north side of the Lochay river, and at a point some $3 \frac{1}{2}$ miles from Killin. It lies immediately below the old farmhouse of Ihmerosk, and about 100 yarls below the roadway, lassing up the north side of (ilentochy. It is an ontstanding oliject in the west end of the field or haugh below Dmonosk, the rest of the field leing compratively level. It is a glaciated hoss of micaceons schist, having the general trend of the neighbouring schists, viz., east and west. The southem face of the rock presents a wall some 8 to 10 fret high and abont 200 yards long, dipping to the north, till lost in the rising ground behind. The top of the eastem portion of the rock-wall is eupmarked for a distance of some 25 yards, with a breadth of some 3 to 4 yards. ${ }^{1}$

C'harater uf the marlinus-Cups are very numerons, numbering some hmodreds, and are fombl in groups and, as usual on rocks, are irregularly scattered. They are of averare size- $1 \frac{1}{2}$ to $2 \frac{1}{2}$ inches deep.

Ringet C'uss.-()f these there are a good many. They are all singleringed, with one exception. The general diameter of the rings is ahont 5 inches; while in the case of the double-ringed cup, the outer ring has a thameter of 6 inches.

Hoof-like marks.-Of these there are several on the western frortion

[^13]of the rock, but they have weathered so considerably that they neal only be mentioned.

Small pittings.-A curious group of seven very small markings may lee scen on the western part of the rock. The point of the thumb would cover these markings.
''ur-marking rith ratial groores.-One marking of this class only is noticed on the roek. It is a cup-marking of the usual type, with three grooves, extending ahout an inel from the central cup, at equal intervals round the circumference.

Arcuate markiny.-This is the largest marking on the rock, and if complete the sine would have a length of 8 or 9 inches. There is a flaw in the rock at its lower end, however. It eonverges thward the bottom, and has a depth of some 5 inehes. There are one or two markings of other varieties on the rock-face. The only one of which any aceomet need be taken is an oval one, which looks as if a small shuttle had been pressed into the rock-wall and then slightly pusheel downwards. It has a length of $t$ inches, and has been partly deepened by weathering. The top of the rock generally is covered with turf and vegetation, and immediately hehind the uarkings it is comparatively level. Were the turf stripmed, this part of the surface might yot yield additional markings.

## III.

NOTICE OF THE DISCOVERY OF INCISED CUP- AND RING-SCULPTURINGS AT BRAEs OF BALLOCH NEAR TAYMOUTH CASTLE. (With Phutugrafhs.) By Rev. J. B. MackenZie, Kenmohe, F.S.A. Scot.
[Lord Breadalbane having kindly sent intimation to Ir Anderson of the discovery of a cup- and ring-marked boulder-stone in the neighbourhood of Taymonth, Dr Anderson requested Rev. J. B. Dackenzie, Kenmore, a Fellow of the Suciety, and an expert photographer, to visit the stone and contribute a notice of it to the Society if it should be found to be of sufficient interest. The following paper is the rosult of Mr Mackenzie's visit to the stone, and the illustration is from a photograph taken by Mr Mackenzie.]

The stone which Dr Anderson has requested me to examine is a natural boukler, measuring about 4 feet in length and the same in breaith. It lies facing the north, on the slope of the hillsice of the Braes of Balloch, a little more than 1000 feet above sea level, and about a quarter of a mile to the east of the house at Tombuie. About one-half of it was coverel with soil and heather, which I removed and replaced as before. This accounts for the carving on one jortion being so much more distinct than on the other. Its precise situation is about 100 yards to the south of the fence which separates the arable land from that portion which was partly arable, but mostly moorland pasture, and is not far (only a few yarls) from an old roail from the arable land to the hill. It is a boukher of the stone which abounts in the vicinity-a coarse schist, very hard and durable-and presents a fitirly level surface. The field in which it lies is full of hillocks, largely formed of boulders, although in many of them the rock is also visible.

About 100 yards to the sonth of the carved stone is a hillock where the rock appears, which originally must have presented an irregular face, some 6 or 7 feet ligh, and slightly cmed. This has at one time been made into some kind of dwelling. There is a heap of stones and soil reaching fully lalf wity $u p$ the rock, and at the top there are still in position a few large stones, with their ents projecting 6 or 8 inches beyond the rock. It may have been a dwelling of the lrehive kind, but
there is too little remaining in position to enalle one to give anything but a very rough gness-only a thorough elearing out of the rublish would enable the character of the structure to be accurately ascertainel.

I enclose a photograph of the boulder (fig. 1), showing its markings. The oblong marking at the side of the stone, of which I also send an enlarged photugraph, is the only one which is different from those nsually foum in this association. It is apparently meant to represent something,


and not merely mmament. I have examinel most of the other houlders in the vieinity, but none of them show anything artificial, except one on the hillock alove noted, which has two notches cut in the edge of the stone, $1 \frac{1}{2}$ inches deep and 4 inches apart.

The view from the place is most extensive: you lowk tuwn on the Tay and Loch Tay, and see the entire sweep of the mountain range from Forman to Bemmore. Although it is so lugh, the soil is excellent -better than in the valley; and there was at one time al consideralde population cultivating the arable gromed abont 900 feet above seatevel.
IV.

## recent antiquarian research in glenshee. By W, mcombie SMITH, F.S.A. s.ot.

Glenshee, in north-east Perthshire, on the borders of Aberdeen and Forfar, is one of the most interesting ghens in the Highlands. It has magnificent scenery, was once thickly populated, and is rich in legendary and traditional lore.

Along with several other districts in Seotland and Ireland, it claims to be the scene of the luar hunt ${ }^{1}$ that resulted in the death of Diarmid, the Fingalian hero. It has Iliarmid's grave-two of them, in fact; the Boar's Beld, Boar's Loch, and a stone admirably adapted for chaining Finn's famous hound lran to. The loar's Bed is a narrow groove between two rocky ridges on the precipitous face of Ben Gulabein, at the lower end of Glenbeg, on its west side.

The reputed grave of liarmid is on a knoll or mound, surmounted by four upright stones of irregular dimensions, being simply matural houlders taken from the alljacent hillsile. The knoll is on the farm of Tomb, nearly half a mile east of the lower end of Glenbeg, at the foot of the range of mountains that hound Glenbecr on the east. Permission to open the mound was freely granted by A. II. Farquharson, Ess. of Invercauhd, the proprietor, and Mr W. M'Kenzie, Chamis, the tenant of Tomb, and a leginning was made on 28th August 1894. The mound is of irregular oval shape, 112 yards in circumference, 39
${ }^{1}$ In the Dean of Lismore's book there is a poem, of no mean merit, by Allan M'Rory, describing the hoar hunt, which Dr M'Lancllan is of opinion refers to this Glenshee. The anthor of the poem describes Glenshee as-
" The vale that close beside me lies,
Where sweetest sounds are heard of deer and alk, And where the Feinn did oft pursue the chase, Following their hombls along the lengthening vale. Below the great Bon Gulhin's grassy height Of tairest knolls that lie beneath the sun, The valley wimls."
Diarmid, in the poem, when he went to rouse the hoar, "went up to Ben Gulbin and "roused from his cover on the mountain side the great old boar."

Yards over the top from east to west, and 29 yarls over the top from north to sonth. It has a short steep slope of $14 \underset{2}{1}$ yarls towarls the West, and a long easy slope of $24 \frac{1}{2}$ yarts towards the east. Apparent height of summit, above level of surrounding grount, from 15 to 20 feet. The dimensions of the stones above groum are: stone at sontheast corner, height 1 foot 2 inches, eircumference at base 6 feet. Stone at south-west corner, height 2 feet 3 inches, circomference 7 fert 5 inches. Stone at north-wost corner, height 2 feet 2 inches, circumference 7 feet 6 inches. Stone at north-east cornor, height 2 fect 3 inches, circumference 6 feet. A line drawn round the four stones, on the outside, at the base, measured 42 fect. Measured from centre to contre of each stone, the distanees in the order given above were $\delta$ fert 3 inches, 8 feet 6 inches, 9 feet 6 inches, and 8 feet 3 inches. The excavation was made in the irregular rectangular space inside the stomes. The soil on the top was an excellent dark loan to the depth of alrmit 20 inches. Below that, the soil was of a light yellow colom, singularly free from stones, and to the depth of 6 or 7 feet cotld he dug with caso by a spate, with little or no help, from a pick. (1) the assmuption that the monnd was artificial, the grave wats expected to be noar the lottom. By the time that a depth of 10 fect was reached, the writer legan to be of opinion that the mound was not artificial, but, in common with other similar, though not so regulaty formed monnds along the base of the monntains at the lower end of Cilenbeg, simply an isolated remmant of glacial detritus. From time to time small prekets of a hack sulstance, so close in texture as to resemble graphite, but really consolidated prat, were met with, and pieces of rotten-like rock. But exeept these, and tun occasional stone of from 6 to \& pounds weight, nothing was met with lut the light yellowish soil.
liy Friday, 31 st August, a depth of 17 feet was reached on the west sile. Before that I had writton to Dr Joseph Imlerson, then residing at Blairgowrie, concerning the progress made, and had rafuestul hina to come and sea the work, if at all ronvenient. From the very first, 1)r J. (. Rattray, F.S.A.sont, of Conal Bank, Blaimowrie, hat taken the most lively interest in the excavation. On the 30 th, while the writer wats being assisted by Dr Rattraty's son, the monotony of the work was broken
in upon hy coming upon some earth of a darker hue than the rest, which emitted a powerful and most disagrecable olour. 1)r Anderson was fortumately able to come up to Glenshee on the 31st. A short inspection of the excavation was enough to convince him that the mound was not artificial, but composed of glacial detritus ins situ. From the appearance of the mound, with the stomes on top, In Anderson said that he would have expected to have come upon evidence of its having heen used as a burial-place, hut at a depth of from 4 to 6 feet. As ouly a marrow vertical excavation had heen made at one end, Dr Rattray, to remove all doubt, was at the expense of having the whole space within the stones excavated to a depth of 6 feet, and the narrow section at the west end to a depth of 22 feet; but no evidence of the soil having bern previonsly disturbed, or of any foreign body having been deposited in it, was met with.

The Jimar's Loch is a small lochlet or tarn, in the hollow of a small plateau, some 30 feet above the level of the Beg, and quite cluse to it on the east side, alout I00 yards above the Old Spital. The narow bank hetween it and the Beg has been cut through at one time, near the northwest eml, and prartially drained the lochlet, so that there is water only at the south end. It is said to contain the usual traditional gold cup. A few yards from its northern end, in a slight hollow, there used to be three boukders lying in a line, the distance from tirst to third being 30 foet. This also had the reputation of being Diamid's grave. When the ground was trenched a growl many years ago, the boukders were removel to the side of the loch. One of the men engaged in the work dug down some distance, lut came upon nothing unusual. There is nothing in the shape or size of the boulders to indicate that they had been placed in their original position for any particular purpose, and precisely similar boulders are seattered over the base of the mountain in all directions. small stones have been sunk in the ground to mark the extremities of the so-called grave, lut being level with the ground are somewhat dilicult to find.

On the face of a small knoll, just behind the kirk of flenshee, is a rather thin upright stone, about 5 feet in height ly less than 2 in breadth, having two small semicircular pieces, an inch or two decp, cut out of
each side, about 3 feet from the ground, as if to kerp in position a rope or chain tied rouml the stone. Ir Anderson humoronsly suggested that this might be the stone to which Finn's famous homed Bran had been tied. An excavation marle at the foot of this stone, on the arst side, to the depth of over 3 feet, revealed nothing but that the knoll wats composed of pure sand and gravel.

Alrout 2! miles down the glen from the kirk is the farm of Brongltdearg, at which there are two upright stones quite close to the farmsteading. They are about 10 feet apart, the one 5 feet 6 inches in height by 8 feet 2 inches in circumference, the other 5 feet in height by 8 feet 6 inches in circumference. $U_{n}$ one of them is a semicircular noteh, like that on the stone behind the kirk, at about the same distance from the ground.

It will be seen that no "finds" were made in Glenshee. The writer, however, had the satisfaction of learming that If Joseph Anderson agreed with him in thinking that the form of the monnd at Tomb, together with the four upright stones placed on the top ly human ageney, warranted the supposition that something of antiquarian interest was likely to be found in it. To have settled that the stones on the top are the sole objeets of interest from an antiguarian point of view, is some corsolation for labour expendal and hopes disappointed.

In addition to I)r J. C. Rattray, the writer wishes to arknowledge the co-opreation and interest taken in the work by the IEw. T. Crawford, I. 1), the Manse, (ilenshee, and Mr C. M'Kיnzio of Borland, Blackwator.

## a bronze medallion portrait of oliver cromweld, similar TO THE bust REPRESENTED ON THE "DUNBAR MEDAL" STRUCK by thomas simon by order of tile parlianient. By William fraser, f.r.C.S. Deblin, Hon. Mem, s.A. Scot.

An oval bronze plaque or medallion of large size, measuring upwards of 6 inches in length hy 4 inches broad, bearing the portrait of the Great l'rotector of the Commonwealth, which came into my possession some years since, represonted his features as more youthful than they are slown upon his ortinary coins in gold and silver. The uncovered head and armoured hust are in high relief, and a quantity of flowing locks of hair deseend over his shouklers. On examining recently some medals and coins of Cromwell in my cabinet I recognised a striking resemblance between this medallion and the beautiful and much prized medal struck by direction of the Honse of Commons to commemorate that "greate mercie" the Battle of Dumbar, with its inseription of the historic word of the day, "the Lord of llosts,"-laving on its reverse a representation of the House of Parliament and its Speaker in full session, hy whose supreme anthority the medal was preparel.

This Dunlar Merlal possesses additional importance in the medallie listory of England, as it is the first military medal ever issued for artive service in the fich, alike to offiecre and men of all ranks serving in battle, similur to the usmal practice adopted at the present day, but the example was not followerl suhseguently until the well-known Waterloo Medal sucereded to that distinction.

The following order for its preparation is taken from the journals of the Ilouse of Commons, vol. vi. page 465 :-
"1he Martis, I0th Septemhris 1650 .-Ovdered that it he refertel to the Committee of the Army to consiler what medals may be prepared, foth for officers and soldiers, that were in the Service in Scotland, and set the proportions and values of them and their number, and to present the "stimate of them to the Honse." From a sulsequently dated letter of the

Lieutenant-General to the Committee of the Army on the the of Fehruary 1650 (old style), written in consequence of the action taken to carry ont this intention of issuing a medal, it appens that the celehnated melallist Thomas Simon, or Simmons as the name is sometimes writtun, was sent ly special orler from London to Elinlurgh to obtain is suitalle authentic portrait of Cromwell for the medal ahout to be made. A skilful artist, in preparing such a portrait, woult, we may believe, set ahout its execution in the usual manner, by preparing, in the first place, a working molsh or design in wax of greater size than the sted die lee intemied to engrave. This model ought to auree in all important and essential particulars with the working die, such as the distinctive and characteristic features of the person intempel to be commemorated, his orlinary attire, and the pesture selectel hy the artist for his motel. The Medallion now shown dees arree in all particulars with the fignre of Cromwell on the Iunlar Metal.

It is, however, a cast in bronze, and, so far as 1 cm ascertain, unifue; if obtained from the artist's original wax model, it must have been copien by the peculiar art process known and practised at the time, and sometimes employed in our own day with streess, termed "cire perdu," that is, the suft waxen design was embedted in a mass of suitable modellingclay to retain the impression, which during a subsequent process of baking lecame heated, and the wax melted out, after which a metal casting could be obtained, and the resulting bronze medallion would preserve a permanent record of the seulptor's original workmanship, in wax.

Cromwell's portrait, both on the Dunhar Medal and my Modallion, agree in being much raisel. Such high relief is charateristic of Simon's nsual manner of design ; and in further contirmation of its being the handiwork of this special individual, we find no tradition or retord existing of any other person whatever being allowed the privilage of engraving or modelling the portratit of the l'otector for either the dies of medals or coins. He selfom gave permission even to paintors to pertray him ; hence genuine anthentic contemporaneons portraits in oil are rarely met. Ill known likenesses of Whiver Cromwell, so far as 1 know, and certainly all his portrats on medals and coins, can le divided
into two distinct classes, according as they belong to two different periods of his remarkable career. The Dunbar portrait and this Medallion were taken when he was comparatively a young man. Born in the year 1599 he was fifty years of age when he fought his "erowning victory." He appears in full vigour of life, a leater of men, every feature denoting strong will and stem resoluteness of character. He is recognised by his portrait to he as history tells 1 s , and long eurling locks of hair in ample profusion fall down upon his armour over his neck and shoulders. When Cromwell subsequently placed his image and superseription on the coinage of (ireat Britain as Lord Protector of the Commonwealth (on these also Simon engravel his likeness), he is shown with rounded and more developed features, consideralily aged in his aprearance, and his alnudant and flowing hair becomes shortenel, still covering his neck to some extent, hat not his shoulders. Whether he is repesented in earlice life on the Dunlar Medal, or in more advaneing years upon the gold and silver coins of the Commonwealth, we notice he is invariably purtrayed as having a quantity of long curling hair, altogether different from the prevalent popular ideas entertained about Puritans and Foundheads, who, to distingnish them from the Cavalier followers of Charles, are usually supposed to be cropped as close as a French sans-culotte during the times of the Revolution in France one hundrell years ago.

The histury of the Bronze Plaque ean he traced without difticulty, and affords a reasonable voucher for its antecedent reliable character. It came into my possession direct from the Whaley family, one of whom during the latter part of last century was a well-known figure in Ibublin society, listimulished as "Buck Whaley," a member of the last Irish larliament, and related to the Earl of Clare, who was married to his sister Anne, cldest daughter of Richard Chapel Whaley of Whaley Abbey, Wieklow.

It is, however, through their relationship with the well-known Colonel Whalley, the near relative, consin, and vigorous supporter of Oliver Cromwell, subsequently one of the judges at the trial of Charles the First, and therefore called in history the "Regicide," that the Whaley family obtain their best claims to distinetion.

Through the kindness of my friend George Dames Bartchaell, Esq.,

LL.B., I obtained the following memorandar relating to the Whalley and Whaley families.

Lichard Whalley of Kirkston Hall, M.P. for Nottinghamshire, married Frances, third danghter of Sir Henry Cromwell of Hinchinbrooke, grandfather of Oliver Cromwell the I'rotector, and had four sons and three daughters.

The second son, Edward Whalley the Regicide, was actively mgaget in the Commonwealth wars as Colonel, Hed to America, and died there lefore 1679 .

The third son was IEnry Whatley, who wats Accountimetremeral in Ireland, and Ml.'. for Athemry from 1661 to 1665. He left a son, John Whalley of Athenry, Co. Galway, who left five danchters, one of whom, the youngest, Susama, married Richarl Whaley or Whalley, M.P. for Athemy from 1692 till his death in 1725 . 11 was the son of Richard Whaley, a Comet of Ilorse, who hal a grant of land in the counties of Armagh and of Kilkemy unter tha . Let of Sottlement in 1666 . Of his parentage there is no record, nor whether he was a comection of the Rugicide's family.

Richard Whaley ant Susama Whabley had a son, Richard, who was father of Thomas Whaley-Bnek Whaley, abso known as "Jerusalem" Whaley, from a successful bet he gained, by walking to Jerusalem ant back within a year, and playing a game of hall against its walls. His departure on this memorable expedition is commemorated in a bublin pablitation of the periol, in dungrel rhymes. This work is named " 1 noth sides of the Cinter." Mr Burtehaell further adds: "Jerusalem Whaky was thus, through his grandmother susmma Whalley, desemben from the Hrother of the Resticile, he and his brother being first cousins of oliver Cromwell the Protector. It is curious that the two families of Whalley and Whale $y$ should have become comectal hy marriage. There is nothing to show that they were originally of the same stoek, hat they prohahly were."

So far for the pedigree. The Whakeys hat an estate in the County Wieklow tormed Whaley Ahow, and a fine Ihblin mansion in Stephens (ireen, still reeognisable by the figure of a reeumbent lime carvel in stome over the portico. When the last of the family died, this house wats sold,
with its family pictures and fumiture, and the Cromwell Medallion then came into my hands. The house itself was purchased for the Catholic University of Ireland, and still remains in their possession.

$$
\text { Monday, } 11 \text { the Felmuary } 1895 .
$$

## GILBERT GOUDIE in the Chair.

A Ballot having been taken, the following Gentlemen were duly elected Fellows:-

Thomas Martin Cappon, Architect, Dundee,
Rev. J. W. Jackson, M.A., F.C. Minister, Cromdale.
(aptain James F. Macpherson, United Service Clul, Elimburgh.
John Horne Stevexson, M.A., Alyorate, 10 Allyn Place.
Rev. Georie Whllams, Mimister of Norrieston Free Church, Thornhill, Stirling.

The following Donations to the Musemm and Library were laid on the table, and thanks voted to the Donors :-
(1) By the School of Anthropology, laris.

Five Spindle Whorls of terra-entta, slazed and painted with foral patterns, from the Pyrenees of the French side, where they are still made and used.
(2) By Rev. Ir Grigor, Pitsligo.

Two Buttor-W"cights of stome, from the parish of Keith, Aberdeenshire. The larger of these is a natural water-rounded pebble of 'partzite, $3 \underset{4}{1}$ inches in diameter. One ond has heen abraded, so that it would he eertanly taken for a prehistorie hammer-stone used at the one end only. This abrasion, Dr (irigor states, was done by knocking it with another pehble in order to reduce it to the proner weight. Its weight
is that of the ohd Aherdeenshire "lang pund," or 24 oz . aroirdupuis, equal to a pound and a half imperial.

The other stone Weight is a roughly angular pebhle of mica schist, with a flat under-side. It has also been slightly reducel by knocking it with another stune to hring it to the proper weight of half a "lang pund," or 12 ounces imperial. In (irigor knows that both were used for weighing buttor till quite recently.

Axe of indurated micaceons claystone, 11 ? inches in length by 3 ? inches in breadth across the cutting face, slightly oval in the cross section, and tapering to a rather slender eonical butt, from Pitslign, Aberteenshire.

Small Axe of indurated micacenus sandstune, $3_{4}^{\frac{3}{4}}$ inches in length by 2 inehes in breatth across the cutting face, oval in the cross section, anl tapering to a roughly conical butt, from Pitslign, Aberdeenshire.

Sicket-hitone of quartzite, 6 inches diameter.
Stone Lid, nearly rectangular, with knob in the middle; and a small Whorl of micaceons stone; both from Pitsligo.

Iron Crawl, from Rosehearty; and Wool Comb of iron, with wooden handle, from Pitaligo, therdeenshire.

Cross, mate of rowan-tree twigs, lumel with red thread, ats a charm against witcheraft.

A model sat of the old Horse ILamess used in Aberdeenshire.
Herl's Club, as useel in the district, markel with a cabalistic score, and a copy of the traditional verses giving directions how to make the seore, from Pitslign, . Wherdeenshire.
(3) By Mr Chbistie, Teacher, Dollar, through Rubert Robertson, F.S.A. sicot.

Cinerary Urn, $15 \frac{1}{3}$ inches in height hy 10.3 inches diameter acruss the month, with a heavy overhanging rim, oramented by oblipne rows of circular impressions, as if done with the end of a stick alont the thickness of a pencil. It was found at the Cominghar, Tillicoultry, on the site of a stune circle, anl alongside of the site of one of the stones of the circle. [See the sulsequent Communication hy Rohert Robertson, F.S.A. Scot.]
(4) By Abolpie Megret, the Author.

Etude de Mensuration sur l'Homme Prehistorique. 8vo, Nice, 1894, 16 Pp .
(5) By Eioluard Piette, the Author.

L'Epoque Elurneenne et les Races Humaines de la periode glyptique. 8vo, Saint Quentin, $1894,27 \mathrm{pp}$.
(6) liy John Beddoe, M.I., LL.D., the Author:

The Anthropological History of Europe, being the lhind Lectures for 1891. Reprint from the siouttish Revien.
(7) By the Master of the Rolls.

Icelandie Sagas, Vols. 1II. and IV. Translations of the Orkneyinga Saga, and IIacon's Saga, ly Sir George Wehre Dasent, D.C.L., de. (hulls Series.)
(8) liy 1B. 1I. Cunnington, F.S.l. Seot.

Notes on the Diseovery of Romano-Pritish Kilns, de., at Pewsey. Reprint from the Proceeninys of the I'iltshire Archaoknical siscety. svo, 8 111., 1894.
(9) 13y the Wibtshire Areheologheal and Natural Mistury Suciety.

Catalugue of the Lihrary of the Wiltshire Archreological and Natural 1history Society's Muserm at hevizes.
(10) By Franels J. Child, the Editor, through W. Macmafn, F.S.A. Scot.

The Euglish and Scottish Popular Pallads. Part IX.
(11) By Mrs C. M. Lattile, the Author.

History of the Clan Macfarlane. I'rivately pinted. Svo, Tottenville, Staten lsland, New York.

There were also Exhibited :-
(1) By Major R. G. Wardlaw Ramsay of Tillicoultry.

Urn of Foul-vesscl type, with pierced cars below the rim, and fincly ornamented, from a cist at the Cuninghar, near Tillicoultry Ifouse. [See the sulserutent Communication by Mr Robertson and Mr Black.]
(2) By the Managers of the Dollar Institution, through Rew. Rubelt Padl, F.S.1. Scot.
Urn of Fool-vessel type, $4 \frac{1}{2}$ inches in height ly 5 inches diameter at the mouth, narrowing to 3 inches diameter at the buttom, the whole exterior sufface covered with rows of impressed ornamentation, as of a towl notehed like the teeth of a comb, less than a quarter of an inch in length, and laving six or seven notches. These rows are arranged in zigzag lines vertically from top to bottom, and there are two rows of irregularly impressed markings of the same kind round the interior of the lip. The Urn was found at Ifarvieston about the year 1s04, in making the west approach to the house. It was in a cist, and with it was found a small oval thint knifi, 1! inches in length ly 1 inch in hrealth, furmed of a flake, with the whitish chalk surface still covering one silde, the other showing the lulb of prenssion, and the edges workel sharp all round from the inner side of the thake only.
(3) By Thomas Wallace, F.S.A. Sont, Inverness.
(Curious stone Implement (?) of mica schist, 11 iuches in length, and formed in shape of a dagger, from North Uist.

The following Commmications were read : -

## I.

THE FORTS OF SELKIIK, THE GALA WATER, THE SOUTHIRN SLOPES OF TIIE LAMMERMOORS, AND THE NOLTH OF HONBURGH. By D. CHRISTISON, M.D.

The forts that form the sulject of the following paper are situated in the enunty of Selkirk, in the parts of Midlothian, Berwick, and Roxhurgh drained ly the northern tributaries of the Tweed, and in the arljacent portions of the latter county on the south of that river. The district-well defined geogriphically-comprises the valleys of the Ettrick and Yarow, the sonthern and eastern slopes of the Lammermoors, from the west of the range to the Tweed, the adjacent banks of that river and the low ground to the south of it, but withont trespassing on Teviotdale proper ; and it will be convmient to consider this extensive district in its geographical rather than in its county subdivisions.

As in former papers, I must here claim the indulgence of other latourers in the same field for the insufficiency of my plans and deserip)tions, my object being to give a gemeral view of the sulject, lout to leave to others the task of investigating with minute detail and strict aceuracy such of the remains as may seem to the worthy of greater attention.

Unless when otherwise stated, the ground-plans are on the scake of 120 fect to the inch, adopted in my previous papers, but the sections are generally on double that seale. They are all oriented as if the north were at the head of the prage. The measurements are in feet. The ground-plans are generally enlargel from those of the Ordnance shects, on the 25 inch scale, hut with corrections of olvions inacenracies and numerons additions in the details. Trenches are usually dotted, to distinguish them realily from ramparts. Sectional measurements were taken by tape and moasuring-roul, the perpenticular heights being estimates of the highest parts of the momuds now remaining.

As the forts rarely have a special designation, for convenience I have given them the name of the nearest farm, burn, de.

The heights above the sea and the loeal elevations are taken from the nearest contour-lines of the $6 . M \mathrm{I}$, and are therefore only approximate, unless when the actual height happens to lre given on the O.M.

The measurements, except for the smaller dutails, are generally taken from the O.M., but have sometimes been checked by myself, or from information furnished by fripmds.

Furts, the existence of which, now or formendy, seems tolerably well ascretained, are numbered; but very dunbtful examples are left unnumburat.

## (A.) Ettrick and Yarrow.

The upper and midtle stretches of these valleys, which have so so strongly excited the poctival inagination, seem to have had no attraction for the fort-builders, insomuch that, if we include the neighbouring parts of lhumfries ant Pecbles, there is here a slace, nearly 20 miles square, quite devoid of forts, and it is only as we approach the junction of the Ettrick and Yarmow that they begin to appear.

1. Huflor Burn, $4 \frac{1}{2}$ miles S.W. of helkirk, and 3 above the junction of the Ettrick and Varrow, is the furthest up the valley of the Ettrick. It is 1 mile cast of Ettrick Bridgr, on the Hutler Burn, abont 700 fect above the saa, and is marked on the O.21. as an oval of alout 320 by 250 fect over all, hut faintly and imperfectly, as if very ill preserved; and I am informed by Mr Craig brown, author of The Mistory of sllitiskliter, that it is now seareely reeognisable. As far as can be findgel from the Ordnance Plan, it has consisted of a single broad rampart and trench.

C'astl" Hill, Makirrowl.-A quarter of a mile E. of the Ettrick, aml 1? above its junction with the Yarrow, a "camp" is marked on the O.X1, ahout a quarter of a mile N. of ()akwood Tower, on Castle llill, about 600 feet ahove the seat, is an irregular rectangle of about 300 by 250 feet, hut both Mr Craig Brown and Mr James Wilson, of Cialashiels, have sondht in vain for any trace of it on the casily identilied spot, and they to not think there "vor was a fort on the site.
2. Hurtuoutmyres.-Two and a half miles S.W. of Selkirk, about 600 feet alove the sea, a reetangular work, one side on the edge, the other on a gentle westward slope of a low ridge. It measures 2 I 0 by 180 feet on the O.M. Three sides are merely traceable in a ploughed field, but the E. side has eseaped, and lies on the edge of the ridge so as to command the eastward as well as the westward slope. It consists of a double mound, with a trench 4 to 5 feet deep between, The outer mound is prolonged both north and south for several humdrel yards each way, its northern arm turning at a right angle and ruming several hundred yards further, till it nearly strikes a little burn, where it ends in a little square mound-enclosure. The southern arm is gradually lost. Possilly these prolongations originally formed part of a parallelogram enclosing the gentle slopes of a slight marshy hollow to the east of the small rectangle. Of course this work, from its form, has not escaperl being called Roman, but it is surely quite possible that, like other works of the kind, it may be an enclosure of earlier or later date, perlaps not even a fortification at all. (on the O.M. it is shown as if perfect, and much more substantial than now. As its sides also are represented slightly eurved and the angles much rounded, the title of the fort to be called rectilinear is somewhat donltful. A large eircular enclosure on a gentle slope about $\underset{2}{2}$ mile off, consisting of a single mound of slight proportions, of which threc-fourths remain, and without a trench, has no resemblance to a fort.
3. Mote, Horrlen, Solkirl-(fig. 1)-a mile and a quarter S.W. of Selkirk, 600 yards E.S.E. of Howden farm-house, alont 650 feet above the sea, known in the locality as "the Mote." It is apparently earved out of a natural mound, conneeted by a slightly depressed neek with equally high level ground to the E., but inereasing in height on the flanks westward ly the fall in the ground below, till at the N.W. angle it is about 40 feet high. At the $\mathrm{W}^{*}$. end the height is diminished ly a tongue of land $(\mathrm{A})$ which projects for ahout 50 yards into the field. A trench, with a rampart in front, covers the west end of the main work, and is ent through this projection. The trench and rampart extend ahout half way round the S. foot of the mote, but northwards the rampart disappears, and the trench ( 13 ) is continuous with a terrace, which gnes
partially round the north face, about half way down the scarp. The interior is nearly level, and measures ahout 220 by 150 feet from crest to crest of a parapet barely tracealie on the flanks, but which becomes a substantial mound at the ends. The scarp is steep, and on the S. side is prolonged lyy a less steep but deep descent to a burn. A broal unfortificl eminence, rising 100 feet higher than the mote to the N., is called "The Moat Ilill" on the O.M.

There is no other mote but this on the O.M. in the whole rearion


Fig. 1. The Mote, Huwden, Selkirk.
overtaken in this paper, and I do not think that more than one of the "forts" has any marked resemblance to a mote.

The mote at Howien is opposite the junction of the Ettrick and Yarrow, and with the three preceding works, two of which are duestionable forts, the list of primitive fortilications in the Ettrick valley hefore its jumetion with that of the Yarrow appears to be complete. In the latter valley there is but the following one.
4. Itemgimyshan:-Alout 3 miles above the junction, 200 yards north
of the Yarrow, and 550 feet above the sea, represented on the O.M. as a faint cirele 100 feet in diameter. I have no information alrout it.

Below the junction of the Yarrow with the Ettrick there are four forts in the Ettrick valley, all on its west side.
5. Phitiphangh.-On a slight eminence, 1000 yavls N. by E. of the junction, 200 feet above it, and 600 abrove the sea. On the O.M. a single oval ring 330 by 220 feet is marked. I coull not trace this all round, hut on the south there are three concentrie, sulstantial low momuts, oceupying a width of 80 feet. They are grassy, but feel stony under fort.
6. Long Phitip, Burn No. 1.-One mile W.N.W. of the junction of the hurn with the Ettrick, opposite Selkirk, on a conspienous green eminence 750 feet above the sea. A deep ahrupt little ravine, the Corbic Lion, winds romd on the N. and E., but the fort is ratired a little from the edge. It is diffieult to make anything of the remains. The O.M. indicates a squarish oval of 200 by 170 feet, much quarrim.
7. Lony Phitip Burn No. 2.-A quarter of a mile N.W. of the last, further up the burn, on the edge of a steep bank, desepncting to it on the S.W. side, about 750 feet above the sea. I could make ont nothing detinite. The O.M. gives two nearly complete oval ramparts, alont 190 by 170 feet over all, hot the plough has since entirely destroyed them.
8. Linylee. - Not on the O.M., hat discovered by Mr James Wilson, Galashiels. It is about 600 feet ahove the sea, and is of the semicirenlar type, the unfortified base resting on the edge of a very steep, almost inaceessible deseent of upwards of 100 feet on the N.E. side of Linglee Burn, half a mile above its mouth in the Ettrick, a little lolow Sclkirk. Only the northern third of the semieirele and a fragment of the southern end, elose to the edge of the ravine, remain. The former eonsists of a scarp 6 feet high, leseending on a trench 9 feet wide at the bottom, with a countersearp 5 feet high, and an onter slope 6 to 8 feet high, to a fieh. Further round, towards the edtge, only the two searls remain, 12 and $s$ fret high respectively, and the trench beenmes a terace.

The next, although not strictly in the Ettrick valley, is so near it, and is so little comected with any other division, that it may be most suitably taken here.
9. Bell Hill (fig. 2).-One mile ant a half cant of Selkirk, 900 feet above the sea, in broken irregular ground, on im isolated eminence, completely and closely commanded, however, hy a height which rises steply on the N.W. The naraly level summit, measuring about 230 hy 100 feet, is straight on the sides, and has slightly rounded N.E. and S.W.


Fig. 2. Bell Hill, Solkiak.
ends. The imer defence consists of a parapet 2 ar 3 feet high romet the efter of the summit. To the S.k. the sarp from this is from 20 to 30 feet high, and has a narrow tertace (A) about half way down, which thes not exteme to the N. enct of this fares, amd expamts at the other end to a large level spaee ( D ) at the s.W. end of the fort. The opposite or N.W. face hats a sterp scarp, is feet high, falling on a marrow
vol. xxis.
parapeted platform (C) at the base of the scarp, which defends a trench, 5 feet rlecp and 7 hroal at the bottom, heyond which rises the strep face of the hill which commands the fort. The S.W. and N.E. ends are each defended by three ramparts. At the s.W. end the scarp from the interior is alout \& feet high, and falls on the wide expansion (B) of the south-eastern terrace abrady mentionel ; this is defended by the middle rampart, which also closes it on the north ly turning in and joining the imner rampart. At the angle of junction there is a smatl oval foumbation enclosure. The outer rampart at this s.W. end is close in fromt of the midule one, aml joins the outsite of the trench on the north. At the N.E. end the two outer ramparts curve round northwarl to join, the one the ontside, the other the inside of the trench of the N.W. face, lait run straight south-eastward, so as to leave a widening space (I) hetween them and the incurving inner rampart, this space being unenclosed to the S.E. There are two entrances near the S.E. and S.W. angles : both may be original, but no characteristic features remain in either of them.
(B.) The Tweed, from Walkerburn to Gala Water.

The valley of the Tweed is stulled with many forts in Peeblesshire, lout on approaching Selkirksine they gradually cease, and for a winding course of five miles the valley is entirely destitute of them. In the succeding course of six miles, to the junction of the Gala, are the following four:-
10. C'uddomlere.-Three quarters of a mile S.W. of Clovenfords, 638 fert aloove the sea, on the edge of a plateau, with a steep slope, facing N.W. to a little dry ravine. It has been of the semicircular type, the unfortified lase resting on the edge of the ravine, hat the plough has lestroyed all hut two fragments at cach end, where the ramparts strike the edge of the slope. At the S.W. end there are three ramparts, with two intervening trenches, the former not exceeding 5 feet in height, and with a gool deal of stone visille in sections, the latter narrow and flat-hottomed. The frayments at the opposite ent are not so large, the imner one, if it exists at all, having more the chatacter of a wall. The interior length is 558 foet (Mr James Wilson). (motsile, to the N.E.,
the gromed for about 100 yards along the ridge is much cut up with irregular low mounds and ridges.

Yair-_ Nearly a mile W.N.W. of Yair House, on the slope of Crais Hill, overlooking Yair Bum, 900 feet above the sea, 300 above the burn. The site is a wak one, being a shelf on the hillside (section, fig. 3), easily approached on the tlanks and commanded in the rear by the slope, which falls directly on it, with a steep descent into it 8 fret high. The wall has run along the top of this descent and downwarts on the tlanks in tolerably straight lines, but the front is curvel, and mensures from crest to crest about 150 fect cach way. The fort, if it


Fig. 3. Transverse Section of Yair Fort.
he one, has apparently Teen of stone, and the interior is rongh with irrectular mounds.
11. Sunderleme Hefl.-A mile and a quarter W. ly S. of the junction of the Tweed and Ettrick, on the edge of the final desernt to the Tweed of Crils $11 i l l, 250$ fret alove the river, and 625 above the sea. The 0.1 M . makes it an oval of 37.5 ly 275 feet, with only abunt a fourth part of the single rampart and trencle remaining. I could only find unerrtain traces, the plongh having almost entirely cffaced it.
12. Rink: IVill. (tisg. 4).-The font is not quite on the summit (6i3s feet) of the that-topped hill, about 250 feet above the Tweed, half a milo W.N.W. of its, junction with the Ettriek. To ther. and E. the deserent is long and steep, but from other directions the apprach is easy. The form is a hoad oval, measuring 340 ly 300 feet over all, the interior being about 230 by 190 . The defences consist of an outer rampart, apparently of earth and stones, 3 to 6 feet wide on its Hat th], which on the S.l. is prolonged lyy ateep natural slope to a hoight of 20 feet, but this height diminishes as the rampart circles romol, till it is only 2 feet above the exterior on the north-west, where the ground rises frome
the fort. In rear of this rampart is a trench, varying in depth beneath it from 3 feet on the suth-east to 7 on the north-west. Within the trench is the main defence, which appears to have been another mound of earth and stone, with a stone wall on the top, but the mass of stony dehris makes it impossible to determine the structure without excavation. In one place I found what appeared to be remains of the coter face of the wall, ten contignous stones in situ, oceupying a frontage of 24 feet.


Fig. 4. The Rink Hill.
If this be really the outer face, the wall must have been set $\underline{2}$ or 3 feet back from the elge of the scarp, thus leaving a natrow herm. I could not find the inner face, but I jutwed the thickness of the wall to have been albut 9 feet. The top of the mount on which the wall apmears to have stood is several feet above the tup of the outer rampart, where the ground outside falls, but is several feet below it where the outside rises. A gnautity of debris, 150 fect long in rear of the imner wall on the north
side, may represunt an additional wall where the natural strengh was least. The single entrance, which is to the east, is much destroyed. It has apparently been 9 feet wide, and is strengthened by a wall running on either side olliquely up the scarp from the bottom of the trench at the midlo of the entrance to join the main wall, thas forming a little elosed work on each side of the imer part of the entrance. There are also remains of ontworks here, but so overgrown with briers that I could not examine them. A low mommel in the phongleal land to the west shows the position of the semilumar anex marked on the 0.1$]$.

## (C.) Ciala Water.

The forts in the valley of the Gala have been pretty munerons, but the errater number have either totally disalpeared or are in a sal state of decay, and I am not aequainterl with any other distriet in Ficotland where the destruction of forts in onr own lay has been so complete as here.
13. Heriot, the highest up the valley, being 15 miles above the mouth of the Gala, is 350 yarls N.E. of Heriot Station, and 1000 feet above the sea. The (l.M. gives it as a restlar, well-watket oval of 350 hy 300 freet, with a double ring, and as if well preserved. It is now almost entirely plonghel away, hat small portions remaining at the two ends show a sulstantial mound, whose crest is 33 feet from the outer margin of the trench in front (Mr James Wilson).
14. ('orsehupe.-On the top of a ridge, 600 yards S . E . of 11 miont Water, opposite Borthwiek llall, on the one sild, 450 north of Corselnpe on the other, 400 feet above the streams, and 1300 alrove the sea. The aphrowh is easy along the rilge at the ends, fint the gromed fills stepply on the N.W. and s.Es flanks. The fort has been well describul ant phaned by Mr William (billoway (Prou. S. A. Sout., xiv. 25), and 1 shall merely supplement his eround-plan with eross sections (figg i.) taken in TN92 by Mr F. R. Coles aml myself. Mr Galloway fomme the dimensions to be 6.56 by 474 feet over all, amd 410 ly $2 \mathrm{~N} t$ from crest to crest of the imner line of the four concentric oxal entrenchments. The width covered by the antremehments variel from 85 foet to 106 ,
with an exceptional expansion to 130 for the special defence of the east entrance.

The sections (fig. 5) show that the defences are of an unusual kind. Their relief is trifling, but the shape in some places is so well defined that it is difficult to believe they have undergone any great change in the course of time. In the section on the N.W., going from the interior, there is tirst a trifling parapet not a foot high, with a gentle scarp, 4 feet high, falling on a 16 feet wide tenace, with a trifling parapet at its outer edge; then a second searp, leating to a second thrrace 3 feet helow the first, 14 feet wide, with a little trench or drain in its rear, and a trilling barapet in front ; then a third scarp and terrace, with aphurtenances exactly like the second, and 4 feet below it ; lastly, a gentle scarp 3 feet high, falling on a fourth terrace, which may he a cart-track.


Fig 5. Corsehope-cross section.
The s.E. section shows three coneantric ramparts, with intervening trenches, of the ordinary type, hut of very low relief, and a fonrth or onter line of defence, having a torrace with ditch in rear, and slight parapet and searp in front, like those in the N.W. section. Northwards, however, the mildle trench also leeomes a terrace or hanurette to where it reaches the entmoe. For an aparent earthwork, the fort has a very low reljef, and seems to be constrncted on the terraced rather than the trenched system, athough the slopes are unnsually gentle for a terraced fort.
15. Chapel Mill.-On the opposite side of Corschope, 700 yards due
E. of the last, and perlaqs a couple of hundred feet lower, on : havedtopped ridge. Miss Russell (Nofos on the Catrail, 1852) says of this fort that "it was stripped of its characteristic ring of stones by the tonant of the farm ten or tifteen years ago." Few stones remain ; hat a single "ring," rising a foot ahove the interior, and a true trench \& feet lefow it and 3 below the exterior, are very distinct on the $\mathbb{W}$. side of an intersecting mulern wall, which cuts off about one-thind of the fort "astward, where the plough has fillet up, the trench, keaving only the scarp. The trench is erossed hy a ramp on the S., atml to the $\mathbb{W}$. contains three contigunus shallow "edls" in a row, earli about 10 fret long and six wide, with a fourth a little N. of the entrance, which is towards the E. I have only mot with two other scottish forts with cellular spaces in the trench.
16. Brotherstom.-(In a southern ridge of Brotherston 1Hill (1380), betweon Brothershiel Burn and Armet Water, three forts are marked on the 0.3I. The furthest N., 200 yards S . of Brotherston Farm, 1000 yards above tho junction of the streams, about 1100 foet abowe the sea, is representel as a single circular ring 150 feet in diameter. I have no information alout it.
17. Sither Brotlurston (Nis. 1), 700 yards alowe the junction, and probally 1100 fort alowe the sea, is mpresented as a double circular ring, the imer cirele about 2.50 feet in diamotw, complete, the outer one, 370 feet in diameter, remaining only on the N., and ckswhere drawn as a dutted hine, as if meroly traceahle. Mr James Wilson foum mothing but small portions of the inmer one at three proints.

1s. Nither lirotherstom (No. 2), nearly 300 yatrds N. of the junction, 950 fret above the soa, represented as a rewthar double oral ring, complete, the onter one abont 200 by 230 foet, the imner one 150 lyy 130. Jrohably it is entirely gone, as Mr Wilson passel over the gromel withont soeing anything of $i$.
19. Browhlomse-Half a mile S.S.F. of the farm of Halltree, about as far N.N.IV. of the junction of brockhonse Burn with the (Gala, 200 yands W. of the latter, fully 100 fropt alove it, and 900 above the sea, on a dome-shaped eminence in a plantation. The U.MI, shows it as a
well-market double oval ring, of about 450 by 300 feet, which agrees fairly with Mr James Wilson's interior measurements of 409 ly 256 feet. He found it, however, "terribly ruined by quarrying." There were some remains of a strong imer wall and deep ditch, hat no definite traces of the outer wall. The groum was ploughel.
20. Tondllelourt.-A mile and a half above its junction with the (tala, $\frac{3}{4}$ of a mile N.E. of Hopringle farm, about 1050 feet above the sea, on Midile Hill, 350 yards ahove the angle of the junction of Tohlle Burn and Miblle Burn. The O.M. gives a small well-marked double circle, about Iso feet diameter over all, but Mr James Wilson ascertained from the farmer that it is now only traceable in a ploughed fiehl.

21 . Siminytom.-Less than half a mile W. of Symington Honse, under ${ }_{4}$ W. of the Gala, about 300 feet above it, and 1100 above the sea. Represented on the O.MI. by a single oval dotted line, as if the remains were barely discernble, measming about 220 by 120 feet. 1 have no information about it.
22. North Wutherstom,-Walf a mile N.W. of Watherston farm, from which there is aceess by a farm road, about as far W. of the Gala, about 450 feet above it, and 1050 above the sea. The site, though clevated, is a tolerably level one, not marked ont by natural features. On the O.N. a regular oval of two dotted lines is represented, as if the fort were morely tracealle, masuring 400 by 350 feet over all, and 250 ly 200 in the inner oral. Neither Mr James Wilson nor I could find the slightest trace of it,
23. Sinth IUatherston (tig. 6).-Niarly 2 miles W.N.W. of Stow, fully 1000 fect alove the sea and 400 above Gala Watur, where it tlows past Watherston farm-house half a mile to the E . The northerly side of the fort is near the extge of a steep little ravine, but the other sides have no matural strength, the site being on the gentle eastward slope of a hill. On the O.N1, the fort is called Roman, and is represented as a regular rectangle with two ramparts, and an entrance in the mitule of the S. front. But in reality only the S.W. side (A) and part of the S.E. and N.W. are straight, the S.W. angle being a right angle, the N.W. one obtuse, and nearly the whole of the N. and E. face is
churd by a wide curve (B), near the s. end of which is the entrance. The defences consist of an outer rampart, generally flat-topped, with a flat-hottomed trench in its rear, the searp of which had no doubt been erownel by an inner wall, of which only the faintost traces remain. The outer rampart appears to be earthen, shored up from the trench in some places ly stone. In consequence of the rise of the hill westward, this rampart is only $2 \frac{1}{2}$ feet above the exterior in this direction, but where it runs down the slope on the S. front it is 5 feet above the


Fig. 6. Soutlı Watherston.
exterior: On both these faces it is 5 feet alnose the trench. The interior, which is full of low irregular mounds, does not rise more than $2!$ feet above the trench. It measures only ahout 160 feet in diameter.
24. C'raigmen, stor:-Three-quarters of a mile N.N.W. of stow church, 850 feet above the sea, and 250 above the (aila, which flows a quarter of a mile to the $s$. The site, on a pleasant plateau on the gentle deseent of a hill, is conspicuous from afar, owing to the contrast of its vivid green with the duller colour of the grass field, above which it
is raisel from 5 or 6 to 10 or 12 feet all round. The fort is combletely demolished, but seemed to me to have been surround by two ramparts, widely apart, and the O.SI. imlicates this by two oval concentric dotted lines, about 400 by 350 feet over all, and upwarls of 100 feet apart. Mr James Wilson, who examined the spot carefully, is of opinion that there were three ramparts, and lis measurements give 360 by 340 feet over all, with an interior of 200 ly 180 feet. The interior is interseeted by numerons low mounds, enclosing irregular spaces of considerable size.
25. Stone--1Half a mile N.E. of the villase, on a nearly level site, 900 feet above thre sea, 300 above the Gala. I could not find the slightest trace of it in the field, then under tumijs. It is represented on the O.M. by two concentric dotted circles, about 300 and 150 feet in diameter respectively.
26. Brork or Toncer, Borr- 1 mile and three-quarters due S. of Stow, a quarter of a mile N.E. of the fiala, 450 fect ahove it, aml 1020 above the sea, occupying a strong position on a narrow plateau, conspicuous from the railway below. It is marked "castle " on the olv., but Mr James Wilson, having procured its exeavation, proved that it hat been a round tower of uncemented masonry, the wall heing 13 feet 6 inches thick, and the interior 31 feet 9 inches in diameter. These are ordinary bowe dimensions, and the discovery of an undoubted broch near it renders it extremely proballe that the Bow tower wats a broch, lot the remains are too scanty to prove it alsolutely [see Pioc: 1892, p. 68 , for a fuil lescription by Mr James Curle, jun., F.S.A.].
27. Broch ant Font, Tormontloe- I mile and a half N.W. of Galashiels, 300 yards S. W' of the (iala, 300 feet above it, and 800 above the sea, on a commanding site, where the pass, through which the branch of the N.B. railway goes towarls Ieelles, joins the Gala valley. The fort wats long known as Torwonllee Rings, hat the broch was only uncovered in 1890 , under the superintenkence of Ar James Wilson and other memhers of the Ramblers Club of Galashiels, who were the first to diseover that the remains of a circular structure existed within the fort. The whole particulars of the discovery are so well described ly Mr Janes Curle in the paller quoted above that I shall merely note a fow details here. The broch is a large one, the interior circular court being 40 feet in
diameter，and the wall from 17 feet 6 incheos to 19 feet thick．The broch is at the upper end of the slightly sloping site on which the fort stands，aml is partially and clusely survoumbl by a troneh，which at one point opens into the main trench that lies between the two walls of the fort．The position of the broch，therefore，is anatogens to a common one of the motes in regarel to their base－court．

The fort has meen a very strong one，sally dilapidated now，upwards of 2000 cartloads of stomes having lween taken from it abont tifty years ago．Lht near the hroch，and along the W．and N．sides，remains of two massive stone walls testify to its furmer strength．The precise shape and dimensions are not ascertainahle，but it has been apmently a brad irregular oval，the W．side indeed being straight，measuring 490 by 430 feet over all．Moreover，there are remains to the N．，W．，and s．of am outer deep trench，with momds on either side，which if complete must have enclused a space not far short of 1400 by 1000 foret．It is to be rompettel that the walls of the fort have not heen exatated，to prove whether they are merely heapod－up stums or ane built．Some light might thens have been thrown on the ghastion whether the broch and fort were of the same period．The Catral is marked on the G．M． aseoming from the s．and ending in the fort，but it cannet mow be tracel on the hill－face，which has been lonis cultivatol，although it still remains at the foot of the hill now the Galia．

Mussilte．－The site of a＂camp，＂but without any remanis，is markml on the $0 . \mathrm{MI} .600$ yarts N．of Mmsilee，$\frac{1}{2}$ a mile W．of the Giali，aml close to Cialashinls．It appars to be about 600 feet above the sea，aml 150 above the river．

A＂camp＂is markel on the OMI．athout $\frac{1}{2}$ a mile above（ialashicls，
 200 feet long and 50 band in the millle，the straight sike of which is formed by the Catrail，where it rums near the edge of the steep lowk of the river，lut it does not appear to me to lee a defensive work．
（1）．）The Tween，from Ciad Water to the Imader．
The Tweed dows due E．from the fala to the Leader in a conrse of 1 miles．On the $\mathcal{N}$ ．side there is lout little hangh，beyond which the bank
rises aluruptly to a pretty miform height of 500 feet. On the S. side the flat is more extensive, and the rise is more gradual to the broad ridge of Buwden Moor, 600 to 700 feet above the river, but becomes very steep further E., where it culminates in the three-peaked Eihlon, the highest point of which is 1100 feet ahove the stream. The width of the valley from erest to erest of the ridges is about $2 \frac{1}{2}$ miles opposite Bowden Moor, but it narrows to $1 \frac{1}{2}$ at the Eildons. On the top of the N. bank are remains of three forts; and on the S. side, three lie on the slope from Bowden Moor, one on its western and highest point, and one on the N.E. top, of the Eilidons.

In considering the forts near Melrose we derive some assistance from an account of the parish, written before 1747 , hy the Rev. Alexander Milne, although unfortunately he seems to have been gifted with more than the average capacity for vague and loose statements, characteristic of descriptive writers of his time. In particular, he seems to have greatly exaggerated the size of the forts.
28. Camp Knace-On the brow of the ridge which bounds the north side of the valley of the Tweed above Gattonsile, nearly 500 feet above the river, and 785 above the sea. No fort is marked on the $0 . M$., but a low hroad mound on the edge of the descent marks distinctly enough the remains of an oval fort about 270 feet in length, probably of stone, as the mound is rough and lard under foot. The rest of the site is ploughed. The Rev. Mr Milne deseribes this as "a large eamp. It has a rampier or wafl about it of stone, about half a mile in compass. There is a plain entry from the $W$. and E. ; near to the W. entry, called the closses, there are a great many fine springs." The site appears to me to be well defined, and I do not think its compass could have exceeded 250 to 300 yards.
29. C'hester Kinowe- - Abont a mile E , of the last, near the elge of the same rilke, 800 feet alnove the sea, 500 alove the Tweend, the remains of an oval fort of one rampart and trench (?), about 260 ly 200 feet over all, is marked on the $9 . \mathrm{M}$. The plough and quarrying have entirely efficed it. Mr Milne calls it "a large camp, with a deep ditch, the s. side much levelled lyy tillage, about $\frac{3}{4}$ of a mile in circumference."
30. Eastor Hill.-1 mile E.S.E. of the last, on the edge of the same ritue, 300 feet ahove the Tweed, and half a mile W.N.W. of its junction with the Leader. On three of the sides, which are opposite level ground, a low mound and shallow trench mark the limits of an oval fort, about 300 by 260 feet over all. On the remaining side, where it comes to the edge of the descent to the river, there is a steep scarp \& feet high, with a ternace or shallow trench at its foot. Mr Mihe describes this fort as " a camp of no great compass, the trench pretty deep."

Passing now to the south side of the Tweed, we take the forts in their order from $\mathrm{W}^{+}$. to E .


Fig. 7. Caulldshiels.
31. Cauldskipls (fig. 7).-At the W. ©ul and highest point (1076) of Bowden Moor, on a knoll 10 to 20 feet abwe the hewd gromed that lies for a shont distance in its immetiate front th the S., amb stretches along the mow eastwand to the Eilion Hills. From the W. end the ground slopess gently at first, and then rapidly, lont from the N. front it falls at once stepply to the loch, 270 fert below. Here the defener is confineal to the natural strength of the position, exeept at the E. end, where
a little ascending ravine or hollow ( $A$ ) cuts into the position, and is defended at the top hy a slight rompart ( B C ) facing N. for 30 yards, flanked by a little line of rocks (1) I) facing E., which runs out at right angles to join the N. edge. The two ends and the S. front are coverel ly two concentric, gently curved ramparts, the inner one half way down the little slope, the outer one at its foot, the latter having a slight trench in front at the E. end. These ramparts appear to be of earth, Dont a third, probably of stone ( B E F ), of which only slight traces remain, formed the interior defence at the edge of the flattish top of the knoll. The interior, which is inregnlar with obscure mounds, measures 234 feet in length from crest to crest of the imer rampart, and 125 feet in wilth, the orer-all dimensions being about 400 ly 200 feet. A sulsstantial mound (G), 3 feet high, starts directly from the angle of junction of the slight rampart ( B C) with the outer rampart, and can he traced a long distance eastward in the moor, hut gramally diminishing in size. Another slighter mound (11) leaves the suter rampart near its W. end, and runs down the southerly deseent of the hill twwards the " military roal" of the O.M., which has been traced by Mr James Wilson for ahout 5 miles south-eastward to near llackehester. A fragment of another moum (I) lies on the slope, before it becomes very abrupt at the W . end of the fort.
32. Huwil Cleurth (fig. 8).-On the N. edge of Buwden Moor, about $\frac{1}{2}$ a mile E. of Cauldshitls Loch, 800 feet above the sea, protected on the E. by a steep, little ravine ; its fwinted S. end cut off from the level moor by a slight trench ( 1 ), ont through a little nose (B) that projects on the moor ; the W. side rising a few yards ahove the dry, shallow head of Haxil Cleuch (C) ; the brod N . end standing upon and commanding the long gentle slope to Marslee Wownl. The form of the fort, proluced by the nature of the gromm, is creseentic. Lacept a rampart in rear of the trench at the S. end (D), 5 feet in hoight above it and 22 fent across, and another along part of the S . end (E), there is little sign of fortiticatiom. The dimeusions are 200 by 140 teet.
33. Marder.-In the worl of that name, and $\frac{1}{2}$ a mile N.E. of Cauldshiels Loch, on the $\mathbb{W}$. side of a hurn, in a position with no natural strength, 600 feet above the sea, there has been an oral fort,
measuring about 250 by 150 feet, of which a broul rampart, with a wide, deep trench, remains on the $W$. side only.
34. Kursile-Castlisteal of the U.M.-Above ! a mile E. of Ahbotsford, 400 yards $N$. of Kaeside, 450 feet ahove the sea, in a sloping fieht, on the entse where the descent becomes steeper. It is searedy recognisable. The $0 . \mathrm{M}$. gives an oval ring of 160 by 90 fect, with the fragment of :an outer rampart to the N.; lnt, aceording to Mr Milue, this "cimu)"


Fig. 8. Haxil Cluch.
Was " urrounded with a deep ditch, in some phaces with iwo fuatas fuore than a mile and a half in comprase, eallod the Kaeside, on rather the Kidside. Some part of the ditch is about 10 feet high. The phase where the camp hax heen, there are two very deep forses to the X., hat to the s. the rampiers are broken down ly cultivation." It is diftioult to make out here whether the enclosure called the Kaeside is the same
as "the camp" in the second sentence. If his description is at all reliable, Kaeside may have been a rare or unique example in Scotland of a prehistoric town in a low situation.
35. Eildon.-This great fort, or fortified town, is of such special size and importance, that I have deseribed it in a separate paper (Proc. S. A. Seot., 1893-94, p. 111). It is on the top of the N.E. summit of the hill, rising to 1300 feet above the sea, and is girdled ly a triple line of dufence, about a mile in compass, apparently on the terraced principle. Within the lines are several hundred exeavations, in all prolahility for the foundation and shelter of lats.

## (E.) Lauderdale.

This district is specially worthy of investigation, as it is clearly defined by nature, and contains an unsual number of well-preserved examples. It affords a fair index, therefore, of what may have been the mumber of forts in other districts where the destruction has heen greater, as well as of the nature of these prelistoric works ; and an examination of them certainly lends no support to the theory that they were mere cattleenclosures, as there is sufficient evidence that nearly all of them were surroundel by at least two "rings," of massive proportions. The Leader and its tributaries drain a district about 15 miles in length by 10 in beadth in the upper and middle reaches, but narrowing to a mile or two below, and has contanerl at least 23 forts, nearly all still recognisahle.

## Head Wayers of the Leaner.

36. Kirkiton Mill.-Three-quarters of a mile W. ly S. of Chamelkirk, 1000 feet above the sea, on the E. side of and 200 feet above Raughy limm, to which the ground slopes very stecply. Three concentric ramparts on the S.W. and two on the N.E. represent on the O.M. the ends of an oval fort 570 feet long ( 523 , Mr James Witson), of which the siles are completely grone. At the N.E. end the outer rampart is 17 feet, the inner 30 feet, across, and the distance between their crests
i.s 36 fen . The S. side and whole interior are quarried. (Infunation from Mr James Wilson.)
37. "Roman Camp," Channelkirk.-Niot a vestige of this romains, if wi may trust the O.MI., hut Roy's plan represents two straight entrenchmonts, meeting at an aente, slightly rounded angle, the easterly one 12.50 feet lans, the westerly one 1650 feet long, with an entrance about the midulle, covered in front ly a small staight traverse. The s. end of the $\mathbb{W}$. entrenchment is prolongen on the phan in a re-entering curve round a litule recess in the bank of the neighbowing ravine, and encls in a little rombulbt, like that at Inchtuthill, at a point projecting into the ravine. The lase of the roloubt towards the interior of the camp, is straingt, amb is defended lyy threx rampants and trenches, hat round the edge of the point there is metely is single semicireular rampart. On the somewhat irregular ground to the S., Rey shows no remains.
38. Hillhonse-Betwern the Ililhome and Kelphope liums, 1100 yards N.N. W. of their junction, 170 yards $E$. of the former, 200 fout ahove it, and 1000 above the sea. Pear-shapeal on the $0.31 ., 600$ feret longe and $4 \times 0$ wide at the lnow N. eml. Appurently frammentary aml ill preservel, but with there defensive lines at the ends, two on the W. sile and one on the E. (No wher information.)
 of Carfracgate and Hhahshaw lbum, 200 fert alove it, and 987 ahow the sach. Three ramparts well-marked on the O.31. cecupy a wisth of 90 fort at the S.E. end of what must have heren an oval fort of considerable size. (Nunther information.)
39. Ti,llis Mill.-The furthest N. of the Landerdate forts, 212 miles s.s.W. of Lammer Law, 300 yards E. of Kolphope Burn, 200 W . of Tullis Itill farm, and about $1 \because 00$ fect above the sea. I circle, ar parently of a single rampart, with trench in front; 360 feet in ilameter on the 0.M. (No other information.)
40. Letemereft-(tig. 9-from a phan hy Mr F. Lymm, F.S... Sont.) lies 700 yards N.E. of the junction of somhope amb Whatphaw limns. 300 yards E. of the former, 250 W . of the later, alout 100 foed ahowe them, and $11: 50$ ahove the sea. Iong steep desernts rum duwn on all sides except the N., where the approach along the ridge is easy. It is vol. xax.





Fig. 9. Langeroft-(from a plan by Mr F. Lym),
dillicult to ileeipher the remain*, partly lwonae the rompart - wates of phan and stran ture as they circle roumb, pantr from dilapidation. 'Thaz ditliculty was suthiciontly great, but 1 was further himbered from mokite :an intelligille plan hy a storm of wiml and main durimg my vian Furtunately, however, Als Lym, after failing from a similar cause, h.t shoceded in making a careful plan, with cross sections, showing the tru. levels, all of whiel I have reproduced in fig. 9.
lewiming on the N., where the gromm rises gently firm the font, there are three ramparts, lut turning west watal, the inner one stops (at N), aml its line is taken up lyy the outer mome of antmion whelume (3), 150 feet lons and 50 wite. As the lines circle rambl to the S., at the S, end of the melosure (M) there is an chtrater (0)), amb berond that the inner of the three ramparts besins, not opposite the outer sid of the enclosure (AI), as lefore, but opmsito its inmer side. Cireling round the $s$. of the fort this inner line lecomes little more than at steny scare (helow O, K, E). The midde rampurt aten changes its chamenhere, widening out, and having, half way hown its searp, what I tenk to be a herm 1 feet wile (1' th (2), hat what Mr Lym thinks to he the levelled foumbation for a wall. The outer mampar on the S , is tritlins,
 turns norlhwards.

Ahont the middle of Whe E. side, there is amother entranes, boyome which lewin the three ramparts of the N . foee that conmpleto the cirmit; but the outer one ( 1 ), instatal of bine in line with the outer
 (O). As Mr Lym's suctions show, the relief of the momels is gromatly slight, owing, mo ilonbt, to "xtonsive dilapidation, but the stony scarps in some phates are as much as 10 or "ven 12 feet high.
(If six lagge curvilinem enchenres in the intorar, tive ahat on cach other, the westumest one of which (1t), ats already explainen, forms part of the defensive lines. It is sublivided liy a tramsersis momed, and within it, as well as chawhere, there ans traces of "hut circine, " and several obseure little stuny heaps or mounds are seathered about the interior. The sixth enelosure (K) rests on the S. immer wall.
12. Addinston (firs. 10, i 1, and 12).-Three and a half miles N. by W.
of Lauder, 1000 feet aluve the sea, and 300 above the Cleekhimin Burn to the E . The site is near the edge of a steep descent to the bum; the approach


Fig. 10. Alllinston.
along the ridge from the N.W. is nearly level, clsewhere the ground falls away gently. The interior is raised from 10 to 20 fect above the
extrior on the flanks and at the S.E. ent, but at the N.W. end is some feet lower than the exterior. Thuts it would appear that the fortsess


Fig. 11. Ramparts, S.W, corner, Adinston.
i. carred out of a natural monnt. The flanks of the work are nearly straight, so is the inner rampart at the N.W. end, hut the outer lines


Fin. 12. Distant view of Addinston.
there and all the lines at the S.F.e emb, as well as all the angles, are emrow. The interior from crest to crest measmess alont 300 fert in lometh, lyy 1 N in lerealth at 1he N. and 150 at the S. mel. The rampurts are musually
massive, lout the plough has partially dostroyed them on the outside. At present two extend all romm, and a thim (i), with a treneh in its rear, beginning at the W. sidp of the S.F. entrance, gradually disappears in the ploughed fieh on the s.W. flank. There is also an outer trench at the N.W. enk. The ramparts are remarkably strong at the N.W. end (section E, F), where the miner one is 16 feet high to the outside, and at the western side of the $S$. entrance (section $A, B$, and fig. 1I), where fur a distance of 160 feet there is a rased platform ( G ) in rear of the midalle rampart (shown in the view, firs. 11). There may have been an entrance at the N.W. augle, lout the works are almost ohliterated there. Insile, near the N . ent, there is a low circular momel, enclosins a space (11) abunt 40 feet in dimeter.

As a grood distant view of a well preservel example of these old forts is rarely got, I give (fig. 12) one of Adtinston, takell from a neishbonring height, from a sketch hy Mr Lymn. The sectims in the plans are also his; and heing taken ly tape and level, are strictly accurate.
43. Burncastle.-Two and a half miles N. by E. of Lander, $\frac{1}{4}$ of a mile N. of Bumeastle farm, 1000 feet above the sea, and 200 above the Earnsclench Bum, which flows 200 yards E. of it. The position is strong, as berides the denp Earnscleach on the E. it has another ravine on the W . and a consideralite fall towards the farm on the s . It is only northwald that the gromd is pretty havel fur a short distance. Tla rings have been almost entirely plowhed duwn, lat a frasment of the S . end remains in a plantation, showing two sulstantial momds, apparently of earth, the inner one 6 feet high, the onter somewhat less, with a slight trench in front. In rear of the inner mound the ground appears to have leem slightly trenchod for a wilth of 30 or 40 feet, perhaps to provide earth for the momuls. In the field the mounds of the N. end are still traceable and are fom in mumber, the two onter ones, as shown in the O.XI., not loing quite concentric with the two immer ones, anl probahly imbating an attached outwork. Exchuling them, the over-all longth on the $O . M$. is 500 fret. The linemeth of the oval camot la ascertained.
44. Datshome Earnsermuth-Two miles and a half N゙.E. of Lamerr, 6.50 yards S.E. of the deserten farm-honse of Earuseleuch, 1256 feet
 of a mile to the W . of it. The site is a commanting one, int the last emspichous height of a spur of the Lammermoors, overlooking Landordale, and the fort is much the largest in the district. Its great elewation has not saved it from the phough, hut ennush remains to show its genemb form and structure. From a careful phan Mr Francis Lynn, it is an oval, much broater at the S.E. than at the N.W. emt, measming s00 by 600 fect wer all, ant 650 by 450 within the defensive lines: the O. 11. makes it somewhat luss. The defences consist of two concentric earthen ramparts, with a trench in front of each, the whole doubthess fxtending originally all mand, athough now entirely destroyed ly the plought in the mithle of the N.E. and S.W. sides. Where best proservel the inner rampart is about 6 feet, the outer on \& feet above their reswe


Fig. 13. Dabshood, Earnshlim?
tive trenches. The struture of the outer mampari (tis. 13, on domble the usual seale) is peculiar, the erest ( $\Lambda$ ) beinsigroverl to it depth of from a fow inches to 2 feet all alhng the parts preservel on the N.E. and S.E. sites, Wher attack was easy from the level or grnely shoms gromet in front. The with of this gronvel or double rampart is from to to 4.5 feet owe all, allud of the groweel top about 16 feet. The imerer rampart has a very trilling devation abose the interion, and in some phates is altugether wanting (this descrijtion is from inforuation ly Mr F. Lymu).

## Mib-Lacneribale:

In this division I have phaced the fonts now Lamede, inchetins fum (1) lilythewather, althengh that is really whe of the hom watems of the Latater.


Bour in old documents, and the pronunciation is Boorus; 3 miles N. W. of Lauder, $\frac{1}{4}$ of a mile $\mathbb{W}$. of the farm-house of the above name, 1000 feet alove the sea, on the eastern slope of Collie Law (1255), but with little natural strength. The site is planted, and has been quaried. The O.M. makes the fort a somewhat straight-sided oval, alout 350 ly 240 fect over all, ant 270 by 170 within the two mounds, which seem to be of heaped-np earth and stones, although at one place where broken in mon ly quarying, on the line of the imer mound, some well-fitted drymasonry is exposed, foumled on the rock. The inuer rampart, where lest preserved, is alumet 6 fert high and 30 across, the outer somewhat loss; the two, with the intervening tranch, occupying a width of 75 foet. Marshy ground close to the" W., with a dry watereouse deseending the hill from it, indicate a water-supply before drainage of the country.
46. Blarkehester:-Two miles N.W. of Latuker, 800 feet above the sea, in a position of no natural strength except to the E., where a slomet sterp slope precedes the gentle descent to the dale. The mounds are planted and the interior is quarried. The shepherl's house of blarkichester', with its appurtenmers, oceupies the S. side, and has caused the destruction of that side, but elsewhere the mounds are well preservel. They are three in number, the outer two being close together and of unusual size, the imer one somewhat retired and of less strength. Where measured ly me, the three "rings" occupied a width of 135 feet, the ontor one was about 40 feet across and 5 feet high to the outside, the middle one 50 fect across and 12 feet high to the outside.

A shallow trench in rear of the middle mound was probahly exeavates tornt earth to add to the height of the rampart. On the $\mathbb{W}$. and weakest side there is also a slight trench in front of the outer rampart. The mounds seem to be mainly of carth, as very little stone is visible. According to the O.M1. the fort is circular, 500 feet in diameter over all, and 300 inside. Two or three small springs, cluse outside to the E., indicate a sood water-supply formerly.
47. Cluestro Mill, Lauler--llalf a mile S.W. of lauder chureh, on the S.E. side of Lauder Bum, on an cminence upwarls of 100 feet alove it, 750 above the sea. On the (1.M. it is circular, 320 feet in diameter
over all, 250 inside, with two rings, nearly complete, though partially quaried. I am informed that scarcely a trace of it remains.
48. Mareficult,s (tigr. 14, alapted to my seate from Mr Mihn llome's phan, Prore, ix. 466).-Three-quarters of a mile W.N.W. of 13ythe farm, 170 yarls N.E. of Blythe Witer, 200 feet above it, and 1000 alhove the sea. The ground falls gently from it to the SE., and steply to the s. W., but rises gently northwards to a lower summit (1090) of Scour Lig (1191), one of the numerons broad-backed hills or


Fig. 14. Harefaulds, Lander.
ridtes which deseent sonthwards from the Lammermoors, This fort, although not reconnisel as such on the O.M., is one of the most interesting in Southern Scotland, as it contains remains of mumerons stone hats. They are more or less cireular, although some partition walls are straight, and some of them still stand to a height of 3 or 4 foet. According to Mr Home, hey vary from \& to 15 feet in diameter. His plan shows only about twenty, not a fourth part of those that are traceable, probably hecause he only gives those of which the remains are substintial.

He thonght that some of the cells were recessed in the wall on the N.E. side, and that the wall was thicker there, but it seemed to me that this appearance was merely due to a congeries of cells abutting on the wall. They are almost all commeted directly, or ly opening into cach other, with the rampart wall, particulaly on the N. and E., where, inchuling those wit marked on the plan, they are two or three deep in some places. The fort has sufferet terrihly from dilapilation within the memory of man, lout facing-stones remaining on the N.E. show that the wall was 11 fert wide there. The main and probally only entrance is from the S . by a kind of matural hollow way fomed by paallel rocky mounds, which run 30 or 40 yards outwarks. But these natural flanking defences are not now elosed hy any work ruming towarls the wall. Possilhy there was another entrance a little further W : on the same site. Extensive "rigs" testify to cultivation outsile ly a crofter pupulation, which 1 am inforned by Mr Jolm Romanes, F.s.a. Sont, was formenty settlen here.
49. $13 l_{f / t}$. - 350 yards S.W. of Blythe farm and the same distance east of the llythe Water, alout 150 fect alnove it, and 850 above the sea, on a prominent level spot, with gentle declivities. Represented on the O.M. as a regular oval, with two ramparts, the onter one the witer of the two, and measuring 370 by 280 feet over all, 280 by 200 internally. These ramparts are still traceable as low, rough, hard monnds, and the interior feels hard and stony momer foot in many places. Some goul-sizel stones lie ahout, and a few framents of corvel fumdations, one of which is a semicircle of stones, are visible. Prohally this was a stome fort, with buillings insile; hut if so, it has been long phombered, and only its harl surface las saved it from total eflacement by the phough, which has come elose up all romme.
50. Herugh.- On the east side of Blythe Water, 200 yads above its junction with Brmata Bum, 700 feet above the sea. A semicircular work, the straight unfortified hase, 230 feet in lughth, resting on a steep slupe to the stream, 40 to 50 feet lelow. The level interior, 105 feet in gratest lreadth, is raisel only a few feet above the tied to the east, and there is no parapet to the scarp, but at the ends of the base considerable mounts, with a trench at the south ens, cat off the site from the contimation of the bank-ctue. In rear of the scarp, on the
northern half of the semiciremufarence, there is a row of four squatish slight hollows, and a platform or roadway 12 feet in width.
51. Thirlestane- -T00 yarls N.E. of the hamlet of that name, and 1100 west of the jurction of Bhythe Water and Brunta Bum, on an eminence s.20 feet ahove the sea, and 200 above Boondreish Watur, which flows 700 yards soluth of it. The access, hamever, is casy fiom the north and east. The site is covered hy a domse and utterly nedected plantation, impenotralle even to a ray of light in some parts. From what can be seen, and from the Ondnance plan, the fort appears to he circular, 330 feet in diameter over all, 220 intemally ; and the defences consist of two concentric ramparts, their crests is feet apart, the outer and stromer one abont of fect high on the N. sike. I thind concentric "ring," 10 feet further in, is $\mathrm{p}^{\text {mhlap }}$ son trilling to he considemed a defensive one.

I an informed by Mr II. II. Craw, F.S.A. Sint, that his father demolishal more than one fort on a farm in this neighbourhood; but 1 do not inchude these, as nor precise information can be got about thom.

## Lower Lauderdale.

As the Leader receives no foolers of any size in the last six miles of its course, the date contracts more and more in width, till towards the month of the river the gromel which it datins is only a mile or two in width. Lu this streteh only one fort remains distinctly ramonisable, but there is anomb evidence that at loast five whers existed fomerly.

Leqrerrowt.-A mile S.W. of the church, on a height mpwarls of soo feot alowe the sala. I circle, 260 fore dimeter, faintly markel on the (o.31. No rematins now:
52. Ilist Morriston.- 200 yards S.W. of the farm of that mane, $1_{1}^{3}$ mites N.E. of Eatston. Marked on the (1.MI. ly a dotted cirele, 400 fene in diametur, as a site only. It is still tramble ly a diflereme in the


The Rev. Mr Milne makes lerief mention of four "empls" as existing marly last mentury on the west side of the lader, in the lower pant of its course. Although nome of them are marked on the ( 0.31 , at heast there are still tracealde.
53. Brid! ${ }^{\text {mouth.-" Near the Leader, opposite Bridgehaugh, there is }}$ a considerable eamp, greatly defaced loy tillage." This is all that Mr Milne has to say of it. Probably the site is not now recognisable, but I have no further information.
54. Ridt!peralls.-Situated $1_{4}^{3}$ miles W.N. W. of Earlston, close to the E. of Carolside Mains, or Cairniemount, farm-house garden, about 750 fect ahove the sea. Mr Milne describes it as "a large camp, a mile N.W. of Clackmae, with three deep trenches; the space between the trenches so large that it is turned to arable ground, about $\frac{1}{2}$ a mile in compass." This description, exeept in regard to size-a feature of the "camps" always much exaggerated by Mr Milne-was confirmed hy a plan on on old estate-map, onee seen by Mr Dumn, F.S.A. Scot., Earlston, lut which has unfortunately disappeared. Mr Franeis Lynn, however, has found distinet enough traces of the nearly flattened mounds, particularly in a $p^{\text {lantation }}$ at the E. ent, althongh even there the ground, including the mounds, is marked with the old-fashioned high rig, showing that it hald long lwen cultivated, before the trees, now about eiglity years ohl, were Hanted. Mr lymu olserved that the imner ring is not concentric with the onter ones, hat retires 84 feet from them (measurad from erest to erest) on the S.E., and approaches within 28 feet of them on the N.W. The dimensions of the inner oval are 188 by 138 feet, its long axis leing N.E. to S.W., while that of the outer rings is from N.I.. to S.E. The "compass" of the outer mound is ahout 300 yards, instead of $\frac{1}{4}$ a mile as stated lyy Milue.
55. Chrstrolece(fig. 15, from a phan ly Mr Lymn)—about $\frac{1}{3}$ of a mile E. of Carolsile Mains, and $1 \frac{1}{2}$ N.W. of Earlston, 700 feet above the spa, on the end of a ridge, looking down on the Leader 300 feet lelow, is said by Mr Milne to be "alont $\frac{1}{2}$ a mile in compass, with one single deep diteh." Alr Lym finds it still distinctly tracealle as a reetangular work, but only 300 yards in compass, the leneth and breadth being 333 and 220 feet. In a plantation at the W. end a part of the mound, 28 feet across and 3 feet high, still survives; a framment at the S. W. angle, the greater part of the E. cme, and the N.E. angle also remain, though more levelled by the plutidh, the E. end being 35 feet across and 2 foet high. The north side is only traceable by a change of colour in the
erop or stuble. The "deep ditch" of Ntihe serms to be entirely tilled up, but "imlications of a sceond wall," in front of the mound in the 1) hantation, seen by Mr Lym, may be a remnant of the countersearp of the litch.
56. Bromentull is mentioned ly Mr Milne as "a small camp on an eminence near Earlston, alont a mile to the S. of Ridgewalls." Mr 1hum, FN... Seot., Ealstom, informs me that this fort is sitll traceable by a difference of colour in the vegetation of the lield when under crop. The pusition is very strong, hetween two ravines.
57. Bluck Hill, Conchenhinoutes, Earlston (fig. 16, S.W. end of the


Fǐ. 15. Chestenlee, Lamier.
fort).-(bne mile S.E. of Eanston, 11 N.S.E. of the junction of the Leader and Tweed, $\frac{1}{2}$ a mite E of the Leader, and 650 fert alowe it, on the top of a conspicums and tinely shapet hill, rising 1031 fert athese the sea. The top is a narow ridge rumning from sill. to N.E., the hishest part of the ribge being the straight else of the N:WF face. From this edge the inturior of the fort falls gently to the SK. for a hreadth of about 150 f et, when another alge is forment. From both these edges the fall is steep and stony for alout 100 feet, that to the N.W. intermpted, however, ly a sloping shalf 10 or 50 yards wide, ahout

40 feet lower than the thp: the N.E. cmil of the rikge fills on a hroat a haunel of the hill, not inclubled in the fort. From the highest pwint (A) of the ridice amp hill, which is at the S.W. emb, the gromel falls gently low ahout 100 yards, and the width contracts gradually to a sharp $\mathrm{p}^{\text {wint ( }}$ (B). This point was prolally included within the fort, hut the traces of its defences are now ohscure. From it there is a rongh, steep, partly stimy descent of 400 feet to N.W., S. W., and S.E.

The defences are greatly dhlapidater. The N.E. end still shows thred


Fig. 16. Blakhill, Cowdenknower, Eurlston.
conemtric curvel grassy mounds, rising oncelndinu the other, only a few fert high, cutting off the fort from the eastern lammeh, which is separated from the mombls ly a trenclitike, wide depression. The entrance appears to have leen towarils the Se end of these mounds. Prohably the defences from here along the si.E. face consisted of two walls, but only the foumlations are tracealle by slight monnds and terracing. On
the N.E. face a slight monul remains at the fino of the slone frome the ridge on the shelf 40 foet helow, already mentionol, and a fontpath of temace (C 1)), slanting thown the slope from the S. WV. (mul, may mpresent an imer line. It is at the S.W. ent that the remains are mast distinet, consisting of four short, curver, concentric, stony mounds (E to L) a fow yards below the top, and oeretrying a witth of (6.) feet. Thesw atl hemin at the N.W. edse, aml curving romol southwarls, the innermost is apparently continums with the inmer line of the S.E. face (at E). The wher theer are suon lont on a little dat sjace on the S.E. slope (F) , from which terraces (F II and L (i) descend rastward aml westwand to join the
 Lower down than the fom momels, the pontle deseent thwards the point (1) is interrupted ly two irresular terraces, and slight remains of at wall (C (i) at the outer elge of the lower of these teraces, probally mark the extreme s.W. point of the defenees. It is continuons with the outer line or terrace ( 6 II ) on the S.E. face, and with the slanting path or terrace (C 1) on the N.W. fare.

The interior, which hats a pleasant expmate th the S.E., and ammmames a mannificent view, appars to have heen ruldy tomaced, and is pitted with mumerons small, shallow, sanmeshaped excavations, for the mosit part very slight and indistinct, lout two (one on earh side of I) are very distinct on the summit of the ridge, near the very top ( 1 ), which itself is surrourled hy in imperfect dumbe circle of higstomes cmbeddel in the soil, presibly the fondations of a wall 6 foret thick, ondowing a sjace 18 fopt in diameter, and now covered with stony debois. besides the pittins within the work, there are two, deop and
 another where the imncr momel passes into the upler S.E. terrace (at E), and anther on the flat space to the s. of the momals (near l). It is to bee prestmed that these exeasatinns mark the fommations of huts. It is recorded that ardy in the century three stone ramparts sumbmed the interior, and that the former thew them down the hill, and phounhell the tep to srow turnips. It is also said that there walls were vitriliod. 1 motiond wo vitrifution, and other observers have assured me that there is none. Hiblert fomm "only a suall cairm,
vitrified on the side where little or no defence appears ; " and this may have been the origin of the belief that the fort was vitrified.

## (F.) The Tweed, from the Leader to Kelso.

In the pretty extensive distriet drained ly the smaller tributaries of the Tweed in its course of 11 miles (not comnting its windings) from the Leader to the Teviot, and including the Eden, with its course of 18 miles, there are lont five forts, two of them on the Tweel itself, one to the N . aul two to the S , of it. The greater amount of eultivation, as compared with other districts, seems hardly sufticient to account for the deficiency, as much of this cultivation is but recent, and extensive tracts are loth elevated and still little under the plongh.
58. The Knock, Huntlymeont, the only fort in the large part of the district (nearly 10 miles square) N . of the river, although not in Landerdale, is so near it, and so seprated from any other fort-listriet, at the very head waters of the Eden, that it might have heen eonveniently inchuded with the landerdale forts. The Knoek is a gentlyrising but eomspicuous little height, in a district of many sueh, nearly 2 miles W. of Gurdon Station, 12 E.N.E. of Lurerwood chureh, s91 fect above the sea, and 300 above the Elen, which flows $\frac{1}{3}$ of a mile to the N. of it. A double wall has surroundel the summit, of a regular oval form, 520 by 300 feet over all, and 420 lyy 220 interior measurement ( 0.11 .25 inch) ; the imer one is at the edge of the tolerably level althongh rough and irregular interior, the outer one a little way down the slope. The stones have been alnost entirely carried off, hut the walls can be traced all round, exenpt where quarriod away at the $\mathbf{W}$. cud, as low hroul momeds, lreaks in which show rublly built stones, but no facing. The walls have apparently leen of less wilth and are nearer each other, at the more defemsible sides, than at the ceasily approached E. end, where is the entrance. Thus the total width of the defences in the midale of the N . side is alont 40 feret, but at the entranes it is 60 fent, the outer wall remains being ahout 15 , the immer about 30 feet wide, and the space loetween about 18. There are some questionable indications of chambers on
each side of the entrance in the inner wall. There is no vesti-a of a trench. There are some f.int and loubtful satuer-like depressions in the interior. Fine hexagonal basaltic columns crop up in the interior and are exposed in the quarries.

The considerable portion of the district $s$, of the Tweed (ahout 10 mikes loy 3) is dratined by insigniticant streams, and is much under the plongh. It contains only two forts.
59. Romerluster, Kippilan:-Two miles and a iptarter S. by W. of Eildon fort, on a gentle eminence 640 fert above the sea; the greator part of the site is in an inacessible rabhit warren, enclosen by a wall, topped by three barled wires. I fragment at the E. end, outsile the warren, consists of a massive eurved rampart, with a scarp, 6 feet high, descending to a trench 15 feet wide at the bottom, the counterscarj) being athout 3 feet high. The O.M. makes the fort a very regnlar oval, mossuring 450 by 300 feet internally, but with distinct remains only at the two ends. Mr James Wilson makes the interior only 400 by 220 feet, but his over-all measurements nearly agree with those of the $0 . \mathrm{M}$. (550 liy 370 feet).
60. Murhmuselar (fig. 17).-A rectilinear carthwork, 200 yarls S.E. of the farm of that name, 2 miles N.W. of Peniel Helnh, and 3 of a mile N.E. of the surpmend "Wathing Street." The site is quite low, near the foot of a little height well suited for primitive fortilication, which rises 579 feet above the saa, and about 70 above the fort. The work was probahly a rertangle, but only the S.E., S. W., and part if S.W. sides remain, the rest apparently having been destroyed hy the construstion of a pond and sluice. The s. W. face (ab in the section) consists of an imber rampart, with a low, narow-erested parapet, risuy fully 6 feet abme the trench. The scarp descombing from the erest of the parapet slopes steply for 3 feet, then gently for 6 feet, and arain stopply for 9 foet. This peculiar form is unitue, as far ats 1 haw seen, in sicottish forts. The flat, marshy trench is about 7 fret whle at the bottom. The comintersarp is remarkally stemp, rising tw an onter rampart as high as the inner one, 6 or 7 feet wike on the flat toup, and raised only a foestor two above the exteriors (on the sid. fare $(r f)$ the formation of the inner rampart is simple, and the outer one is

[^14]alsent. The gromed outside on this face rises gently, and a slight curved entrenchment is markel on the O.M., 350 feet from the man work, 800 feet long, and quite disconnected with it. I did not notice this. The remains of the N.W. face ( $d$ ) are also simple in structure, but on the further side there has leen a second smaller rectangular enclosure ( 1 ), not quite in line with the main work, and without a trench, of which probably about one-lailf remains. It the N.E. angle of


Fis 17. Muirhonse Liw.
the main work are olscure manas of syuare foundations. The dimensions of the main work, measmed along the crest of the imer rampart on the O.M., are 225 ley 195 feet.

On the lanks of the Tweed itself, in the lomg stretele of 11 miles to Kelso, there are hut two forts, oppositn each other at Makerston, one so trilling as lardly to deserve the name.
61. Ringley Mall (figg 18).—Walf a mile S. W. of Makerston House, on the edge of a steep descent, about 80 feet high, to the Tweed, on its south side, and about 250 feet alose the sea. 1 it is of the semieircular
type, the hase resting on the unfortified eatre. It is much thetroyed, particularly on the eastem half, by the fromation of a road and hy quarrying ; hut there are remains of an inmer stony rampart all romel, From which as searp 7 or 8 fect ligh falls on a terrace from 12 to 27 fieet wide. I secomd seap, of about the same height, leads to a secint terrace on the western half, but if it ever existed on the eatem half it

has disappeared. Towards the south there are: remains of a stony parapet at the edge of the teraces. To the west the grommen contimus to fall slightly, but southwards the outer defence is on the lewal of $\mathrm{tt}_{3}$. road and fichls. The nearly level interior measures about 1 so ly 150 feet within the ramparts. Possibly this was a terraced mote, defendel ly stone walls instead of palisates.
62. Mulierstom.-Due north of the last, on the opposite side of the Tweed, on the edge of the precipiee, 60 or 70 fect high, which falls to the river. This work is also of the semicireular type, but is of tritling size and strength. The mufortitied lase of the interior measures only 60 feet, with a radius to the north of 45 feet. To the east, where the alpmoah is nearly level, the defences consist of an outer rampart, not 3 feet high and 15 acruss, with an imer scap alrot 4 feet high, hat without a parapet. To the west the interior is raised about 15 feet alnow the exterior, and the searp is broken and irregular. Perhaps this side has been injured ly a footpath that skirts it half way up.

## (G.) The Whitaner and Plafkader.

The Whitader and Blackader drain a great part of the Lammermons district of Berwickshire, in their eastwand course, hefore uniting in the Merse, or flat part of the county. The mumber of forts in the lill comutry itself is only ten, bat at its abrupt termination eastwards, on lancle Elge or the slopes leneath it, there is a remakalle sporp of \& fort-sites, at four of which remains still exist. The only wher probable fort at the fall of the Lammermors on the Merse is at the sontheast point of the hill mass on Duns Law.

## Blackader.

63. Flass.- Near the soluee of the stream, cluse to the north of Fhass farm-house, alrut 950 fect above the sea, an oval fort, 370 by 200 feet, is marked on the O.M. Aprarently it har a single, ill-preserved ring at the time of the survey, but 1 am informed that now the remains are searerly recognisable.
64. Blach C'astle Piuts: (fig. 19).-( me mile and a half N.W. of Greenlaw, on the east side of the Bhackader. From Greenlaw the ground rises gently nonthwards to a ridge, from which the first view of the extensive southern mootland slopes of the Lammermoor IIlls is got. From this ridge the groum falls gently northwards towards the Fangrist Bum, and also westwards to the elge of the steep and deep ravine of the Blackader. Here, sume 50 feet below the level of the ridge,


Fig. 19, Black Castle Fings, Greenlaw.

678 above the sea, and 150 above the stream, the fort is situated on a site evidently chosen mainly for its great natural strength on two of the three sides, as it is deficient in the other usual chatacteristic of commanding an extensive view, owing to the greater height of the ridge to the south. The position is on a triangular spit, the N.W. side of which dominates a little hangh of the river, falling to the haugh by a hare, gravelly and rocky, inaccessible slope. The S.W. side is protectenl loy an equally inaccessilile deep and steep little dry mave (the loil's Neuk), which, beerinning a few yards beyond the fort, rapidly increases in depth in its short course to the river. Two concentric curved lines of defence, separated ly a level space 35 feet wide, each consisting of a rampart and trench, the outer one with a very slight mound thrown out leyond the trench, form the hase of the triangle, and protect the interior from the nasy access from the east. The last ten yards of the outur line only, at it: morth end, diverge in a straight course outwards to the edge of the slope, for no apparent reason. The scarps of the ramparts are musually steep. The heinht of the inner rampart where highest is 14 feet above the trench; that of the outer one about half as much. The trench of the imer one is narrow, that of the outer one about 8 feet broal at the bottom. The entrance las probably been close ton the Deil's Neuk ravine, as the ramparts fall somewhat short of reaching its edge. There is no other break in the inner line of defence, amb one in the mitdle of the outer line may he modern. The fort is a pure earthwork. Not a stone is to he seen about the place, and how its green momds and interior aequired the name of Plack Castle is difficult to imagine, unless they had formerly been covered with leather. The brare slopes which defend it are of a fine red colour.
65. ('hestors, Marchmont.-Abont $\frac{3}{4}$ of a mile S.W. of Marchmont Ilouse, on the S. side of the Tharkader, at an inconsiterable height ahove it, 500 fert alrove the sua, and close to the east of Chesters farm-huse. Entirely dnstroyed loy the present temant ; hat I an told hy Mr P. Loney, the land-stenvard, that its ligure can still he traced hy a difference in the colour of the vegatation when under crop, On the 6 inch O.MI it is nowly cireular, and has apparently two defonsive lines, far apart, and nealy completn, 350 feet in thameter over all, 150 internally.

 the present state of this fort also. On the 6 incle ().M. it is repmeconted as an oval of $700 \mathrm{by} 450 \mathrm{fect} ,\mathrm{mainly} \mathrm{hy} \mathrm{a} \mathrm{dotter} \mathrm{line}$, apparent remains of three mamarts at one place. Both these forto wher anthworks (Mr P. Loney).


Fǐ. 20. Reel nehhran Hill


 away, ame to the moth, where it rises for a shat di-t.ater athophls. .
as closely to command the fort ly a few yaris of height. A marrow trench (A), 4 or 5 feet thep, cuts off the fort from this higher ground, ant is continted round the level fronts, but not on the sloping westem side.

Within this rises an earthen rampart, 9 to 12 feet above the trench on the cast, 7 to 9 on the north, lut only 4 or 5 feet high on the west and sonth. On the south this rampart is curionsly groovel or hollowed along the $\mathrm{t}_{\mathrm{n}} \mathrm{f}$ ( 1 C ), but towarls the west, in place of being on the top, this groove deseends and mins along the scarp (C I). It is gradually lust to the east and north. In rear of the rampart is a wile, shallow trench (E), varying from 20 to 40 feet in width and 3 to 4 in dopth, lecoming a turtace on the west (F). There is no rampart or prapet in rear of this trench. The single entrance, from the east, is round the flauks of a straight, low, short mound (fi), fithlioned apparently hy removing the main mass of the rampart in its sear and the whole of the rampart on its tlanks. Thus it is not a projecting work, lut stands as it were in the trench,-a mique arrangement, possilay not orisinal. The groumd, outside and in, and perhaps part of the ramparts, have heen ploughel.
68. Raepleurlifipar (tig. 21).- Desemding 200 feat lower, S. by E. from Raecleuchhill fort, for less than $\frac{1}{4}$ of a mile, by a gentle slope, the visitor finds himself suldenly overlooking another fort across a little, steep, lry ravine (E F), which hegins at the W. ent of the fort on its N. site, and runs castward with increasing depth to join, after a course of 300 yards, another narrow, steep, dry, and much depper ravine-the Guile Howe, which rums on the S.E. side of the fort north-eastwarl. The site is thens admirally definesl and defended on the N. and S.E. of its three faces, hut it is open to the $W$., where the southward slope of Ilarlens llill (shown by arrows on the plan), as it runs past, is free of ravines. The western face, therefore, is strongly fortifiod by two unnsually sulstantial, concentric, curved mounds, -the onter one (E I (i) 40 foet wide, though now only 4 fret high; the imer one (II I), where best preserved, 60 to 70 feet across, 8 to 10 feet high to the outside, 12 to 15 to the inside, the groater lowight inside being due to the original slope of the gromed towards the interior. These mounds begin at the erge of the southern ravine, where it is nearly 200 feet isep, and mun moth-


Fig. 21. Rrecleuchhead.
wards 1 p the slope to the heal of the northern ravine; the inner one continues round the fort on the S . elge of this ravine, so as to proteet the flank of a wide, natural, or partly artificial trench (L M), which is in rear of the immer rampart; but the outer mound crosses the head of the ravine to its north side, where it is completely and closely commanded from the northern edge of the ravine a frew yards above it, ant then plunges down to the bottom of the ravine, finally recrossing to its southern side, becoming a kind of terraee (K), which ends at the Pastern angle of the fort, 15 or 20 feet down the slope,-a curious and unique arrangement.
$\Lambda$ searp (NO), 5 to 12 feet in height, hat without a parapet, defends the interior from the trench-like hollow in rear of the momels. The interior in rear of the hollow is irregular on the surface, ame is rulely triangular, measuring about 300 feet in length ly 200 on the hase (O.M. 6 inch). From its apex there is a rapid deseent hy a sharpcresten! ridge ( P Q) to the junction of the two ravines.

The S. site of Guile Howe is steep, but is 50 to 80 feet lower than the fort slope on the other side, and near the top has a remarkable torrace about 20 feet wite (below ('). It may be the romains of another fort, for which the site is admirably alapted; plonghing of which there are evitent signs, anl the proximity of Raceleuchhead farm-huildings wouk account for the destruction of other evidence.
69. Duns: Lan:- It is matural to expect that Ihns Law should have heen an early seat of oceuration, projecting as it does from the skirts of the Lammermoor Hills into the phain of the Merse, as an isolated dome, rising ly moldrate slopes to the habitahle altitude of 713 fent above the sea, and about 250 ahove the phain, and with a consilerable extent of level gromel on the top. It is surprising, however, that any evidence of 1 rehistoric ocemation should $\mathrm{l}_{\mathrm{w}}$ left, as in the couse of aghe the medieval town secms to have cirded round the skirts of the Law from the N . side by the W., till its molern representative settleal down on the S . It is believed that the summit in medieval times was not ocenjiend ; and this belief, strange as it may appear, is contirmed by the aploment romains of prehistoriv fartification, which could harlly have eseaperl total destruetion hed a more molern town ocempied the sitn.

The remains consist of two concentric oval mounds, which, nithumh obliterated in some phaces, can le tracel nearly all round. The wedeall measurement is ahout 800 hy 600 fect ( $0 . \mathrm{M} .25$ inch), and the lomes are tracel where the groum bugins to fall from the nearly level smmat, s.merally gently, but westwan? somewhat almupty, the lower lim. husembling the slope a little where it is abrupt, and leeoming a terrace. A mmbler of stones lio about, or are embehded in the mounds ; and as there are no trenclest, the probability is that the fortress was of stone, althongh whether built or morely heaped up camot he determinel,
 on the s., appears to be part of the defences, hont suon slaeers off in a straisht line westwat, and is probally an ohl fence. In front of it ate traws of ploughing, amb six or eight swelling "riss" in front of the lines towards the S.E. are probably due to the same cause.

Towarels the S. the limes are obliteratel by a levelling of the gromel, Which, as Mr Ferghson, FSS.S.Sot., I huns, sugensts, may have beren to form jlatforms for Leslin's guns. Sownal irregular mound-enclosures of considurable size, othurs of a "hut circlu" type, ate traceahle here, ant within what seems to have been an entrance, tlanked by a straight mound, on the East.

Lestie's so callel " camp" is a small rembuht 200 fect square, with diminutive stuare hastions at the angles, formed of earth from a slight treneh in front, the moumds being only 2 or 3 fuet high at the most, amb 3 or 4 yarls wite. It is so much retirel on the summit as to command little more than the groume within the prehistoric (?) lines which surround it. Inms Latw is sulphosed to have been on the left flank of Leslie's encampment.
sume distance loderw the lines, on the Wr., a remarkably well-formen, sharp-crested mound runs for several humdred yarls almee the show that falls bwarts I uns Loch, known as "the Brontons park." This is the
 callel "the harnt towns" ; but the rume conlel not have hern to defermit it, as the shepe towarels the summit of the hill rises at onew from the motmel wery abruptly, and completely commamls it. On the where haml, it is dillicult to regarl it as a prehistoric work, intemben to defeme
a town on the summit, as the eurves of its irregular outline are concave outwards. It is also much more rugular in form than is characteristic of prehistoric mounds. It is of substantial dimensions, rising abont 5 feet alove the ground towards the summit of the Law, and perhaps double that height above the "Pruntons" slope, into which it runs insensilly.

## Whitader.

70. Wrimkitar Walls (fig. 22) - Wrinklaw (1192), one of the gentlyslopel, almost indistinguishable summits in the heart of the Lammermoors, falls gently south-eastward for 600 yards to the site, which is 900 feet above the sea, on the edge of a steep descent, about 100 feet high, to the Dye Water, a mile and a half alove Longformants. The S. eme is thus strong liy nature, and the E. and W. sidus are likewise [rotecterl, the former by a little burn which ents its way down the slope, the latter lyy an artificial-lonking straight dry ent ( A I ), which rons down the bank at a little distance from the fort. The only sign of fortification on these sides is a tritling moum ( $($ ) at the ehlge of part of the W. face. But the nearly level neck of the 1 rojecting site, which faces N.W., is fortilion on its sontherly half by a regularly formed trench (I) E), aloot 100 feet long, 10 to 13 deep, and 6 wide at the bottom, defended by a parapet 4 or 5 feet high. It is continuous with the deep eut on the slope (A I'), save for a depressed bridge of roek (between $A$ and I) which (crosses to the fort. On the northerly half, the dafence, in its present perhaps modified condition, consists of a platform 9 feet wide, raised only 4 feet above the exterior, faced lyy a retaining-wall (FG), and with a gentle interior slope. The entrance is leetween these two hatves of the N.W. face.

In the interior are remains prohably of three successive oceupations. Near the entrance are the honse and garden-walls (not in the plan) of a shepherd, who lived there within recent times. Towards the middle are foundations of ahout fourtenn rectangular structures, arrangel mainly in two rows, back to lack ; and at the sonth end (iu the space ll), as I was informed ly Mr Craw, F.S.A. Scot., there are shallow, salucer-like hollows, which at my visit were concealed by hracken. They are of the type found in several frehistoric forts in Berwiek amt

Foxhongh. Between the rectangular structures and the altos the of defence there is a substantial curved mound (1), which stretches shout three-fourths across the interior, and appears to have formed part of an


> Figs. 22. Wimklaw W ill.
inner line of defence ; and in front of its cast wal a circular structure, probably a kiln for drying corn, stands close to the little rill.
71. Cransluans.-On the N. sile of Thorter Cleneh, a mile S.W. of Cranshaws church, 800 feet alove the sea. The O.M. shows $\frac{3}{4}$ of a circle, 260 foet diametre over all, consisting apparently of one rampart and trench (no other information).
72. Shamatiank IIIll.-JIalf a mile N.W. of Ahary St Pathans church, 800 feet above the sea, at the edse of a steep descent of 300 feet from a hroal-topped hill to Monynut Water, which tlows only 100 yards to the W. The O.M. makes it pear-shapeet, 300 by 250 feet, consisting of a single massive ring, lut with part of an outur one on the E. side, the distance from crest to crest of the concentric ramprarts leing about 60 feet (no other information).
73. Cocklourn Law (tig. 23).—Four miles N.N.W. of Duns, 1064 feet above the sea, and 650 feet above the Whiteder, which winds romul it at a distance of $\frac{1}{2}$ mile to the N. and E. The defensive lines surromel the summit, which rises about 40 feet alove them. The general form is an oval of 500 ly 380 feet over all, and 330 by 280 interior measurement, according to the Ormance Plan, but Mr Franeis Lymn makes the latter 365 ly 248 . The E. face, strong hy nature, is defendel by a single rampart at the ende of a short hat steep descent, but the lines are doublel at the S.W. emt, where aceess bugins to le easior, and trebled on the W. and N.W., where the approach is quite gentle. All these linms are simple, grasegrown, but stony momels, a few feet high and of molerate willh, without trenches. As they sweep romed the W. face they are widnly apart at the N. ent, but approximate gradually southwards, the clistance from crest to crest hetween any two of them varying from nearly 60 foret to little more than a third of that, The catrances are remarkalle for their number and struetme, and show an mansual anxiety on the part of the lmiders to secure a thanking defenee. The entrance from the $S(A)$ is where the single castern line meets the double southom one, and is quite simple; it is dankel intemally ly a straight rampart joining the outer and immer lines on the W . side. The Western entrance ( B I) is whare the domble line from the S . meets the trelbe line from the N. As it passes from the exterior to the midulle line, it is flanked on the N. ly the end of the outer line, which embs abruptly here, and on the S. ley a little eireular momel, the remains,
perhaps, of anme idfensive work. The passage is straight through the midule line, but then tums sharply to the left and pieress the imner line 20 yants further N., in an oblique manmer, flanked on the N. site liy it


Fig. 23. ('whinnu Law.
travere, at lirst curved and then straight, which rommen the inure with the midde rampart. The northern entrane (C') abso penetrates
the three lines obliquely, but the details are different. In entering the work a flanking defence is obtained hy the outer rampart leing carrion further ont on the N . than on the S , side, and being furnished on the N. side with a short arm at right angles inwards, which directly flanks the approach to the entrance. In passing through the middle line, the entrance seems to lave loen flanked by a considerable mass of structures, perhajs gnard-rooms, but mere low mounds remain, one of them, however, ilistinctly forming a small rectangular enclosure.

There are obselure traces of structure in the interior.
From the whole character of the momels aml the entire alsence of tenches, this has leen, in all probahility, a stone fort.
74. Etin's Hull (fins. 24 ancl 25).-Walf a mile N.E. of Cockburn Law fort, $\frac{3}{4}$ of a mile $\mathbb{W}$. of the southwarl bent of the Whitader at Ella (Elbow?), 250 foet alhove that river, and 660 alrove the sea. A description and plan of this fortress, with its containel broch, ly lhr John Stuart, has alrealy appeared in our Promeetinugs for 1869 , lout as these have been supersedel hy a more precise plan and account by Mr John Tumbull, after excavations had heen male, it will not be ont of place here to repromee his plan (fis. 24) from the Proreentinys of the Bervichsthive Naturetists' Club, and to give a bitef summary of his paper. I have allem a plan (fig. 25) of the N.W. ent of the fort taken ly myself in 1893 , as it shows some points not sufficiently adverted to ly Mr Turnbull, together with a few observations on matters of detail, which differ sommewhat from lis. My plan is on the same scale as the others in this $1^{\text {rapur }}$, and Mr Tumbull's is somewhat reduced, to correspom with mins.

The site is on a kind of shoulder or terrace, which is in fact the termination of the gentle delivity of 400 feet from the top of Cockhum Law, before an abrupt phuge is make to the Whitaler, 250 feet below. Here, facing the N. and N.E., the fort comes to the crlge of the deelivity, and the N.W. end is strengthenel lyy a deep hollow, ruming down to the river; but the S.E. end is boumben loy an irregular moterate slope, and the S.W. face loy the gentle acclivity of Corkhom Law, and therefore have no natnral advantage. The armeral form of the work is not unlike that of the human ear, the broal emb being to the N.W. The


Fı. 24. Fidin' Hall, on forkhurn Law, Borwi-h-then
total length, on Mr Turnbull's plan, is somewhat under 600 feet, and the greatest lrealth, towards the N.W. end, alout 370 . Near the S.E. end the brealth diminishes to about 250 feet. The lines at the broad and narrow ends of the "ear" are curved, but on the two sides they


Fig. 25. Ethin's Ilall, Cockhum Law, Berwickshive.
are nearly strainht. At the ends and on the S.W. face they apparently consisted, when Mr Turnhull's plan was taken, of two ramparts, each with a trench in front, and such is their present conlition, except that now there is no outer trench at the N.E. ent. These ramparts are
apparently of earth, although some stones lie about them. Mr Turnbull deseribed the trenches as still from 12 to 15 feet deep in some places, but 11 feet is the most I observed, and generally it is much less. The outer trench is only 3 or 4 feet below the exterior. As the lines biml round at the two emls towards the elge of the steep descent to the river, they fall off in stremgth, and, in conformity with the usual practice in works so situated in scotland, they might be expected to cease altogether on a side so strongly defended by nature ; but in this ease, the two lines are continued along the edge, although their character alters. As shown in my section (tir. 25, BL A), the inmer line hecomes a stony scarp (L) 6 or 7 fert hich, which probably may have been defended loy a palisate, and the outer one is changed to a stony mound 15 feet wide, supported on the ellge of the bank hy a retainingwall (A), neatly built, I8 to 24 inches high. Southward these lines get broken up by enclosures that line the S.E. entrance.

There are two original entrances, besides an evidently molern one. That at the narrow S.E. end (fig. 24) is close to the elke of the steep descent, and after penetrating the entrenchments, is continued in the interior of the work as a narrow approach towarls an enclosure containing the broch, ln'tween straight walls, flankenl hy stone foundations of various shapes and sizes, minutely duseribed hy Mr Turnbull. This phasage makes its way for about 60 yarls, or $\frac{2}{3}$ of the distance to the broch, which is phacel near the further or N.W. end of the interior. The other entrance ( 6 , firg 25) is situated where the nearly straight ramparts of thes.W. side meet the eurved ramparts of the N.W. end. It pierces the two ramparts ( 6 ; to Il) as if making direct for the broch, hut is then surdenly blocked by the salient angle of a massive mount (E (') apparently mainly of carth, lout with many stones lying on it, the south-eastern arm of which (C), parallel with the ramparts of the s.W. face, is straight, and regularly diminishing in bulk, disappeats after a couse of ahout 30 yarls; while the northerly arm, straight at first, lumbls slightly "astwards, and joins the imer rampart of the N.E. fice after a course of 60 yards. Mr Turnbull traced the easterly arm also romm to the N.E. face (tig. 24), so as, with the northerly one, to form an inner or third line of defence to the broch, but 1 failed to observe this. Narly
half-way along the northerly arm there is a break (fig. 25, M), through Which may have been the entrance to the enclosure containing the broch ( B$)$. If so, the entrance, after encounturing the salient angle of the mound (C E), must have turned sharply to the left through a slightly hollowed way between the northerly arm (E) and a platform (K) in sear of the imer rampart of the enceinte.

In the interior, but $s$. of the broch enclosure proper, eight eircular and two rectangular enclosures have been exeavated (fig. 24). Four of the circular ones, varying in internal diameter from 16 to 47 feet, and with stone walls from 3 to 8 or 9 feet thick, are in the larger slace to the $s$. of the long eastern entrance-passage, and some unexcavated monds in this space, abutting on the imer rampart, may contain others.

In the contracted space to the N . of the passage, between it anl the steep deseent to the river, are four more cireular enclosures 16 to 20 feet in internal diameter, and two rectangular depressions, one of which is bartially enclosed by a wall, and measures about 12 by 10 feet internally, lout the other is inlistinct. There are considerable remains of paving in some of the circular floors, particularly near the entranes.

The broch is notable as being one of the very few found s . of the Forth. It is also the largest known example, the dimensions as given ley Mr Turnbull being-

$$
\begin{array}{lll}
\text { N. to S. } & 92 \frac{1}{2} \text { feet. } & \text { E. to W. } 90 \text { feet. } \\
\text { S. . to N. W: } 92 \frac{1}{2} & \text { S.W. to N.E. } 92 \\
\text { Interior diam. } 55 & " & \text { Thickness of wall, } 15 \text { to } 20 \text { feet. }
\end{array}
$$

As shown on the phans, the wall contains the chambers ant begiming of the staircase characteristic of the brochs, although the height of the wall now nowhere exceeds about 6 feet.

The forts in the following gronp, though not all strictly in the Whitader distrist, are so closely commeted with each other that they eannot properly be seprated. They are situated where the undulating table-land of the Lammermoors ends castwards by a sudden dip from Buncle Eige ( 750 to 850 feet ) to the valley through which the coast line of railway sends ofl a branch sonthwards to supply the Merse or lowlands of Berwickshire. Buncle Edge faces S.E. and is about 2 miles
long, lout the high ground continues to mon castward for 2 mis more On the Elge and the slope to the valley below no luss than ten fort sites are marked on the (I.M., but there is nothing to be sem now on three of them, and the claim of the romains on three others to have bern furts is questionable. Altogether there has heen a remarkable group of apparently prelistorie enclosures here, but only four of them can now be proval to be forts.
75. Warlarbank, the most northerly of the group, is on the top of Horsky Hill ( 860 ), an castorn prolongation of louncle Filge, and liss 100 yards W . of the farm-house of W arlawhank. The top of the hill is a broul-backed ridge, so that the site is almost level. Thu wal fort, much that med by frequent plonghins, consists of two concentric mounds with a trench between, with a third mound at the E. and wakest cml, From crest to crest, the distance from the inner to the midhle rampart here is 12 feet, and from the midule to the outer one 30 feet. In some places the trench is still 5 or 6 feet deep below the interios. The dimensions of the fort on the O.M. are $4 \times 0$ ly 330 fept over all, but Mr 11. H1-witt Craw, F.s..1. scot., who paced it for me, made it somo:what less. The interior, from crest to crest of the immer rampart, les make to be 357 hy 225 feet. Irohably this was an earthwork, although a foorl many small stones lie about the moumls. The simgle entrance is from the s. E.

Fustorlund Bume- Mhout 1200 yarts $s$, of the last, 200 yarls E. of the hurn, and a little more than 600 feet alwoe the seat, the " sujposed site of a camp" "is marked on the 0. M. I did not go to it,

An almost level walk of a mile from Warlawbank along Jowsley Hill leaks to the N. emb of Bomele Edre and thre Iowhosh phatation, a narrow tir-wood which lines the Ehge without a break for 2 mike, sending tomgos down the slope hore and ther, making buw le bige a romspicuous lambman from grat distanees to the E , and S .
76. Bunde Eilye No. 1.—120 yarls from the N. enulof the plantat tion, completely crossime it, and emerging slighty on the elevaterl mown to the W., and on the shope to the E., is an oval fort, 5010 by 390 foet over all ou the ( M. M., hut which by Mr Craw's pacing is redued to about 440 feet hy 360 feet. The single mound and trench oceupy a width
of 30 feet, and the trench is nowhere more than 5 feet helow the crest of the mound ; lreaks in which, however, show so much stone, that in all probability we now see the mere overgrown dehris of a stone fort,

The interior has been quarried, and several ramps that cross the trench have probally been caused in quarrying operations, or in phundering the wall of its stones.

A few yards to the S.E. of this fort a straight entrenchment rums north-westward, partially in the woon, but mainly in the open moor, for a total length of 600 fret. About 750 feet south-westwarl a similar entrenchment rums parallel to the other, also partly in the wood, partly on the moor. The ends of these in the moor are connected by a slightly curved entrenclment, 750 feet long, fonvex outwards. Thus three sides of an enclosure are formen, the fourth side, towards the S.E, or edge of the hill, being open. The entrenchment consists of a slight mound and trench, altogether only about 15 feet wide, the momel heing only 2 feet high at most. It is marked "camp" on the o.M., but has probably been a fence in comection with the neighlouring fort; the length of the sides is taken from the O.M. ( 6 inch).

About 550 yards S. by W. of No. 3, on the slope of Buncle Eike, in a field more than 600 feet above the sea, near the farm-house of Marygold, the site of a "camp" is markel on the G.M. I did not visit the spot, hut, looking from ahove, could see no remains.

Skirting along the phatation for $\frac{1}{\frac{1}{2}}$ of a mile, another enclosure is met with like the one in comection with Buncle Edse fort No. 1 . It is entirely on the moor, however, the length of the two short, parallel, straight sides, which start from the elge of the plantation, being respectively 50 and 300 feet, while that of the cursed side on the moor is no less than 1500 feet. Towards Buncle Edge the enclosure is quite opm. The structure consists of a mound about is feet across and 3 feet at most, alove a treneh 3 feet wide at the frottom, with another trifling mound to the outside. This also is called a camp, in the O.M., hut although of stronger make than the last, it too is more likely to have been a fence in comnection with one or other or both of the two following "camps."

One humtred and fifty yards S.W. of this enclosure, outside the
plantation, on the moor, the site of a camp, is marked on the O.M. No trace of it appears to remain.
77. Buncle Eidge No, 2.-One hundred and fifty yards from the last, and $\frac{3}{4}$ of a mile S.W. of Buncle Eitge No. 1, in the plantation, is a fort of much the same character, which must have been almost in contact with the large enclosure just described. It is an oval, measuring over all 510 hy 405 fret on the O.M., but according to Mr Craw's pacing only 324 by 303 feet, of which the interior claims 243 ly 219 . The defeners consist of a single mound rather more massive than that of Buncle Eitye No. 1, with a trench in front; and in some parts an outer, much smaller momed. The main mound is rongh and steep, a good many large stones lip alout it, and the prohalility is that it was a stone wall, now demolished, and overgrown with grass, bracken, di. The interior, which slopes gently to the s.E., is also rough and irregnlar. Near the S.E. end a straight mound traverses the interior, but only extends half way across it from the S .

Ahout 500 yards S.W. of the last, 700 feet above the sea, on the ploughed slope, where it suddenly hecomes sterper, booking down upon and about 350 yards due $\mathbb{W}$. of the poor remains of Buncle Castle, 200 feet below it, a "camp" is represented on the O.M., oval, with a single enceinte, and measuring ahout 240 hy 150 fect. It is now quite imlistinguishable as a fort, although the surface is still untongheml. The position is not a matural one for a fort, lwing not at the mbe of a steep descent, loat on the lesimning of the descent itself, and it looks almost as if it had been guarmed. The surface is covered with impogular grassy mounds and scattereed heaps of small stones. This may hase been an carly villare rather than a fort.
78. I'raston Cleurle (fige 26).-Six hundred yards S.W. of the last, at the S.W. end of luncle Edge. The roal hore, ascending from the Merse to Lammermoor, winds through a little pass called Preston Cleuch. On the X.E. side of the roal rises the commenement of Pmele Edge and the boghush plantation, and on its S.W. side a stemp aseent of about 30 to 40 feet forms the N. front and part of the E. .nnd of a strong and unusually well-preserved fort. At the W. and there is also a rise in two stages from the road, hut the whole S. face has no natural atvantate,
the groum in front lowing nearly level with it. This disposition of the groumd eanses a varisty in the kind of defenee. In the strong N . and N.E. there is simply a searp, partly furnished with a parapet, descending to a level terrace ( 1 B()$, 6$ or 8 feet below, cut on the slope; but


Fig. 26. Peeston Cleuch.
the weaker W. emd and the $\mathcal{H}$. front, which has no natural strength, are fortitied lyy three conerntric ramparts with intervening trenches. The inner rampart at the $W$. and thorongly commands the two outer ones (section 1) E), as they are on the shope lelow it, but beyond there is a level space about 40 feet in width, hounded westwards ly a natural
mound ( F in plan), lwhind which a considerable berly of assailants could shelter, completely coneealed from the fort. On the S. and S.E. (seetions G II, K L) the fortifications assume more formitable proportions, the imner trench leing from 10 to 12 feet decp, in plaves, and the onther one 6 to 7 fent below the top of the outer momed, which rises only a foot or two ahove the exterior. It is simpular, however, that to the s., the millle rampart ( I in section K I L) is much hinher than the inner one ( K ), completely cutting off its view of the onter rampart ( L ) amd country beyond. It is pessible, indeed, that the immer rampart was originally raised to a higher bevel, perhaps ly a wooden or stone erection, as the top is flat and 12 feet wide. The crest of the middle rampurt, on the contrary, is sharp, but towarls its $\mathbb{V}$. end it cives off a narrow path or terrace ( M N ) ent on the imer side of the rampart, and descending westwarl, of no apparent use, as it is too low down to surve as a hangette; perhaps this tertace is not original. The ramparts end abruptly on the East at C, but in such a mamer that their trenebes command and tlank the terrace ( $1 ; C$ ) at the N.E. end of the fort. The entrance has ajparently leen at the N.W. ent (B) of this eastern terrace, and is flamked by the E . end of the hinher and witer terrace ( A 月) of the N. front. From the S.W. a wide opening (0) penetrates the ramparts, lat it is either entirely modern, or if it was another entrance, it has been much alterest aml its original character destroyed. The inturior slopers gently from N . to s., and apparently contains some ohsienre fomblations, lat the indications are too dubines to be deciphered withont exavation. According to Mr Craw's pacing, the fort measures 462 ly 368 feet over all, and its interior 252 hy 216 from crest to crest of the inmer rampart.
79. Hubrhester-(lig. 27)—on the western edye of Lamberton Monr, where the elevated groum falls steeply towards basselrig fam, although not in the Whitamer district, is the only fort in the long stretch of 10 miles of high ground from the Buncle Edge grenp to the sata, overlooking that district, and therefore may be fittingly indluded here. It stands 700 feet above the sea, and emmmands an extensive view towards the N. and W: The southem half of this oval fort is wery well preservet, while the northern half, in a different parish and farm, is
totally obliterated. Probahly it was never so massive as the sonthern half, because the defences of the latter begin to lose strength as they bend northward, and the natural strength of the northern half was greatest, as it was near the edge of the steep descent. The existing defenees consist of two remarkably high and regular, narrow-erested mounds, with two trenches, the immer one being in places 9 or 10 feet deep, whike the outer one in some parts is 6 feet leelow the top of its comenterarp, which has no parapet. These defences end eastward at what has heen the entrance, as seems provel hy the neat rounting off of the imner trench. But where they near the entrance the ramparts have heen lestroyed, as the onter trench falls short of it by 20 yards, and the immer rampart, from a distance of 12 yards, falls rapidly in height


Fig. 27. Ramparts, Habchester.
till it disappears at the entrance. The length of the inner rampart I pacel ass $4 \geq 0$ feet along the crest. The over-all length of the long axis of the oral on the $6 \mathrm{in} \cdot \mathrm{h}$ O.MI is about 4.50 fmot . Close in rear of the parapet of the immer rampart is a zone alout $l \boldsymbol{\sim}$ feet wide, oecupied by a sirins of little mounds ant hollows, probably the remains of some kind of huts, and in rear of these is a slight hollow like a rondway between the zone of momeds and the centre of the interior. The fort is evidently an earthwork in the main, hut there are some signs of a wall having beren erected on the top of the imer rampart, which, however, may have bern modran. I give (fig. 27) a view of the untually well-preserved ramparts and trenches.
80. Chestor Hill, Ayfonn- - $A$ mile and a half E.S.E. of Aytom church, 539 fret above the sea, on the eilge of a steep bank. The O.M. represents the fort as of an oval form, measuring 450 hy 250 feet, the N. side being formed lyy the bank, and the S. represented ly a dotted line, as if merely traceable. I understand that no vestige now remains.
(II.) (iroup of Furts near St Abb's Head and Coldingham Loch.

This remarkable group (Map, fig. 28) comprises ten of fourtepn forts marked on the O.M. in the hilly district that lies between the Eye Water


Fig. 28. Position of Forts at St Abb's Head and Coldingham Loch.
and the coast. Seven lie within a radius of half a mile from the S. angle of Cokhngham Lorh, and all ton in a space $2^{2}$ miles long and half a mile wide, where now there are lat three farm-honses, and probably mot a score of inhalitants. In the map the position of the forts is shown by letters which correspond with those in the text ; the figures give the height above sea of the clitts on the coast and of some parts inlame. The forts may be divided into a St Abl's gronp of two ant a Loch
group of "ight, as the two groups are separated by high gromm which concerals them from each other.
s]. The st aldis ! monep is situaterl on the s. site of a little valley that descends to a level of only ahout 50 feet above the sea. On the N. side risps the steep slope to the edge of the St Ahb's cliffe, which presents a fine, irregular outline against the sky as seen from the forts. Eastwards they command a fine view towards Coldingham shore and


Fig. 29. Forts near St Ahb's Iteal.

Fyenouth. They thas look from no great distance upon the surposed sites of Ellais Numery to the N. and of Sit Abb's Kirk to the E. Their green sites, still undefaced ly the plongh, rise conspicnously from cultivated fields.
a. - (figs. 28 and 29 )-stands ahout 270 feet above the sea, $\frac{3}{4}$ of a mile due S . of sit Abl's Heal, on a stepep little flat-topped knoll, 40 feept ligh at the N.W. end, but diminishing to the S.E. till it is nearly level
with the field from which it rises. A single rampart, apparently of parth aml stones, girdles the N.W. half of the top, and has an entranee towarls the s.E. half, or accessible neck, ujon which are remains of other momuls, too much destroyel to be interpreted. On the steep $\mathcal{X}$. slope are two terraces (between $I$ and B), 9 fret wide, conspicuous from afar. The elimensions of the oval enelosmere are about 210 by 96 feot, In the interior are some rectimgular grassy "foumbations."
1.- (tigs. 28 and 29)-a quarter of a mile N. W. of the last, 370 fent ahove the sea, on the highest part of an elevated field, loat with no immeliate natural strenorth. It is of a squarish wall form, and has a single, mach dilapislaterl rampart, apparently of earth and stones, with an entrance to the S.E. From the $W$. side of the entrance a "fonndation" runs straight into the interior for about 70 feet, then eurves as if to rejoin the rampart on the W. sile. Within the space thus abost enclosed, and at its N. $\mathrm{V}^{*}$, ensl, are two "hut eireles," almot 25 and 21 feent in diameter respeetively. Ontside this enclosure, and abutting on the E. rampart, is anothor, 32 feet in diameter. The over-all dimensions of the fort are ahout 175 by 120 feet.
8.2. Cobtingham Lorth aroup.-The loch lies about 430 foet above the sea, in a hollow $\frac{1}{4}$ of a mile $s$. of and 50 feet below the edge of the clifis that run westward from St Ahb's Inoml. It is of a trianghar form, with a straight base 450 yark in leagth, ruming from N. W. to N. L. It rapilly contracts to a narrow point to the N.W. Its length is about 700 yarls. Aromm the loch, althongh not all in sight of it, are no leses than eight forts, if they all deserve the mame.
c.-(fig. 30)-hes 1100 yanls dhe $W$. of $l$, the nearest and highest of the st Abl's grouj, but, like all the members of its own group, at a much higher level. It is alout 540 feet above the sea, and is situaterl ahout 1.50 yarts from the E. angle of the loch and 250 from the clitf efge, on the top of a recky knoll, from which the groum slopes pretty gently, "xeppt morthwards, where it falls abruptly and ronghly, a height of about 30 feet. It is oval in form, aml is defomelel by ( 1 ) an imere rampart running all romal, ant measuring about 400 foet alons the top; (2) a midelle rampart, not confimed on the steep N . side: (3) : muter rampart, also deticient on the $\boldsymbol{N}$. sile, remarkably distine amd regniar
on the Wr. and S., but apparently stopping abruptly on the E., unless it is represented by a not very well marked terrace.

The entrance is to the S.E., and passes straight through the ramparts. On either side of it there is a complex network of "hut circles," constructed partly in the ramparts, partly between them, only one being in the interior, close to the W . side of the entrance. The total number that can be distinetly mate out is six on the W. and as many on the E. side of the entrance, anl they vary from 18 to 30 feet in diameter from erest to crest of their mounds.


Fig. 30. Fort near Cohliugham Loch.

The dimensions of the fort over all are about 280 ly 230 feet, the interior being 170 by 125 , and the width across the thee ramparts on the S. side 105. The interior slopes from N. to S., and is bisected by an outcrop of rock from E. to W. Orenings in the turf of the ramparts show small stones unmixed with earth, and there are no true trenches.
d. Ahout 400 yards S.E. of the last, and the same distance E. lyy $\therefore$. of the E. angle of the loch, 450 feet above the sea. A tlouthtful fort. It is of a spuarish oval form, with a single slight rampart, entered from
the N.E., and is completely commanded on the S.E. by a little height, which rises directly from the rampart lyy a steep rocky slope 10 or 12 feet high. The enclosure measures 100 ly 70 feet over all.
e. Alout 500 yards S.W. of the last, and somewhat less S. hy E. of the E. angle of the loch, 450 feet ahove the sea, on a good defensible site, with short, steep descents, exeept northward, where the approach is gentle. The single inclosing mound is much injured by a quarry and general dilapidation, but is sulstantial in some parts, and is stony. It runs in a semicircle roum the southem half of the site, but assumes a straight course on the N. Thus only the half of the elevated site is enclosel, but it is probable that the other half was originally also taken in, as is indicated ly some olseure remains. The original form, therefore, may have been an oval, bisected lyy a central rampart. The dimensions of the existing enclosme are ahout 160 by 140 feet over all. The straight rampart is 105 feet long at present, but is broken off ly the quarry at the W . eml.
f. A quarter of a mile $S$. by E . of the S . angle of the loch, but not in sight of it, 485 feet above the sea, on the top of a gentle rise, and much impaired by quarrying and general decay. It seems to have had a single rampart, apparently of earth and stones, running in a somewhat irregular oval course, except on the $\mathrm{N}_{\text {, }}$, where it is straight for about 100 fret. The dimensions over all are 200 ly 170 fect.
(1. Close to West Loch farm-lionse, 100 yarls S.E. of the S. angle of the loch, and 492 fret above the seat, there is a work of doulitful character. It has no natural strompth, and eonsists of two eircular momels, the immer of which is mueh marer the outer at the N. side, where the entrane is, than elsewhere. The outer mound, apparently of earth and stones, is irregularly formed, and aparently well preserved, but it is only 3 or 4 feet high, and of slight width. It is slightly trenchect in front. The interior is phated, and but for the too remblar and sulntantial character of the rampart, and its entranee, the work might he taken for one of those eireular plantations surroumed by a mound which are so frequent in scotland. The inner mound is only
about a foot in height ; its diameter is only about 40 feet, and that of the whole work 130, on the O.M.
$h$. This work is placed on the O.M. 500 feet above the sea, aml 200 yarls S.W. of the W. emu of the loch. It is represented as mearly rectilinear, with a single rampart, and measuring 120 by 90 feet over all. I coukd not find any trace of it on or newr the spot marked on the map.
i. Eamsheu!le (fig. 31).-This is the most important fort of the group. lts situation also is one of the most remakkable in Scotland, perehed as it is on the alre of the highest print of the magnificent line of clifls that fringes the Irwwickshire coast. Hrwe the precipice rises almost perpendicularly from the sea to a leeight of "xactly 500 feet, or about 300 above the cliff at the renowned healland of st Abl's, which lies a mile and a quartur due E. of it. The fort consists of two parts, each rutely oval in form, one side in each being the menencel edge of the precipios, and the other a triple rampart on the landward sisk, where the ground slopes, directly from the edre, gently towards the mashy hollow at the N.W. end of the loch. The two parts tonch each other in their long axis, but their ramparts are only partially comecten, and in such a mamer that each part is separately defensible. Ahditional strength is given by a steep descent 300 feet ileep to Wrestrur ] ban Bum on the extreme $W$., and lyy indentations of the cliff at the extreme E. end, and in the centre where the two parts meet. Owing to the fall in the ground landwarl, the fort, viewed from the opposite site of the lorh, which lies 70 feet halow the edge of the eliff, appears to be on a little height, called Tun Law.

The Hestern dirision or fortlet appers to la the stronger of the two. Its defences consist first of an inner rampart, rudely semioval in phan, amb ending on the edge of the cliff at either emb. Its scarp falls upon a platform Jeginning at the entrance, which is near the W . ent, where the position is most defrusible, and gradnally expanding to a width of 30 fent at the E. eml. This phatform, with the midille rampre in its front, constitutes the mildle line of defence, the onter one leing formed loy the third rampart, which, however, has no phatform in its rar. As the defances alproach the k . end, thery are morlitied so as to afforl at


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=
$$

$=$
Fig. 31. Eirnshengh.
better protection in case the eastern fortlet were stormed. The inner rampart turns alruptly towards the cliff, so as to form a nearly straight face towards the E. ; the platform in its front is wilenel ; the middle rampart stops (at $A$ in the plan), hut the tine is immerliately resumed by a stronger rampart, which, begiming close in front of this sudden stop, lifurcates at once, enclosing a seronl phatform (B), triangular in plan, its lase resting on the precipice edge. In front of this the outer rampart is continued without change to the elge. Thus a front is presinted towarls the eastern fortlet of four ramparts and two platforms, or une more of each than on the landward front. Moreover, as only the nuter rampart joins the other fortlet, the connection of the two is so slight that in the event of the easterly or weaker one falling into an enemy's hands, the defensibility of the more important work would be but little impaired. The chief simensions of the ramprarts at three points are given in the sections I) $\mathrm{E}, \mathrm{F}$ G, and II I.

The interior, roughly oval, measures about 200 by 100 feet on the O.M. Ranged against the inner rampart are eight more or less circular fommations or hut-circles, and there are four more stanting free in the centre. They vary in size, the largest being 36 feet in diameter. Some stone is visible about them.

Breaks in the ramparts show stones mixed with earth, and in one phace apparently rudely built stones, lout excavation is necessary to show the structure of the ramparts, and whether there have been any trenches. The living rock crops out loth in the interior and on the scarps.

The entranef, situatel nore the $\mathbb{W}$. end, passes straight through the rampaits. It is much strengthened ly the steep descent in front of the ramparts, between it anl the cliff-edge, of 300 feet to Wester Dean Burn.

The Etestern ctirision of forthet has also three ramparts and a platform, hut the latter, insteal of lwing between the inner and midhle ramparts, ats in the western tivisiom, is between the middle and outer ones. It is also widur than that of the W. division, averaging 30 fect. The imurr rampart is quite indepembent of the W . fortlet, the sole connection with which is hy the middle one, which springs from the outer rampart of the $W$. fortlet ( $C$ on the plan) 80 feet from the cliff, and
 rampat, from which it is separated by the wide phatfome alrenty mentionn?

The ratrance, which is near the $W^{*}$. enel, passes obliquely thengh the rampurts. There are no hut circles in the interior, which measmes alront 250 ly 130 foet. The length over all of the two fortlets is ahout 720 fert, the lrealth of the eastern one over all being 230 and of the other 190, as given on the O.M.
$k$. This fort stands somewhat apart from the general group, separatenl from it ly the deep hollow of Westem I lean. It stamls on or near the top of Gutlaw llill, 500 fort ahove the sea, 14.50 yards W.N.W. of the W. end of the loch, and 250 yanls from the cliff edge. I hat not time to go to it, hut it is representell on the O.M. as a small work, with a single rampart of a some what semicircular form.

In concluting this account of these two groups, it may he noticed that they all have apparently a large proportion of stone in their ramparts, and that they are destitute of true trenches. Whether any of them were really of built stone can only be determined loy extavation. "1hut circles," generally of a large size, oceur in there of them. The entrances to these hut circles conld, I lelieve, be marlo out masily enough, lout thore was so much to do in my two visits to this rather remote spot that I neglected to note their pesition, "xcept in one or two instances. lat fir the valuable help rembered by Mr 11. II. Craw, WF. Fouklen, and Mr Ferguson, Inns, my notice of these interesting groups would have been more defective than it is.

Notes on some prehlstoric structures in glenelg and KINTAIL. By LOCKHART BOGLE, F.S.A. Scot.

Glenelg is peculiarly rich in structural antiquities. I have taken the measurements, de., of some of them, leaving out, however, the two wellknown Brochs, Dun Eletha and Dun Trotan, both in the Glenbeg, and now said to have been placed under the protection of the Ancient Monuments Aet.

Wun Griugaig.-From the manse of Clenelg, I crossed the hill to the direct sonthwark. When I came to be half way down the hillside, I noticed below me, on the gently sloping shoukder of a hill, a faint circlet of stones (fig. 1). The place is about 500


Fig. 1. On the hill between Glenelg and (ilenbeg. feet alove the level of the sea, and is slightly to the East of Correry farm, and the broch, Itun Trotan. The broch, however, cannot be actually seen from the stone circle. On examining the stones, I found there had been a circular enclosure of a wall 5 feet thick, surrounding an internal diameter of about 30 feet. Some of the stones were of large size. The site chosen would not recommend itself as a place suitable for defence, the sward being fairly level. From its fragmentary state and grass-grown appearance, this buikling probably belongs to the chass of prehistoric remains.

Continming onward, I reached the head of Glenbeg, where the prospect wikens into radii of remote glens, each with its torrent. Dun Gringaig is perchal on a rock towering over the ravine of the river. Before ascending the height, however, my attention was attracted to another and very peculiar circular enclosure close to the river (fig. 2). This was large in design, ant the walls of great thickness. Thongh very dilapidated, the walls could be easily traced through the masses of
strong heather which attempted to conceal the masonry. A row of large elongated stoncs had been placel upright along the imner edge of the circular wall, and each stone must have been firmly fixed beneath, as not one could be stirred. The height of the highest ahove the ground would be about 3 feet. I cannot divine what could have been the object of this methor of building. Exeavation may solve the problem. Neither this nor the previously deseribed circular buihling is to be found on the one-inch Ordnance Survey map.


Fig. 2. Circular fountation at the heat of Glenheg.
Must interesting is the hroch-like structure of I won Grigaig (lig. 3), hanging over the mountain river, and within somed of its everlasting murmurs. On the E. side, where there is no great natural protection, a stupentons wall has been reared, fully 15 feet thick at the hase, and much the highest part of the browh. The proximity of the river channel prechules the notion of its ever having been circular; the river being continel by the solid sides of rock must always have flowed as it now does. 1 give a sketeh from the N., of part of the

[^15]

Firs, s. 4. Plan and riew of exterior wall of Dun Gritrgig.
wall, with a strange twisted rowan tree, which looked as if it might be almost as ancient as the structure itself (fig. 4).
I) n Grugaig has the intermural galleies and other peeuliarities of the broch. As to the "ground floor" chambers, I was unable to see the approuches to any, the interior heing, of course, heaped up with dubis; but the first gallery is laid open most of the way. The wall on the E. side contains a second gallery, which is in a tottering combition (fig. 5). I remember once as a boy laving crept into this upper gallery for shelter from rain. Untold wealth coull not tampt me to minter it now. It is a pity that this very fine ruin las not been propped up like its two neighbouring towers in the glen, and


fut under the protection of the Boare of Works. The wall on the b: attaned the height of 14 feet, and, judging from the fallem materiat visible, must have been much highor. A namow wall linet the vera of the cliff, mobably to protect the inmates from the arows of the fore on the rock across the river. Traces of walls existel in the interion', which was $5 \mathrm{~S}_{2} \frac{1}{2}$ fect in its longest interior diameter. All the lintels hatl not been carried away; three still remained,-one over' a rloorway, most diftienlt of aecess.

The Biuphan Burblach (fig. 6).-I am not certain of the precise meaning of the word Baghan in this connection. Macleod and Iewar's Dictionary gives "Balhan ; a little harbour, a creek, a road for ship"," none of whith will apply to this sulject.

Joyce, in his Irish Names of Places, however, gives the following explanation in the chapter on Ilabitations and Fortresses :-" Beside


Fig, 6. The Biaghan Burblnch.
many of the old castles there was a hawn (Bathum) or large enclosure, surrounded ly a strong fence or wall, which was often protected loy towers ; and into this enclosure the cattle were driven ly night to protect them from wolves or rohbers. (bllonovan also accounts for the name "hawn," which frequently appears in documents relating to Irish history since the phantation of Ulster, as lowing the Anglicised form of the Irish Badhun, an enclosure or
fortress for cows. But in its Anglicised form in the 16 th and 17 th centuries it is often used for the courtyard of a castle or other fortitied enclosure.

Burblach is the name of the old farm on which the Bighan is situated.

Close to the stables of the Glenelg manse is a green hill, with a summit resembling the interior of a boat, slightly concave within, with rising prow and stern. A wall 11 feet thick forms the gunwale of the boat, with entrances E. and IV. The remains of the wall are nowhre over a few feet in height. The exact width of the entranees cannot be determined without exeavation, but it seems to he 6 feet. Inside are the remains of a hut of comparatively recent erection. Remarkable traces of a circle, 39 feet in diameter internally, are discovered near the centre of the enclosure. The walls of this circle are much grassgrown, and measure 5 foet in thickness. Numerons traces of small circular huts, 5 or 6 feet across inside, are foumd in the Bighan, which is of great size, the interior measuring 34 yarls by 56 yards. No

- vestiges of intermural chambers are to be found.

The Bayhan Ciallotair (fise 7).-This is at smatler Baghan, being 2.2 yards hy 24 yarls, beside the hill road which leads to Ardintoul. The walls, 8 feet thick, are


Fig. 7. The Baghau Galldair. composed of smallish stones ; and there are two entrances. Inside are traces of two circular huts.
"Ccistral MhirLeod" or MarLemt's C'astle.-Behind the village of Galldar, sheer clifis rise to a great height, and seem to threaten the hats beneath with destruction. On the edge of one of these precipicess is perched, like an eyrie, Mamleol's (astle (fis. \&). Castle, however, it never was, in the mediepal sonse of the word, and examination only temds to show that it belongs to that stramge class of prehistoric buikdings, constructed with dry stome, or, as is evidently the case here, with stone and parth. On the highest part of the summit a somicircular
wall of irregular form is drawn across the lesel space (fig. 9), leaving a warrow and dangerous eutrance to the E., where a slip might mean death. The wall is entirely grass-grown, lout some of the stones are still in situ. On the $W$. side, where there is no great slope, the wall measures 14 feet in thickness ; on the E, 9 feet only. There are traces of a hollow in the N. wall, such as might be eaused by a small window, but this explanation is cloultful. There is also what appears to be the remains of a row of large stmes in the centre of the W . wall. A similar appearance is noticed in the Bublach Baghan E. wall (iig. 6). A narrow wall forming the S . side of the fort seems to have run along the lip of the cliff, as if for protection from the preeipice. What seemed


Fig. R. Site of Machool's Castle.
to have been a strong outwork ran along on the N . to the cliff, where the onter entrane might have been. The natives had long been in the halit of poshing the stomes orer the rock and using them for the erection of their hats.

This " castle" is peculiar in having a well-known and frmly believed tralition relative to its oneupation as a dwelling in historic times. I olitained this tradition from several of the ohlest men of the place. "It was last inhalited liy 'Alistair Crotach' (the humplacked), the lirst chiof of Mareleod who came to Glenelg. His chite fell over the
rock and was killed; so le left the castle, and went to another dwelling called Dalla-mhor, on the site of the present Free Kirk manse." Alistair C'rotarth obtained a charter of Glenelg from James V. in 1539. There is no ruin of any molieval castle in cilenelg, and it seems to me quite prohable that this ancient prehistoric fort might have been used by Maeleod as a tomprary residence or hunting-lodge when he visited


Fig. 9. Macleol's Cantle-ground flan.
that comentry and collecten rents, fe. The smallness of the internal dimensions ( 1 s feet ly 34 feet), the difficult entranere, and the semse of the terrible storms which must sometimes sweel over the roek, make one fully realise what an eirie habitation "Macleod's Castle" must have been in old times.

## Kintail.

Near the farm of Beolary is a high alluvial bank, through which the river has cut its way. On the top of the bank are faint traces of some circular building, the half of which seems to have fallen into the river throngh the wearing away of the bank. In the bed of the stream, immediately below, can be seen large


Fig. 10. Cireular structure near Beolary stones. From the few stones to be seen on the top, I found the outer measurement was 13 yards in diameter (fig. 10).

Kintail, Dunan Diarmaid (fig. 11).-In close proximity to the E.C. manse of Kintail is a little peninsula running out into Loch Duich. A rock usurps almost the entire space of the promontory, amd on its top is found an irregular circle of very thick wall, almost level with the gromed and covered with grass. Some


Fig. 11. Dun an Diarmaid.
of the outer stones seem to be still in situ. No doubt the two-storied
house, a short distance off, has bern built of the stones. To the S. is a wide hollow in the wall, whish formed the entrance. Little or none of the structure eam be seen without excavation, hut from the outline not being a pure circle, and from the absence of indications of wall chambees, I consider it to lee no broch. Measurements from outside walls, Is yards by 18 yards.

The word Diarmait, associated with the In man or little Dun, also occurs in Leigh Diarmaid, or liarmailds grave (fig. 12), which hes in a tied close by. Twenty large rough stones, of an average length of 2 fret each, extend to the length of 27 feet in a double parallel row, while the measurement across from the outer edge of the stones is 8 fut. Five of the stones have been removed or have sunk out of sight. The remaining fifteen are embed ed on a level with the grass, which might argue for a great antiquity. The tradition of the natives affirms that liarmaid


Fig. 12. Diarmaid's Grave.


Fig. 13. Near the manse of Kintail.
and his wife are both buried here, - the Diarmaid being the hero celebrated in the Fingatian ballads.

Not far from the same manse, on the way to l horne, is found beside the road a circular walled enclosure (fig. 13). It seems similar in some pospects to the (ienelg Baghans. The space inside contains a small circular
building 11 feet outside diameter, and it measures in total diameter 15 yards. The walls are 5 fert thick; and there are two entrances, each seemingly $l$ yard wide. It is singular that the structure is built on a slope beneath a high cliff, from which arrows could he fired into it.

## III.

NOTICE OF THE DIRCOVERY OF A STONE CLNT AND URNS AT THE CUNINGHAR, TILLICOULTRY; By R. ROBERTSON, F.S.A. sot. WITI NOTES ON THE CONTENTS ANI TIIE SCULPTURED COVERING STONE OF THE CLST; By GEORGE F. BLACK, Assisזant Keerer of the Museym: and on the michoscoplCal FNAMINATION OF THE FIBROUS OR HAIRY SUBSTANCE FOUND IN TIIE Cist ; Br John sthutilers, M.D. Ll.D., Eneritt's Phofesson of Anatumy in the Univerisity of Aberdeen.

The Cuninghar ${ }^{1}$ is an elewated ridge of samel intermixed with gravel, about ${ }_{2}^{t}$ a mile to the E. of Tillieoultry. It lies N. and s. at right angless to the Ochils. The turnpike road has been ent through it at the southern end, and a few yards to the $N$. of the road there formerly stome a stone circle. This circle measured some 60 feet in diameter, and the standing stones are said to have been about $5 \frac{1}{2}$ feet of an average height. These stones have now entirely disappeared, having been removed, aceorling to local tradition, some forty years ago to cover a built drain at Tillicoultry llouse. The site of the circle itself has also been reduced hy a half, the place having loen utilised for a good number of years as a sandquarry. A small embankment which ran round the circle and the sites of some of the stoncs are still visible in the remaining half.

In April 1894, Mr Christie, teacher, Dollar, while visiting the place with a friend, observed the rim of a large einerary urn protruling alove the soil near the elge of the circle, and alomgsine of where one of the standing stones seems to lave been. In attempting to remove this urn it unfortmately went to pieces. The pieces were all carefully collectenl, aml the urn (which was filled with hones) is now exhilited in its restomed condition. It is of the msual einerary form, with a heavy overhanging
${ }^{1}$ C'unningar, Cunninghar, C'uningaire, -an obsolete word signifying a warten for rabbits.-Jumicson.
brim, and ornamented on the brim only, the ornamentation being composed of ohlinue lines of cirnlar impressions madn by the end of a romm stick scarmely so thick as a pencil. The um has been presenter to tho Muspum liy Mr Christie.

On becoming acquainted with this find I went to inspect the plaer, and on examining the site of the cirele my attention was attracter by the end of a large block of stome, protruding from the face of the sandpit. It was about 4 foot below the surface, and exactly where the centre of the circle must have been. As I knew that stomes of this size were not found in the sand-pit, I proceeded to investigate it morr closely. I then saw that it formed the cover of a eist, and on some of the sand leing removel the end slab was also visible. Cousidering tha diseovery one of considerable importance, I at one commonicated with the proprietor-R. G. Wardlaw Ramsay, Esi. - Who gave instructions that it shomlel be left untonched until I wrote to the Socinty aml endeavoured to get some one of experience to come and superintend the examination of the find. Shortly afterwards, from the pusition of the cist in the face of the sand-puarry, and the continual erumblines away of the sand, the covering hlock fell, bringing slown with it one of the end and one of the sidestals of the eist.

Fortunatuly I was on the spot soon aftar, and foumb the remaining portion of the cist and eontents untoucherl. Along with the Rev. If. Panl, F.s.A. Sont., I made a careful examination of what remained.

The cist was of the usual kind, formed of four rough slatos of fresstonr, the two longer sides of which lay N.E. hy S. W. It moasured $t$ fent 9 inches in length, $2 \frac{1}{2}$ feret in width, and 2 feet in depth. The cover was a huge block of erey granite, nearly 6 fore long, $4 \frac{1}{2}$ feet at the hroadest part, and of an average thickness over all of 2 feet.

It is calculated to weigh from $3 ?$ to 4 tons. The joints of the cist were carefully parked with elay; aml so thoroughly had this bren done, no sand or soil of any kind had found its way insile. The thoo was composed of a layer of pure samb, a few inches deep, from which all gravel had been thoroughly sifted out.

At thes. W. comer a very tine example of a "foml-vessel" urn (fig. 1) was found, in a perfect state of preservation. It stood month upwards,
and was perfectly empty. It is deseribed in the subsequent part of this commmication hy Mr (ico. F. Black.

A few pieces of the long bones of the skeleton were all that remainel, but there were sufficient indications that the boly had lain in a comtracted position, with the back towarls the N. side of the cist. The place where the heal had lain was also clearly marked, and several teeth were found, the crowns of which are in an excellent state of preservation, and show that the burial was that of an adult. No orna-


Fig. 1. Um of food-vessel type, from the Cist, Tillicoultry.
ments, weapuls, or implements of any kind were found, although the contents of the cist were earefully sifted.

At the siot where the heal hal rested was a quantity of a fibrous or hairy sulstanee, of a dark-red colour; and underneath this was a layer of white prhbles, some of them deeply stained with the same red lue. The former has all the appearance of heing the hair of some animal, and no doult a microseppical examination will determine its character. If found to le animal, if may be the remains of a skin on which the head restel ; it is, however, remarkalle that it should have resisted decay for such a lengthy periors.

The covering-stone (lig. - ), as I stated, had fallen to the bottom of
the sand-quarry, and lay nearly covered by sand and gravel brought down with it in its descent. On clearing this away a remarkable feature was lorought to light. The block was foum to he elaborately ornamented on its sides and upper surface with riugs, spirals, and lines. The labour of cutting these in the hard granite with the primitive tools of the perion must have been very great.
several suceessful photograhs of the stone and its carvings were


Fisf. 2. Covering-Stone of Cist at Tillicomltry, sculptured with Cops and Circles.
taken by Povost Wrestwond, Dollar. These are now shown, and give a good idea of the size of this remarkable stone and its ornamentation. I may mention that granite is not a mative stone of the district, lout many horks (prohahly iewearried) are found scattered over the southern slope of the welhils. This stone has now been removel to the vicinity of Tillieonltry Honse for saffety, and ean be seen there by any one interested in it.

I think it ean be safely coneluded that, judging from the character of VOL, XXIX.
the rist, its large and tinely decoratent cover, and its position in the centre of a circle of standing stones, this interment must have been that of a person of importance. The large cinerary urn is probably one of several extemting round the circumference of the circle.

Many other urns have been found in former years in the Coninghar and immediate neighbourhood. One found in a cist, while forming the western approach to Harvieston Castle, is now in the museum of Iollar Institution. It is a very fine example, and it is said it contained a flint implement when found. [See the description of this urn on p. 107 cunt".]
l'rofessor Strotuens said that he had examined the fibrous substance under the mieroscope. He had comparel it with human hair, and that of the horse and ox, and found it was neither of these. such hair kept its characters well, in illustration of which he exhibited a side containing hair he had foumd in a short stone cist at Parkhill, Aherdenshire, in 1867 , and a lock of hair found in 1858 in the cave in the island of Eigs, in which, towards the eud of the 16th century, 200 persons of the clan M•I onald were suffocated hy the clan M'Leorl. In loth of these the characters of human hair were evident. The fibrous material from the Tilliculttry cist is of a dull golden or lrown-red colour, in inregular tufts not longer than $\frac{3}{4}$ of an inch, soft and easily broken, and composed of fine fibres about a sixth the thickness of the hair of man, the horse, or the ox. Interlacing with part of the rel tufts are whitish fibres, like fine threat, from twice to thrice the thickness of the hairs above mentionel, lranehing ahruptly at intervals, and apparently of vegotable nature. The fibres of the red sulnstance show the characters not of wool proper, like that of the sheep, but of the umber hair of varions quadrupets, sometimes termed their "wool." The strongly serrated edges (or surfact) which wool proper shows, and to which its felting property is said to he due, are not here jresent. The cross dark and light markings are so close as to resemble the markings of striped musenlar fibre, and the serrations caused by the distal margin of the covering-scales are faint. It might he the "wool" of the dog or fox, which would suit the colour, or, for structure at least, that of
the rablit. It would reguire a great heal of comparative microscophe observation to determine the particular animal. It was to be noted that the tufting does not seem natural, but as if the "wool" had been crushed. The tufts and individual fibres easily break in the fingers, and there is a debris of brokentlown tibres, approaehing powder.

Mr George F. Plack said :-As Mr Rohertson has very fully duseribed the circumstaners relative to the finting of the cist at Tilliconltry, it only remains for me to draw attention to its contents and to the eoverimgstone.

The wn is of the fool-vessel type, and measures $4_{4}^{3}$ inches in height by $4 \frac{1}{2}$ inches across the mouth. The whole of the onter surface of this urn is ornamented with bands of zigzag cord-marks, which have been impressed in the elay while in a suft state. In addition there are eight projecting perforaterd knols or ears, placed at equal distaness round the shoulders. Two of these unfortmately are hoken oft.

The piered ears, which are a rare feature in these mons, are believed to be for the purpose of allowing a thong or conl to be passide through to arlmit of the vessel leeing suspended; lut in the case of the urn before us, the holes, I think, are too small to admit of sueh a nser. Canon (ireenwell has suggested that urns of this type with piereed ears are of earlier date than those with the cars unproced; and he adds, that when they ceased to be suspended, the ears were still retained, in accordance with the common prineiple of survival, bat were not piereed, and so became mere ormamental appendages.

The matted sulstance found in the eist, at the sjot where the hean rested, appears to be of two materials-the lighter colouret, composet of the matting of roots; and the darker colomed, apparently a kind of felted or unwoven cloth. A discovery of a similar material was mate in a eist containing mons and a spoon of ox-hom at liroment, I werury, Aberteenshire, ant is here shown for comparison. There are also on the table two small pieces of materials of similar texture, one portion of which enveloped the long bones of a skeleton in a cist at bamhill, near Brouglity-Fery, while the other was found in a cist at l'arkhill, Aberdeenshire.

The association of pebbles of quartz with burials of the Bronze Age is not common in Scotland, but a few instances have been brought together and discussed loy Sir Arthur Mitchell in a papur printed in the 18th volume of the Proceudinys.

Probably in one or two of the instances there quoted the pebbles may have formed merely a flooring for the cist, but in most of the cases they appear to have possessel a symbolic meaning.

The covering-stone of the cist, as will be seen from the photographs, (see the illustration on p .193 ) bears on the face a serims of concentric circles, and ifirals springing from one of the groups of circles. Four grooves also mite the same set of circles with the left-hand edge of the stone. On the edge shown in the photograph there is another group, consisting of two concentric circles. The unevenness of the surface of the stone appears to have been of no moment to the sculp,tor of the circles, as the incisions follow the surface into its sinuosities and depressions.

As corering-stones of cists are very rarely sculptured in any way, I have thought it worth while to bring together all the recorded scottish examples of circle-marked slats, for comparison with that found at Tillicoultry.

In 1871 a cist was discovered in the course of clearing land on the farm of Westeryirl llouses, four miles north from the village of Carnwath, Lanarkshire. On examination the cist was found to contain an urn of the drinking-eup, type, ornamenterl, and about 9 inches high. At the same time the covering-stone, on leing turned over, was seen to be seculptured with three grouns of concentric circles and two curious triangular markings. Both the urn and the cist-cover are now in the Museum, ant the latter has been fighred in the Proceentinys. ${ }^{1}$

At Coilstield, Ayrshire, in 1785, a large slab, bearing a series of concentric cireles, was found acting as the covering-stone of a cist containing a portion of an omamented urn of food-vessel type. In this instance it is not recorkel what prosition the senlptured face held in relation to the cist, whether directed outwards or inwards. ${ }^{3}$

Another circle-sculptured slab was found about the year 1864 cover-

$$
\begin{aligned}
& 1 \text { Proced. Sor. Ant. Srot., vol. x. p. } 62 . \\
& { }^{2} \text { Wilson, I'rchistoric Annals, vol, i. p. } 480 .
\end{aligned}
$$

ing a cist at Carlowric, near Elinburgh. The cist here was composel of rude ummarked slabs of freestone, and contained nothing beyoul a stratum of unctnous, black, fatty earth, with traces of lecomposed lones. The cover bore three series at least of concentric circles, ame wach serios was fise in number. In this case the sculptured face was directed to the inside of the cist. ${ }^{2}$

When making a new roal through Craigie Wool, about a mile distant from the place last mentioned, the end of a cist was left exposed at the top of the embankment. The cist consisted of two lateral stones and apparently two end stones, and was coverel with a slab about 3 feet hroal and at present only 4 feet long. The interior or unter face of the slab is carvel with several grouls of concentric circles, and formedy one or more sets existed on portions of the slab that were broken off and lost. An urn is supposed to have accompanied this interment, as one of the workmen stated that on opening the cist they found within it an object which he irreverently deseriberl as "an auld can."

A fifth slah, now in the lluserm, although not a envering-stone, may also be mentioned here, as it formal part of a cist. I refer to the slab from Carnban or White Cairn, a village on the line of the Criman Canal, in Argyllshire. It hears on one face a series of five concentric lines of a lozenge form, and when found served as a panel in the cist, and had the carved face directed to the interior of the grave.3

From the evidence here adluced, I think we may safely conclude that at least some of the mysterions ring-marked stones are of Bronze Age date.

[^16]NOTE ON TWO LATE NOTICES (1560 AND 1563) RELATING TO THE CULTUS of st Ninian in EngLand. By the Right Reverend JOHN DOWDEN, I.D., F.S.A. Scot., B1shof of Edinburish.

In the year 1560 was pullished a Commentary on the Prophet Haggai by James Pilkington, who in the following year (Mareh 2) was consecrated Bishop of Iurham, in succession to Bishop Cuthbert Tunstall, deprived. This work was republished in I562, together with an Exposition of the Prophet Ohadiah, ${ }^{1}$ ant has again been printed (1842) in the Parker Society's elition of the Works of James Pilkingtom, B.I). (mmler the editorship of Professor Scholefield, of Cambridge), to which the referanees are here made. Pilkington was a vigorous controversialist on the side of the Ruformation ; and in his Exposition of the Prophet Jlaggai, he attempts to reply to the charge of "diversity" among "the grospellers" by a the quoque charge against his opponents. "Some pray to one saint as more in (iod's favour, some to other. Some use Trinity Knots, and other St Katherine's. Some have St Tronion's Fast, other our Lady's, and many the Golden Fridays" ( 1,80 ).

A later work by Bishop Pilkington, pulbished in 1563 , and entitled The lunnymye of Pautes ('hureht in Lonuton, in the yeare of our Lord 1561, and the iiii. day of Jume by Ly! hltuynge, de., contains a passage following the same line of comment:-"Fastings were more than I know; some used St Rinian's, some our Latly's, some the (ioldun Frilays, some every Welnosilay, some half Lent, some whole," de. (1. 551 ).

It will he ohserver that the "St Tronion" of the earlier work is "sit Rinian" in the later. The various forms of the name of sit Rinian, as exhibited by Bishop, A. P. Forbes in his edition of the Life by Ailred (Histomians of scotlamel, vol. v. 1p. xxv, xxvi, 304), will probably leave no doult that it is St Ninian who is referred to under the names used by Pilkington. That Pilkington was referring to Enylist devotional practices, the context leaves lithle dould.

[^17]Pilkington does not appear to have had any conneetion with I hurham before his elevation to the kee, and the date of the publication of the earlier of the two works refered to as precenling that event suppliss 110 suggestion for associating the prartice of "st Rinian's fast" with the N.E. of Englaml. But an inquiry into the writer's carlier history may ferhaps supply the clue. Ile was himself horn in Lancashire, and was of an ohl Lancashire family; and in 1550 he had been appointed to the vicarage of Kemdal, in Westmoreland. I'ossibly it was the observanee of a fast of St Rimian lyy some in that neighbourhood, or in lancashire, that supplied him with the basis upon which he foumded his remark. And that the veneration of St Ninian was known in that quarter in the 16 th century we have proof from the Chetham sounty's Lancashire and cheskire IVills. The extract is given hy Forbes (Historians of Sootlant, v. p. 304):-" Also I will that one be hyryt to go for me . . Seynt Truyons in hootlande, and otter [for] me a bunde phacke whyche $y$ s in my purs." This will is dated in the year 1540, the notice in l'ilkington being twenty years later.

The easy access by sea from the Lancashire and north-western const of England to the shrine at Whithorn would not mmaturally have stimulatel the cultus of st Ninjan in those parts.

The mention of "our Laty's fast" in connertion with "st Xinsan's fast" would maturally lead one to conjecture that the latter was, like the former, a special voluntary, or, as it is technically called, rotire fast, undertaken as a penance, or as an act of special devotion to the saint.

There is a passage cited by the lollamists (Acta sitneforum, siptemb, tom. v. p. 326) from a manuscript work of a certain Patrick Niman Wemyss, De imbubitatis sortiae sametis, which may throw some light on the character of this fast. This writer, 1 am emalled to state (on the anthority of the Revereml Father smedt, s.I., l'resident of the Soriety of Bollandiste, who has with much courtesy replied to my inquiries), is without douht to be identified with " latriok Weems," a seoteh Father of the Society of Jesus, "mployend in the Provine of Bohemia in the early part of the last century. ${ }^{1}$
${ }^{1}$ see Ramerls, Eaglishl Procince of the Sorionty of Jesus, by Hemry Foley. B.I. (vill. vii., part second, 1. 824, London, 1883). "Weems, Patrick, Father (Ficutch), horn

Wemyss declares that the solemn fast of St Ninian was well known, and a matter of common discourse (in ore ommium versatur) ; and then he goes on to state that the saint was accustomed to abstain from all frod and drink from Thurstay in Holy Week till he had celebrated the Easter mans on the following sunday. It is natural to suppose that "St Ninian's fast," observed ly devotees, was a similarly rigorous fast during Good Friday and Easter eve, and Easter morning till mass harl been said. ${ }^{1}$

It may be olservel that in Ailred's Iitus S. Nimiomi no mention is manle of any special fast observed ly the saint. The only notice I have olserved in this work that has any possible relation to the sulject before ns is the modest statement that he was in cilo solbius (cap. i.). The (ffiree of the saint in the Aberdeen Breviary is similarly silmont. But to whatever source the story of St Ninian's own special fast in Holy Week may be tracesl, the character of the fast olserved by those who sought to pay to St Ninian special devotion is sufficiently deseribed in the old Scottish poom on St Ninian, which forms part of the MS. (ig. ii. 6 in the Cambrilge University Library, and the text of which was pullisheel for the first time in I882 ly Horstmam under the title Barthomr's rles sidnottischen Nationaldichters Legentensammluny (Hrilhrom). There we learn that the fast, at least in the time of the writer of the 1 mem (that is, the time of King David II.), ${ }^{2}$ consisted of a fast from noon on a Friday till after mass on the following Sunday, and that Jume 29, 1671 ; entered the Society Jan. 15, 1698. In 1609 he nas employed in the province of Bohemia (Oliver, from stomghurst sicotel Ms.i.). He is mentioned in a scotcl catalngue for 1729 as being then at Prague."
${ }^{1}$ Patricius Ninianus Wemyss, in manuscriptis de indubitatis Scotice Sanctis, suas de $S$. Niniano observationes ita elandit; Solemme sancti Prassulis jejunium in ore ommium versatur : solehat enim Vir sanetissimus quotamis a Feria quinta Majoris Ilebdomalae ahomi cibo rotuque ahstinere, dum sacrosanctae die Pavchalis Dominicae Resurrectionis mysteria perageret, miraculorum gloria cum S. Dutacho in regno Scotiae longe celpherrimus.
> * Of Sanct Niniane zet I zn tell

> A ferly in my tyme hefel.
> line 815.
> pis wes done but lessinge Quhene Sir Davi Brays ves kiuge.
> line 941.

-Holistmann (Zuciter Bund, pp. 131-133).
this fast was kept three times in each quarter of the year,-twice, as it would seem, in suecessive weeks, and once at any time within the quarter, as chosen by the devotee.

It will be onserved that, in the I th century at least, we rlo not fimd, so far as evidence is supplied by this 1 mem, that (iood Fritay and Easter eve were specially selected among the Fridays and Saturdays that were "fastel." ${ }^{1}$

1 have only to add that the initial " T " in the form "Tronion," used in one of the passages of Pilkington, may perlaps be accomted for ly the vocal allhesion or Tiaison of the last ennsonant of the wort "saint" with the initial " K ". Examples of forms of the word with the " T " have been eited by Dishop Forhes. But Professor Scholetield, the editor of Pilkinglon, was evilently unacquainted with thens, anl supposes "Tronion" to be merely a clerical or compositor's ertor (Pilkington's Works, p. 551, uote 2), nor does he offer any explanation that would help to identify the saint refirred to.
${ }^{1}$ After referring to the great crowds that visited St Ninian's shrine at Whithon the writer proceeds-

> "And par-of sull name ferly
> For pe merwalis done Ithandly [ie. constantly] pat he kithis one sare and sekr, pat denotely vil hyme seke,
> Or fastis vitls deuocione
> Ilis fastinge, bat nov is commone, pat is fryday fra pe novme
> Til sonday at pe mes be done ; \& how mene fastis it, gif $p^{32}$ vil spere:
> Thryse ilke rath [i.c., quarter] of pe zere ;
> Twise to-giddire, be thrid he skil
> In pat quartare quhene pu wil."
> -llorstmans (Zuc. D., 1. 130, lines $7003-7 / 4$ ).

## Notes on a supposed mithraic cayern at wouldian, in KENT. By JAMES LANG, F.S.A. Scot.

Of the worship of Mithras, once so general throughout the Roman worhl, seareely any traces have been left in Britain. With the exception of the well-known discovery on the line of Hadrian's Wall in 1822, no authenticated remains of any temple dedicated to the Sun-god (so far as I know) are on record. And it will be borne in mind that at Broovicus the find consisted only of altars, every trace of the building in which those altars had had a place having entirely disappeared. A discovery, therefore, of any Mithraic place of worship in these islands camot but be hasied as one of great importance in the history of Archeology ; and it is in view of this that I have ventured to present these few notes on a recently exposed cavern for your consideration. And here I may say that it was our hope and prayer that something shoull be done towards preserving for all time this most interesting, and I believe unique, specimen of ancient religious architecture. That the Society of Antiquaries of Scotland and the sister Society in London Whould comhine to loring about this end was my fervent hope ; or, if not to preserve the luilding in sitn, that (as the iliscoverer of it suggested) means might he taken to transport it bodily to some safe asyhm. Urgent indued is the case if anything at all is to be done, for the severity of the weather and the friable nature of the soil of Kent will soon cause to disalpear cevery trace of this last monument of a forgotten age.

Early in the spring of last year (1894) the lahourers employed in clearing away a portion of the ground required for the extension of the cement works of Mr l'cters at Wouhlham came upon traces of masonry ; lont little notice was taken of the ofcurrence at the time, as the district is one in which Roman remains, as well as Saxon ame Damish, are by no means uncommon. Beyond a short paragraph in a local new:paper, no puhlicity seems to have been given to the occurrence.

It was through my comection with the "Leland Club," a wamlering
hody of Antiquarians and Archæologists, that I first heard of the time towards the end of August; and I was then asked by Mr George R. Wright, F.S.A., the founder of the club in question (amd a distant kinsman of the late Mr Thos. Wright, M.A., the well-known historian aml antiquary), to accomprany him on an cemesion to Wouldham, in Kint, to risit the relif. Cuf otmately I was malle to jum him at the time,
 give the ren lt of my it afontion $=$


The remains (lig. 1), in I suw them corly in Ineemlner lat, connist only of threw walls and a portion of the fourth, the whole originally forming a cavern exavated in the face of the bank, or small samb-clift, overhanging the river Menway, a short distance beyomb the villawe of Woultham. ${ }^{1}$ being a cavern, the walls have, of couses, only whe face

I The spot is on the right bank of the Medway, where the river takes a sharp heme, two or three miles above the city of Rochester, and is actually in the parinh of Burham.

- the inner one-and these walls are of chalk, hewn in blocks of fairly uniform size, and backel with rublle. The surrounding sand has by this time been entirely cleared away except at the immer end of the building ; and thus exposed to the action of the weather, the total disappearance of the whole structure cannot lant he a question of a very frw werks-if, inleel, it he not already gone.

The length of the building is, inside, 40 feet 9 inches, and the width 19 fert. The height to the spring of the arch is about 3 fcet 6 inches; and aplarently the total height of the arch when complete was 12 feet. The southern wall (to the right on entering) is almost plain, but at the centre of the northem wall there is a very distinct shaft upwards, probably to admit light, and traces of what may have been a gromed arch. This apparent arch is exactly central to the length of the building and measures 19 feet across-the same as the total width of the cavern. The shaft is leautifully exceuted, and is one of the hest preserved parts of the louiding. It measures 10 feet 2 inches wide at hase, and slants upwards at a slope of about $\frac{3}{1}$. Whether there was it corresponding shaft and arch starting from the opposite wall is matter of conjecture. Certainly the traces of such are scant. At the inner end of the cavom are three niches, of equal dimensions, - each abont 4 foet high, having a depth of 2 feet and a width of 2 feet 9 inches,the total space ocempied by the three being 10 feet 10 inches. These, it is conjectured, were for the statues of the god and his two assessors ; but no traces of altars have come to light.

In the onter wall, when first discovered, there was a doorway, somewhat to the right (i.e., to the south) of the contral line ; and, so far as I coukl learn from an ohl man present (who has been employed there continuonsly, and who saw the cavern opened up), this doorway must have leeen of such a height as to necessitate one stooping slightly when entering. There is but one course of masonry, abont 8 inches thick, and it is built with great care and no little skill.

A notalle feature is the interior ducoration of the cavern. On each stone throughout the builling are grooves or thutings distinctly and artistically cut, the whole forming a rude ornamentation, very striking in its effect. The lines vary their direction on different stones, being
perpendieular, diagonal, or lorizontal according to the fancy of the artist. The most frequent is undoubtedly the "herring-bone" pattern so well known to the Romans, formed by the meeting horizontally of diagonal lim's drawn in opposite directions from the top and bottom mges of the stone. Another form is that of the "chevron," where 1rarallel lines, being drawn from the right and left elges, meet vertically ; and this occurs most frerquently where the stone is built into the wall entways (teelnically called a "healer"). In other places the lines are vertical or horizontal, hy way of varisty, or diagonal in one direction only. ${ }^{1}$ ['nfortunately these markings are rapmilly disajpearing, owing to the weathering of the chalk, which cannot long withstand the rains and frosts of our climatu, and already they have disappeared over the greater part of the structure.

I am indebted for my measurements and photographs to the kindness of Major G. K. Scott-Monerieff, of the Royal Engineers, who very kindly assented to my appeal, and, at considerable personal inconvenience, himself visited the structure and took them with his own hand. My own measurements had been done vory lurriedly, and I did not deem them aceurate enough to present to the society without veridiation.

When the eavern was first seen by Mr. Wright there was still an areled roof upon it, but this fell in during the excavation, on removing the debris which filled it י口p. It is now, therefore, open to the heavens, and presents the appearance shown in the photographs which I exhibit. The bank and surrounding soil is all of sand.

Orientetion.-The cavern is, as I have said, situated on the left bank of the Molway, some sixty paces or so from the water's elge, and facing ahout 5 s . of W .-in direct prolongation of a stratel of the Medway. This stretel would be illumined lyy the reflection of the stun's rays at sunset for a great part of the year, and cortainly at the winter solstice ; and the reflection would shine straight into the cavern.

One coin only las as yet been found in this cavern,-a small hasis, beautifully preservel, of the time of Constantine or soon after. It bears the legram "constantinomohs" very freshly impressed on it,

[^18]with a female heal in a helmet, laureated, and carrying a sceptre. On the recerse is the figure of Victory stamling on the prow of a ship, a sceptre in her right hanl, and her left resting on a shield. In the erergue is the contraction "cconst." How far this coin can be taken as establisling the date of the cavern 1 leave others to julge. It seems to lolong to a series of whose exact dates there is some uncertainty, lut evidently struck in honour of Constantinople, the then newly alopted eapital of the empire. Sce Eckhel, vol. viii. p. 96 (Vimetolouce, 1798).

Monday, 11 th Marth 1895.
THE Hox. HEW H. DALRYMPLE in the Chair:
A ballot laving leen taken, the following Gentlemen were duly elected Fellows:-

Hamlton More Nisbet, University Hill, Ramsay Lolge. Murton Gray Stuart, 2 Belford Park.

The secretary amounced the election ly the Council of the following Ladies as Lally Associates of the Socirty :-

Miss H. J. M1. Ressell of Ashiestiel. Miss Amy Frances I Uue of Tarradale.

The following I lonations to the Muswm and Library were laid on the table, and thanks votel to the I fonors :-
(1) By the Right IIon. Tife Earl of Southesk, K.T., F.S..l. Scot.

Highland Brass Brooch, $2 \frac{1}{4}$ inches dianeter, with tongue of iron, and one face chased with linear ormamentation, nearly obliterated, from lnverness.
(2) By Im R. be Ibl's Trotter, Perth.

Highlaml Brass Brooch, $2 \frac{1}{2}$ inches diameter, with tongue of hass, and ond face chased with linear omamentation in patterns, from Perthshire.
(3) liy the Hon. Join Ibercromby, F.S. I. Siot.
swedish Calemlar-staff, 32 inches in length. [hee the subsequent Communication ly Mr Morlanl Simpson.]
(4) liy R. Carfrae, F.N.A. Scot.

Stone Flat-Iron Rest, with initials G. I', and date 1766.
Facsimile of Burns' "Jolly Begtars," from the original mannseript. 4 to, tilascow, 183 s .
(5) By the Stirling nuciety.

Transactions of the Stirling Natural Il istory and Archeological Society, 1893-94. 12mo, Stirlin号, $1 \times 94$.
(fi) Liy Wm. Cramond, LL.l)., F.S.A. Sent,, the Author.
The Amals of Forloun, from the earliest times. I?mo, Montrose, 1894.
(on Statinla Tol). A (inide to Auchinhlae and the Fordoun listrict. 12 mo , I mudee, Is9t.
(7) IBy J. W. Broon, the Author,

Archeologieal Notes and Ohservations, 1891-92. 8vo, 1p. 20, pl. iv.

Farly Man in Marlborough. 8ro, p1. 12.
(א) My Misi Russell, Aishiestiel, the Author.
The Vitritied Forts of Scotland, and the Themries as to their Ilistory. Svo. Reprint from the Journal of the british Archaological Aswociation.
(9) By Thomas May, the Anthor.

Ancient Stone Implements. Reprint from the Proceedings of the Warrington Literary and Philosophical Society.
(10) By the Secretary of State for India.

List of Arehitectural and Archæologieal Remains in Coorg, ant Sonth Indian Buddhist Antiquities. Vol. XV. of Archæological Survey of Intia. 4to, 1894.
(11) By the Master of the Rolls.

Calendar of Patent Rolls, Elward II., 1307-13 ; Calendar of State Papers, Domestic Series, 1668-69; Catalogue of Ancient I teeds in the Publie Record Ottice, Vol. II. ; Letters and Papers, Ilemry VIIl. Vol. N1V. pt. 1, 1539 ; Calemlar of Close Rolls, Edward Il., 1316-23.
(12) By the New Spalding Club.

Hectoris Boetii Murthlacensium et Aberdonensium Episeopormm Vitæ. Eilited and translated hy James Moir, M.A., LL.D. 4to, Aberdeen, 1894.

The Records of Aboyne, 1230-1681. Elited by Charles, eleventh Maryuis of IIuntly, Earl of Aboyne. 4to, Aberdeen, 189 4.

There were also Exhilited :-
(1) liy I. P. Mexzies, F.S.A. Scot.

The so-ealled "Pannockburn" bampipm of Menzies. [Sre the sulsequent Communication by Mr Menzies.]
(2) Ry Mardy I? M'Call, F.S.A. Soot.

Bronze Knife-I hasger, with that tang and rivet-hole in the butt-end of the tang, fonnd on West Cairns, Mid-Calder. It is thes deseribed hy Mr MCall in his recently issued Mistor!! and Antiquities of the P'arishl of Mirt-C'alder: - "Fig. 1 represents a small leaf-shaped blade recently foum in the lamls of West Cairns. It measures 4 inches in
length, and ${ }_{4}^{3}$ of an inch across the widest part of the ensp, and is still sharp on either edge and at the point. The tang is perforatm to aulmit of a rivet uniting it to a short woolen handle. The metal of which it is made is foumd to consist of seven parts of copper and two of tin." This form of knife-dagocer, with the tlatemed binde having no midrib, and the flat tang perforated for a single rivet, is exceedingly rave in seotlami. In the last volume of the Proceotingis (p. 219) the Hon. John Aherrromby has describert a tine specimen of the variety, with a midrib down the rentre of the blade and a flat tany with a single rivet in the end, which was fome at Crawford Priory, in Fife. He also refers to the similar Wade found at Whithaugh Moss, in Ayrshire, which was the only Reottish example previonsly known. But the blade desweribed hy Mr M'Call differs from these loth in the form and tlatness of the blale, while the absence of a mitrib, and the waty in whith the elges are drawn town, give it quite a distinetive eharacter. It clusely resembles tha blade from a harrow at Romblway, in Wiltshire, figured hy Sir John Evans in his Bronee Implements. of (ireat Brituin (p. 223), which was foum with a contracted unburnt hurial, on the left forearm of whith was a stone braeer or arm-guard against the impact of the bowstring, and near the lead a harbel arrow-point of tlint. It appears, therefore, more likely that the blates of this peruliar form belong rather to the earhier than to the later portion of the Bronze Age. [The hociety is indehted to Mr M'Call for the loan of the wool-hlock of the West Cairns


Fig. 1. Ting ed Bronzt Blate, from West Cairns, Mil-Coldet. blade.]
(3) Ry the Queen's and Lord Treasurer's liemembrancer. Portion of a massive Silver Chain of I ouble Links, with penannular voh. Xxix.
terminal link, found on Whitlaw farm, near Lauder. This fragment of a massive silver chain of double links consists of the penamular terminal link, six entire links and two broken links. The jenannular link is of the same form and character as in the other examples presprvel in the Musenm from Whitecleuch, Lanarkshire, and Parkhill, Abredeenshire, except that it has no symbols ineised upon it, being perfectly plain. It measures $1 \frac{3}{4}$ inches diameter in the central thattened portion, which is ${ }_{8}^{5}$ inch in brealth, the whole brealth of the ring being $\frac{3}{4}$ inch, the bevelln rims projecting on each sile about $\frac{1}{8}$ inch. The penannular opening is $\frac{1}{4}$ of an inch in width, and the thickness of the borly of the ring in the centre is ${ }_{8}^{3}$ inch. The donble rings are male of cylindrical rods of silver fully $\frac{1}{4}$ inch in diameter, bent into a circle $1{ }_{8}^{3}$ ineh in diameter, the ends brought elosely torether but not joined. The origin and purpose of these massive silver chains are monown. They are peculiar to scotland, no example having been ever found outside this country. There are four examples in the National Mnseum, from the counties of Inverness, Aberdeen, Hathlington, and Lanarkshire. other three are now known, viz, one from Horlwell, another from Greenlaw, and the one ahove descrihel from Whitlaw, near Lauder, all in Berwickshire. [hee the previons paper on "Massive silver chains of double links found in Scotland," ly the late Dr John Alexander Smith, in the Proreerinys, vol. xv. p. 64.]

The following Communications were read:-

## I.

NUTHCE OF A CAIE RECENTLY DISCOYERED AT OHAN, CONTAINIXG HUMAN REDAINS, ANI A REFUSE-HEAP OF SHELLS AND BONES OF ANIMALS, AND STUNE AND BONE FMTLEMESTS. BY JONEPH ANbERson, LL, D., Asmistant Sheretari And Keeper of the Mteetm.

This eare is sitnated at the hemb of the eliff; where a lateral valley
 It was discovered in the emb of Demomber last, by atarymmen removing rock from the face of the clift, for hathling purposes on a futh belonering to Mr A. Mac.Arthur, solivitor, anl agent for the Commerial bank. I heard of the discovery from Mr. J. Walter Jlizitit, who had formerly corresponded with me on the discovery in 1890 of a cave in the same elifl immediately behind the Uhan Distillery. Moanmhile, the eave on Mr Mardythur's feu lave been visited, tiost lyy the Rev: Alesamber
 Mr W. Anderson smith of the Fishery Inami, ame Ir Mar Nimghton, F.A.A.Scot., Taymuilt, who agreme with Mr lliguin that the dismorery was one likely to prove of sementitic importance. This hating lomen communicatel to me hy Mr Wiggin, and to 1$)_{1}$ (lyistisun, the serortary of the sumety, by Ibr Maw Situshtom, it was deeded by the Commeil that
 suciety sulplying the fumbs, aml the whjeets fomm heine "ppropriated to the Sational Mrasem. Ther Somety's astion was cormatly met by the lncal prarties, viz., Mr. J. W. Nlysin, Mr. Johm Mumo, Dr E. Mailey, and Mr Maw. Irthar, who cheerfully save their serviere for this purpost. I went to 0han twite dming the comse of the "Xoavations, luing
 the surinty, who math a plan of the cave, ambletremined its luelight above the Ombance datum lias. In atdition to my what ohorvat ons When prasent at the exabations, I have hat the lumetit of many luttors
 time the rave was being exavaterl, and I hate alat atrated mysolf of the information contained in $\mathrm{Mr}_{\mathrm{r}}$ Jolan Mmm's working-liary, 1 9 th to

24 th Jannary, and plan and sections of the cave made ly his son with reference to its condition and the position of the excavations at that date.

The circumstances of the discovery of the cave were as follows :The quarrymen, after they had penetrated about 8 to 10 feet into the rock from its exposed western face, broke in uron that side of the cave near its southem extremity, and proceeded to hast ami remove the whole of the superincumbent rock from the top of the cliff down


Fig. 1. View of the Cave, looking south-(from a photugraph).
to the level of the cave, thus removing its roof, and laying open its east and west sides and its southern eml. The mast side then formed part of the puarry-lack in the face of the eliff, while the west side hat leen removel down to the fevel of 3 or 4 feet below that of the black earth floor of the interior. Part of the eurve of the roof was still visible on the eastorn side, and also on the southern end (see the view
in fig. 1), but no measurement could be obtained of the former height of the roof anywhere above the black earth floor, on which the whole mass of rock forming the roof had subsiterl after blasting. Towards the north end there was a great talus of earth amt stomes sloping to the lrase of the cliff. Snbsequent investigation showel that the mouth of the cave had originally opened in this direction. In the wall of rock on the east side, and towarls the back of the cave, there were several recossen, one of which was tillell with black earth, and appeared to slant upwards ant backwands into the rock as far as it conld be probed from lelow. It was ultimately found to form a shaft-like communication with the mper surface on the top of the cliff, where a slight hollow was visihke, which hat become a receptacle for the soakage from the surrounding surfate after rains, the shaft lelow it forming a chamel ly which it percolated into the eave. That the shaft was once an open passign from the surface down into the cave was evident from its being now wholly filled with black vegetahle monk derived from the surface soil ; and it is equally evident that loy this chamel, lufore it was completely blocken from above, the greater part of the black warth, which formed the uppermost layer of the diposits in the interior of the cave, had found an entrance.

The area of the floor of the cave, as shown in the accompranying plan (fig. 2), was, roughly spaking, nearly 25 feet in length, and from 16 to 20 feet in hrealth. Its mouth, which opened to the northward, was completely blocked ly the talus of earth and stones before referred to; and when this was approachel from the imer side, in the course of the exravation of the interior deposits, it became avident that there had been a great fall of the superinemmbent rock into the aperture. There was some appearance of an artitial rearraugment of the fallen blocks, by which a kinu of harrior was formed, narrowing the witth of the month of the cave the about 7 feet; lint the artificial character of the larrier was not, to my mind, conclusively established. Beyond the barrier of fathen rowk, and across the anerture of 7 feet in wilth, was the talns of rarth :mb stones derived from the slow disintegration of the face of the cliff, by which the whole contrance was covered up and etlectually concealed.

The mothon of exploration adopted was suggested hy the circumstances of the case, and the cessation of the buhting and quarrying oprations, consequent on the severity of the frost, fortunately afforded

than the surface of the deposits in the interior, and the rock forming the roof having been also removel, while there still remainel about 6 feet deep of a talus of earth ami stones over the deposits towards the mouth of the cave, it was determinel first to remove the whole upper layer of back parth from the interior of the cave, and then to sink a trench across the back part of the eave from west to east, so ats to expose a section of the contents, while the uperer part of the talus towarls the month of the cave was being remosel. It was foum that underneath the layer of hack earth there was a bed of shells, varying from 27 inches to about 3 feet in thickness, extending over the whole floor of the cave, and showing little or no intermixture of back earth or grasel, lut here and there patches of ashes mixed with wool-chareoal, and charred splinters of hone. Inter this sleflleded was a bed of thee clean gravel, composed entirely of small water-rolled stones. In this gravel, at a depth of about 18 inches (where the section was first made), there was intercalated a duposit of sholls, which we at first spoke of as the lower shellbed, but whieh proved to le of partial extent ind unernal thickness, thinning out towards the sides and towards the mouth of the cave, amd in sexpral places prosenting an irregular or patchy apparance in the sortion, as if the shells hat been deposited in heaps or pockets in the gravel. Inderneath this intercalated layer of shells the gravel extembed for about 4 feet or more to the cave-louttom, where it was mixel with large and small fragments of lowe rock. The whole thiekness of the gravel-bed moler the upper deposit of shells was thus about 6 feet, including the intercalated lower deposit of shells.

The east side of the cave was thickly encrusted with alhering stabactites ; and, in detached ipots throughout the flom, the shells and gravel hat leen cemented into cakes loy the calcaroous drippings from the roof. Premising that the layers of hack carth, shells, and aravel thus reveated in the cross section were removed stuccessively over the whole flowr of the cave from north to suth, and carefully examined spacleful by spateful, 1 now proceed to give a summary of the results.

The blarli earth layer. - In this layer, besides the quantities of
bones of small vertebrates-presumably, bats, rodents, and birdsthere were a few boues of animals, apparently (so far as they conld be recognised) belonging to the larger mumants. Towards the back of the eave, and under a projecting part of the roof which remained on the cast sile, a human skull was found on the surface of the black earth. A few feet further north, on the same side of the cave, another skull was found embediled in the black earth, almost on the top of the shell-bed underneath. Nitl further north, and conly a few fret distant, were a good many other bones of a human skuleton. Two lower jaws were also separately found near these remains, on the same side of the cave.

The upper shell-hert.-This, though called a shell-bed from its relation to the bed of black earth above it and the bed of gravel lelow it, is not a natmral deposit, but an accummlated refuse-heap, the result of a lengthened occupation of this cave by man, and of the general use of shell-fish, whether as fool or as bait, or for both purposes, hy the occupants. It is not composed of shells exclusively, but is largely intermingled with bones of land and marine animals which have also heen used as food, and with patches of burnt ashes or thareoal of wook. The bones are generally broken into splinters, and their charred fragments and the burnt condition of the shells in the neighlourhood of these patches show that the fires were kindled on the spot. The shells are for the most part of the edible varieties ahundant on the neighhouring shores between the tide-marks, such as the limpet, razor, and seallop, shells, Tupes, cockle and mussels, oysters and periwinkle, and occasionally the larger ant smatler whelks. As a rule, the shells were large, as if seleeted for their size, and not gathered indiseriminately-large and small together. Occasionally, akso, they lay in patches of the same kind together, as if the protuce of a siugle gathering of periwinkles, or of limpets, or of cockles had heen thrown in one heap. Many of the flat valves of the Pecten marimus were broken into scoop-like forms, hat these might he aceridental, as the natural hreakage of this shell, when troklen upon, is along the lines between the ribs. Very many of these shells were Ifuite 6 inches in diampter, and the largest oysters reached 6 by $4 \frac{1}{2}$
inches. Broken and splintered bones were interspersed throughout the whole of this mass of shells, searcely any of the larger bones being entire, and the splinters varying from 2 inches or less to 5 or 6 inches in length. A good many appear as if they had been gnawed by dogs, although in other cases the great density and thiekness of the bone make it impossible to account for their fracture in this way. Undoubtedly, the bones were intentionally broken and split up by the occupants of the cave, and as undoubtedly this was done for other purposes than access to the marrow, for we find the bones so treated that contain no marrow, and even the shed horns of dear broken up into splinters. One principal purpose for which this was done was the manufature of hone implements, of which a very large number were found scattered through the beds of refuse and of gravel with which the floor of the cave was coverel.

The Gravel-bed. - When the upper shell-hed or refuse-huap was eleared off, there was exposed beneath it a layer of clean washel gravel or small-sized pebbles, extenling over the whole floor of the cave. It rose slightiy higher at the east side of the eave than at the west, ant highest towards the mouth of the cave, where it was thrown up against the rock at the east side in a considerable slope. In the centre of the floor it was fairly level, and its depth seemed to be not less than between 5 and 6 fret.

The lower shath-led.-Interealatel in the upper part of the gravel, and covered lyy gravel to the depth of from 6 to about 18 inches, was a deposit of shells of irrenular thickness, not extending over the whole tloor of the cave like the upper shell-ben, but thinning out and disapparing towarls the sides, and on the east towards the mouth or entrane. Where it was first shown in the section towarls the south end of the cave it was 9 to 12 inches in thickness, hut near the eentre of the cave it went down into a hollow in the gravel to a depth of 26 inches; a frew fere further back it showel on the opposite sides of a trench 2 fort wibe a thickness only of 5 and 9 inches respectively, while in other parts it varied from a more scmaping to 3 or 4 inches in depth, and in other parts thimed out and disappeared. Like the uper shell-hed, it was mixed with broken hones of animals, and buth
the shells and bones were more decomposed and friable than those in the upher bed ; but this may have been due, partly at least, to the fact that the gravel-bed was much wetter than the shell-hell above it. The same shells and hones of the same species of animals were found in both shell-bects, ant the same varieties of lone implements.

The Implements. - All the implements recovered from the cave are of bone or deer-lorn, with the exreption of three hammer-stones, aul a number of tlakes and chips of flint, a few of which show signs of seconlary working, though none are really implements in the sense of being fashioned and finisherl.

Itmplements of stome.-The lammer-stones are oval, oblong, waterworn pehbles. The largest is of grey sambstone, 3 inches in length by $1^{3}$ inch in wilth, and little more than 1 inch in thickness, with romuder conds, both of which are abraded by use. On one of its flatter sides there are two small pits, like those on so-ealled anvil-stones, and on the other side a single $1^{\text {it }}$ of the same description. (he of its narrow siles also shows marks of alutasion by use as a hammer-stone. The second hammer-stone is a small, oval, ollong, rounded peblhe of quartaite, $2 \frac{1}{8}$ inches in length and $1 \frac{1}{2}$ inch in diameter, with rounded ends, hoth of which are much abruled by use. Thure are also marks of use near the midule of one of its flatter sides. The thirs hammer-stone is a slightly smaller peble of porphyritic stome, similarly markel on the emis and sides.

Other peblles were found, with fainter and scareely prepeptible signs of use.

Twenty flints were found, of which three were mere natural noklules from $1 \frac{1}{2}$ to 1 imilh in diameter; and forr $\frac{1}{2}$ inch in diametrer, which were in their natural conlition. Eight were chips or broken nodules, from over 1 inch to ${ }_{4}$ inch in diameter, with no secondary working. Two were split nolules, from each of which four or five small tlakes hat been struek; two were lroken flakes, one of which lath a slightly seraper-like finish at one end; and two were slightly curven flakes, I inch and $1 \frac{1}{\text { inch }}$ in length, the longest showing wear, as if ly use as a side-seraper.

Imploments of Bone.-The bone implements consist of pins, awls
or borras, rublurs or smouthers, formes from splinters of lone or deer-horn, with the broal end rounded off or polished hy rubhing ; and harhes harpoon-heads or fish-spears of deer-horn.

The pins are three in number, of which only one (fig. 3) is apparently entire, measuring $2 \frac{1}{4}$ inches in length, nearly of the same thickness throughont, but tajering slightly towards both ends; the secoml is only $1 \frac{3}{4}$ inch in fongth, the end lroken off; and the third is but about an inch of the point of a very wellmake pin, which hats been completely charred in the tire.

The borers are also three in momber. They differ from the pins in being vely much stouter, and expanding towards the lntt-end. The largest, which is still atherent to the mass of shells cemented together hy the stalagmite in which it was foumd, is 3 inches in length, the butt-end flat and rounded, and the other end drawn to a tine, sharp point. The second (figg. 4) is also 3 inches in length, but stouter, and with a stronger pint; and the thind, a more slewter splinter of the same length.

Five rather shouler lwone, 21 to 3 inches in length, and two spines of some hig fish, $1 \frac{1}{4}$ inch in length, may or may not have heen usel as pins or borers, but they are not artificially fashioned for this pupose ; and three bones, apparently of hirds, which were pointel ont to me ley Mr


Figs. 3 and 4. Bone Pin and Borcr. |.) dames simpson, are flattenm on one side.

The roumb-nosed, chisel-muld implements are the pmincipal featurn of this ware. Their momber is very great, and their likemess to eath other extraomlinary. One of demelome and two of bonn are shown in figs 5, 6, and 7. One hmmend and forty of these imple-
 or rublend sufferes at hoth emts. Ghe of these is shown in fig. 8. They variol in siae from 3 inches to $1 \frac{1}{4}$ inch in length, ant were
all formel in the same manner of a splinter of leg-bone or of deer-hom, the one end of which was left with the fractured elges montonched, ani tapering to a rough, uneven point; while the other was shaped to a romuded or more or less hevelled edge, of the width of the splinter. All show much wear, as if from rubbing on the bevelled end, but none whatever on the unshaped end of the splinter. Some, made of a very dense bone, have a high polish


Figs. 5, 6, 7, 4. Implements of hone and deer-horn. ( (i.)
on the rmbed end; and the clisel-like edge is worn quite round, like the elge of an ivory prer-eutter. The widest is fully $\frac{3}{4}$ inch at the broad end, the eldges of which are rounded and polished for $\frac{1}{2}$ inch back from the working face of the tool. The rounded end, of course, is the working end; the other end, with the tapering form, and bearing the rough edges and irregular


Figs. 9, 10. Bone Implements made from leg hones of lien i.
point of the original fracture, presents no sign of use, and it is impossible to imagine any kind of use for it of sufficient importance to warrant the trouble of rounting off the other end as a butt. That the apparent butt-end is really the end for use, and that its form is the result of use, and not merely of fashioning, is plain from a stnily of the objects, and from comparison with the two largest implements found (figs. 9 and 10), which have worn and hevelled fonds similar to the smaller ones. Both are made from the ley-bones of deer, which have been lroken across at a distance of 5 and 7 inches from the joint, and split longitulinally, the end of the split lone furthest from the joint being then turned into an implement of this kinkl. The bevel on its rubbed and prolished end, with the wear and polish at the comers and sides, is exactly that of these shorter implement formed from a triangular or tapering splinter. But if you were to haft one of these ly inserting the talering unworked end into a laandle of soft wood 3 inches in length, you would have the exact comnterpart of the two larger implements on which the joint end of the slim-bone is left as a handle.

The use of these implements is not suggested ly anything heyond their form and characteristics, but it is plain that they lave been suljected to much use, and use of a kind that has smoothed and sometimes striated their ends, rounded off their corners and edges, and imparted to the densest hone of which they can he mate a high degree of polish. I know no tool that comes nearer to them in modern use than the bone tool, not very dissimilar in shape and construction, with which the country shoemaker used to finish the welts of his shoes. We have, however, in the Museum a series of tools ahnost similar, ant similarly male from the shin-bones of oxen or deer, which through long use have acyuired a similar high polish at the ends ; and a similar, and in some cases even a greater, smoothness and saqonaceous feel, suggestive of the absorption into the bone of much animal fat in the process of dressing and working in skins. These bone tools have been foum in greatest nmmers in primitive prehistoric dwellings, or in refuse-heaps of shells and split bones, chiefly in the Orkney Islands. Similar tools have been found in the

Swi- Lakn-1)wellings, and are still made and used for dressing skins by the Esquimanx and other skin-clad trines of the Aretic regions.

The hapeons or fish-spears are sevell in number. They are all mathle of deer-horn. Of the seven, only two are antire, the others being morely fragnonts of the point-onl, showing from two to four barths. The largest (fig. If) is really at harpoon, with a perforation in the butt-rnt for the line, which is usem either to attaeh it to a dloat or to be retained in the ham after the tish has been struck, amel the heal of the harpoon disengagel from the shaft. It is 6 inches in length, and flattish on the muler side, which shows the caneellated strueture of the hom, hut the other sile, which is of the dense waturnal part of the hom, prosents a kimel of ridgr, or milrils, ruming from the point to within about an inch of the hatt, which is lattened amb rounded oll. There are four barts on marh side, thee first within half an inch of the puint, and the othres alternating, so that the points. on one side come nearly in line with the midlle of the space between the peints on the other. The harbs do not staml free from the shaft of the implement entirely, but are ent in at a sharp angle with the line of the elge, and only ahout a quarter of an inch of the extremity of the
harb is free. The cuts appear to have been made by the sawing backwards and forwards of a sharp, rough edged tool, which thickened rapilly towards the back. They are apparently such as wouk be marle ly working with a splinter of flint or other sharp stone.

The second harpoon (tig. 12) differs from the first only in being smaller in size and having no perforation in the butt. It is $4 \frac{1}{4}$ inehes in length, and has form harls on each side, similarly made, and placed ahmost opposite to each other.

The thire harpoon is merely the point-end, $2 \frac{1}{4}$


Fis. 13. Small Hafpon of deer-horn. (a $\frac{3}{4}$.) inches in length, with two barls on each side, not placed opposite to each other, but alternately.

The fourth and fifth have merely about $1 \frac{1}{2}$ inch of the point-eml, showing the hases of two harbs. The sixth and seventh (fig. 13) are 2 inches in length, with two barbs each, and have the butt-mul romeled off, as if marle from a broken portion of a longer implement, the marks of the incisions of another bair of baris being still visible at the base.

These harpoons are extremely interesting, as heing the first specimens obtained from a Scottish eave.

Similar harpoons have, however, been foum in a large mound known as Caisteal nan Gillean in the island of Oronsay, as recorded by Mr Symington Grieve, F.S.A. Scot., in his monograph on "The Great Auk, or Garefowl." This mound was explored in 1879-82 hy Mr Grieve and Mr Galloway. It was neatly circular in form, 150 feet in diameter, and about 30 feet high, composed in its upper and lower parts of hlown sand, but having a refuse-heap of shells and bones nearly 8 feet thick interealated near the top of the mound. The contents of this refuse-heap were the usual edible shell-fish of the sea-shore (the limpet being the most abumlant), remains of the wrasse, grey mullet, dog-fish, and skate, and remains of erustacea. Of marine animals there were the rorqual, the grey seal, and the common seal. Of land animals, chipfly the reddeer and swine. The ox was not represented, and the sheep by only a single hone, which may have come from the surface. The implements
were eleven hone harpoons or larhed fish-spears ; bone pins or borels : "also a number of bones rubbed at one end, some on loth sides, so as to form an elge, ant others only on one site," mate chiefly of the hones of the red-dece. These last appear to be of the same character as the rubhing or skin-lressing implements from the olan cave. A few hamnerstones and a few chijes of flint were also found, hot no timishod implements of fint or other stone. Here and there throughout the mass were the remains of fires, consisting of cmbedded patches of ashes, chareoal, and wool.

Unfortunately, no detaled description of these implements from Caisteal nan tillean has been pullishel, so far as I can aseoptain, but I am informed that the harpeons resemble those fomm in the Ohan cave, both in their genemal chararter and in behg male of deer-horn.

The only other example which resembles them in its general chararter is that found in the neolither stratum of the Victoria C'ave at settle, in Yorkshire, which is described and tigurel by Professor Beyd Dawkins. ${ }^{1}$ It lay upon the grey clay at the hase of the accumulated deposits near the entrame of the cave, and from the sume stratum were takin a bone head with linear ornamentation, three rude tlint-flakes, and broken hones of the brown bear, stag, horse, ant Celtic shorthom. This harpoonhead is 3 inches in length, and has two barbs opposite to each other on either side, and two opposite to cach other but pointed the reverse way, near the butt, which hat the same broad, tlattenel, elliptical shape as those from the (1) man cave. The harls are cut into the shaft in the same manner as those of the olan hampons, thongh they stand out somewhat more freely from the eflge.

A doubly-harbect harpoon-heal of hone was also formb in Kents Cavern, near Torguay, in levonshire, along with other two which were barbed on one side only. They were found in the eaverearth unter the stalagmitic floor, and assoriated with implements of palaolithic types. The Kint ('avern harpom, however, difkers from the souttish examples, and from that fomel in the Victoria C'ave, in laving its harbs cut free on hoth sides of the shaft, amb standing at a much less ablute angle. In chatacter it therefore resembles the French ant other (outinental rxamples of pataeolithic times.
${ }^{1}$ Car. Hunting, p. 11こ.

Harpons barhed on both sides, made prineipally of reindeer-horn, have leen abundantly found in the caves of Iovlogne and other parts of France. They also oceurred in the eave at Kesslerloch, ${ }^{1}$ near Schaffhausen, and at Mont Saleve, near tieneva, Is before observed, these pakeolithic hamoons are characterised ly their freestanding barks, and the great majority of them are mperforated, Some, however, do possess lerforations in the butt-end; and while they are styled liy some writers harpoons," and by others spear-heals, M. Lartet has remarked that " without definitely limiting the use of these weapons to the ancient fishermen, it may be stated that remains of tish are found in the stations with the harbed implements, ant none oceur with the lancelate spearhuals." A harpoon of rember-horn, from the paleolithic station of langurie Dasse, ${ }^{3}$ in the Ihonlogne, now preservel in the museun at Toulonse, is, however, very similar to the ohan ones in the way in which the slanting harts are ent, and has also a rounded and flattened butt, with a perforation mate in the same maner. But it is deswribed as of a type extremely rare in Perigord. Another, $8_{4}^{3}$ inches in length, ako with a flattened and perforated butt, and the harbs standing free, lut slanted backwards at an acuto angle aml slightly curved, was fomm in the neolithie lake-dwelling station at Latringen, in the Lake of Bienne, in Switzeland. Others have hen fome in other lake-lwellings. ${ }^{4}$

The dishes spearel, both ly the pabelithie fishermen of the French eaves and the meolithic fishermen of the swiss lakedwellings, were exclusivily of frosh-water species-chiefly salmon, trout, carp, irean, and tonch. Lut sea fishes were apparently taken in this manner by the tishormen of the Danish kjikkenmïhldings, ${ }^{5}$ in which hone fish-spears have been found with remains of that fish, mackerel, de. The fishremains found in the refnse-heap at Caisteal-nan-Giflean, with harpoons

[^19]of inene similar to those of the ohan care, were the wrasen itse crey mallet, the dog-fish, and the skate.

There is one very "urious statement on recorl of the existenn of the practice of spearing seat tish on the West Coast of sootland whieh himes it ifown th the beginming of the hast eentury. Martin, who hat reeorelel more ohsobeto extoms than all the other travellers in Soutland put together, has the following passage in his account of the Western Isles, under the heal of skye:-
"The (trey Lorl, alies Blackmonth, a fish of the size amd shape of the salmon, takes the fimpet for hait. There is another way of angling for this fish, hy lintening a short white down of a goose behind the hook, and the lwat leeing continually rowed, the fish rum greedily after the down and are easily cautht. The (irey Lord swims on the surface of the water, and then is caught with a spear, a rope (line) being tied to the further end of it and scoured in the tisherman's hand."

Unfortumately, Martin has omitted to describe thre precise kint of spear by which the natives of skye were accustomerl to eatel the grey lurd (which I take to he the sathe or coal-fish) whon swimming on the surface; but there is Jittle douht that this spearing of sea hish in 1700 on the Wiest Const was a direet survival of the ancient enstom, and not a now inveution.
 the eave have heen submitted to Professor Sir William Turnee and his at-xistant, Mr Jamos Gimpson, from whom a detailed rejort will low -n! aspurntly ohtainet ; lut Mr simpson has kinully suppliml me with $\therefore$ provisional list of the fauna, which is sulficiont for the present purfras. The animals whose presence las been determined are the red-ifeer amb romber (the former of great siz*), the ox (hos lomgifiroms) or Ciblte shorthorn, the pigh (also of large size), the dog, the hatger, the otter, thul the eat. The luss primigruius, the large long-horned ox, is nut present;

 many cases, fish of vory considerable size, sumh as might have been captured even by the larges of these harpoons ; but the speries hawe not been dotermined, although I thought I recognised the lown jaws of
a wrasse and a saithe among the number of better-preserved ones. The large edible crab or partan was represented, curionsly enough, by no prortion of the shell except the great claws, which were, however, very plentiful. Bones of birds wore few, and these apparently sea-fowl, but the species undrtermined.

It is thus evident that the fama of the case is the orlinary recent fanm of the district. There are no extinet animals; and the only frature of the refuse-heap which calls for notice is the great preponderance of shell-fish as compared with other food supplies, whether derived from the land or the sea.

The atp of the Refuse-heap.- The inguiry into the age of the refuseheap dous not include an inguiry into the age of the cave itself, which is a purely grological question. The cave was ohsiously there, and accessible, when the human leings first took possession of it. But it is a question pertinent to the ocoupation of the cave, whether the sea hand wholly and finally left it when they tirst took fossension; and this question may be answerel in the attimative or in the negative arording to the interpretation that may le given to certain fats combected with the manner in which the refuse of the people's foot is found to be deposited in relation to the gravel-bed which overlies the rocky floor of the cave. This gravel-hel itself is ages younger than the case, hecanse, at the time when the wash of water within the cave was sufficiently deep and strong to do the work of exeavating the rock, little ur no gravel woukd remain within it. The gravel-bed therefore does not belong to the time when the land sat so low in the water as to permit the free influx and reflux of the waves in volume over the cave-floor, but rather to a time when the sea was retiring, and a beach was being formel in front of the cave. Then the work of tilling up the floor with gravel wouk he performed by the heavier storms driving into it the lighter gravel from the beach. That beach, however, was not the present beach, which is fully 100 yarls off, hat a beach on a much higher level, or fully 30 feet above the level of the present beach. That the gravel-bed in the eave is really the inwash of the sea when it stool at that level I think there can he no doubt; but that any of it was thus washed in sulsequently to the first occupation of the cave
hy man requires to be sulstantiated by evidence of the elearest and most irresistible kind, beeause it involves the question of the alteration of the relative levels of sea and land by fully 30 feet since the neolithic period in the Wist of seotland. For, as I have said hofore, there can be $n o$ question of the character of the fama of the cave, which camot be considered as having any relation to pateolithic times. Exen if we hat any proof of the existence of pakeolithic man in North Britain, he could hardly be associated with a fama of a character so totally distinct from that with which he is always found to be associated in sonth Britain, muless on the hypothesis of some special reason for the difference of the fatma. But the evidence of the more superposition of the upper layer of the gravel over the lower shell-bed is not decisive enough to carry the inevitable consermences. The lowest point reached by driving an iron bar to the hottom of the gravel was $3 t$ feet ahove the Orlnance rlutum line. The cave is nearly as hroad as it is long, and conserquently, when the gravel was being washed in, there wouk be a tendeney in the reflux to wash out the eentre, and leave it heapel up towards the sides. Probably, also, when the washing-in power was nearly exhausted, a lank would he thrown up towards the month of the care. Finally, it would le left with its gravel hottom quite uneven, and higher towards the sides than at the centre, and probably higher at the month than further in. Whem, therefore, the cave was taken possession of by the people who hrought to it daily such provision of shell and sea fish and such land animals as they obtained for fool, and cooked and consumed their common meals within it, the refuse of their food and ocenpancy wouk fall into and fill up the lownt lesels of the hollows in the gravel floor, and the ligher portions being so loose and mobile would be troulden down over it, so that it wouk he intercalated in the gravel in patches and prokets, as it was fombl, while the gravel so levelled down would also be mixel with refuse and implements.

On the other hand, 1 must allow that it did appear to some of us, while the excavations were in progress, that the mprer portion of the gravel-bed at least must have been warked in over the deposit of foodrefuse which was intercalated within it, and consequently that the
orcupants were for the time driven out, but afterwarls resmmed possession, and rotained it without further distubance from the sea. In that case the mper deprosit of shells and fool-refuse above the gravel and beneath the black earth would be the only part of the contents of the cave accumulated since the sea retired from the higher level, while the deposits of refuse interealated in the gravel wonld indicate the occlupation of the cave during the time when the sea stood at the higher level, and oceasionally washed into it. But it seemed to me that the force and volume of the waves that would carry this gravel into the very back of the cave would necessanily lift and disperse or carry out with the reflux at least the lighter parts of the deposit of refuse-empty shells, charcoal, and ashes. Nevertheless, the patches of shells intercalated in the gravel still retained among them the smaller and lighter shells as well as the heavier, anl occasional deposits of ashes and charcoal. But there is no alisolutely decisive evidence for either of these suppositions; and even thongh my oljection le foun to have little value, there is no escape from the conclusion that, if the uprer gravel was washed into the cave after its occupation ly man, it must have been during or sulsequent to neolithic times, for archrologirally the fauna ant implements of the cave must he classed as neolithic at the earliest.

Oflow 'ares at olam.-This cave is the fouth that has been tliscovered at © Han in the range of cliff which rises over the old raised beach behind the town. They are situated as follows, procealing from sonth to north :-(1) behind the Gasworks, a small eave with shells and bones; (2) behind the listillery, a much lasser cave, with a very consilerable refuse-heap, explored by Mr J. W. Higgin in 1890, also contained a quantity of luman remains, incluting one small skull and cight lower jaws, some flint chips and hone implements; (3) the present cave in Mr Machithur's feu near St Columba's Chureln ; and (4) at the comer where Nursery Road enters Strathaven Terrace was a considerahle cave, containing human remains, flint implements and flakes, and the bones of existing animals,-which is deseribed by Sir William Tumer in the Report of the British Association for 1871. [A detailed account of the human and anmal remains found in these caves is given by Sir Willian Turner at p. 410 of the present volume.]

## II.

## NOTE ON THE "baNNOCKBURN" BAGPIPES OF MENZIEN, fiz 1) P. MENZIES, F.s.A. scot.

The office of pipers to the chiefs of Clan Menzies was held hereotitarily ly a family of Maclntyres, a mame which moans "the sons of the carpenter." Traditionally they are said to have been the pipurs to Ther Nenzies since before the days of Brnce, and to have headed I'lan Ahenzes playing the bagpipes at the battle of Ramockhmo. The pipes preserved in their family, and hamdel down from father to son until the time of the late Sir Neil Nemzies, Bart., are now known as "The Menzies Banockburn Bagpes." They are referred to by ManIntyre North. ${ }^{1}$ Three prortions of them remain :-
(1) The chanter, which has the same mumber of fingor-holes as the modern chanter, hat there are two axtra holes on carch side. These holes are muth worn away romel their mgen. The chanter mpasures over all $13_{4}^{3}$ inches, and grablually tapurs for 12 inches, $\frac{3}{4}$ inchs at the reed socket to 1 inch diameter at the point, from where it is gralually convexed outward for $1 \frac{3}{4}$ inches to form the horn-shapeel or trumpet chul or month, which measures 2 inches dimmeter over all, with three turned lines on its bottom surface. The inside wore tapers from $\frac{7}{8}$ inch in diameter at the hom eml to $\frac{1}{4}$ inch diameter at the read ems.
(2) The howpipe, which is scquare, but graduates to the roumd at the month-pieer, measures $9 \frac{1}{2}$ inches long over all, with make sonket at wishe end $1 \frac{1}{4}$ inches deep by $\frac{3}{4}$ of an inel diameter ; it is I incln sumare at this end, and tapers for $5_{4}^{3}$ inches to $\frac{3}{4}$ of an inch sunare, then gradnater on

- Touk of the Club of True Highlanders, in which is a plate of them (Ni., 5iti), as "the remains of the olitest known bagpipes." thut the whest known hagtip"s that an be realty anthroticated as to tate are the set boange the date 1409. the property of Mr Robert (ilen, F.S.A. Scot., which are describud and tigured in the Procedinys, vol. xir. p. 121.
to the round, having a male socket for month-piece $1 \frac{1}{2}$ inches deep by $\frac{\pi}{8}$ of an inch diameter, tapering to $\frac{1_{16}^{7}}{7}$ of an inch diameter.
(3) The drone. The
 top half only of it remains. It measures $9 \frac{1}{8}$ inches over all, and is lwred ont inside for 6 inches by $\frac{3}{8}$ of an inch diameter lore, then other 3 inches $l_{1} y_{4}^{3}$ of an ineh dimmeter bore, which forms a female sorket: the outsile at this part is $1 \frac{1}{8}$ inches diameter $3 \frac{3}{4}$ inches up, it then tapers towards the centre from 2 inches diameter to $\frac{3}{4}$ in. diameter; here there is a rutely formed band, $\frac{3}{4}$ of an inch broad and 1 inch diameter, having two small bands at its, alges ; from this it tapers for $3 \frac{1}{8}$ inches to $1: 8$ inches diameter at the end of drone ; at the socket fend it is monnted with a horn hand $\frac{5}{x}$ inches ded, which has three small lines romm it.

The bag and lag-sockets, as shown in the reprotuction (fig. 1), are restorations, and were executed ly Pipe-Major I munean Mar Lougral, Aherfeldy, who, on completing them, played a selection of Highland tunes. To get them to play,
however, it was necessary to till
up the wormeaten holes, but after much trouble and care he was successful in restoring them to a playing condition. Their tone is somewhat lom and harsh: from their having only one drone, the air or mulody is heard more distinetly than in the modern hagnipe. He also sent me the following ilcontitication of them lyy an old pupil of the MacIntyres:-
"I have interviewed Alexamber Menzies, Aberfeldy, with regard to the old relies of bagpipes, said to have belongen to the Machatyres, hereditary pipers to The Memzirs of Menzies. Alexamler Menzies, now over eighty years of age, livel next house to the Maclutyres in Rannoch, $1820-1840$, and was a pupil lemming pipe-mmsic with them. Tte well romembers seeing the pieces of the old hagpipes with the Mactntyres, Who put great value on them, from their having been in their family for several humtred years."

These Menzies pipurs lived at Ramoch in later times. They seem to have been sent hy the chiefs of the Menzies from time to time to the Mac'rimmons, the well-known teachers of pipe music at Dunvegan, Isle of skye. The first of them of whom we have any note is I Onald Mor Ma-Intyre, as having returned from the Iskes, as the pipur to Nir Alexanier Menzies, finst Baronet of Menzies, about 1638. Ilis son, Juhn Hachntyre, also completed his knowlelge of pipe music umber Patrick Oig MacCimmon, piper to the ehiefs of the Mae Leorls, He is known as the composer of the piolxireathds, "The Field of Sheritfmuir" and "The Nemzies salute," Freite na Mrinerich. Mackay says, in lis Coltertion of Atrrient Piper $11 u s i t$, $1 \times 38$ :- "This fine, boh piubaireachd is the composition of John Maclutyre, son of Donald MacEntyre, in the Brae of Rannoch, who was, at the time of the hattle of sheriffimuir, piper to Menzies of that llk, chiof of the name ahout 1715 ." His son, lonald Bane Machntyre, succeeded him as hereditary piper to sir Liohert Menzies, thinl baronet of Menzies ; Sir , John, fourth Baronet; Sir Rolert, fifth Baronct ; and Kir Nibl, sixth Baronet of Mmziss, some years after whose surersion to the chiefship. I onald banm dime, and Left two suns, Robert amd John. Robert hat become piper, hefore his father's death, to the late $W$. Robertson Marl) mald, chioftain of Clan Ramah. On the death of his father, boing the elder som, the "Menzins bamockburn Pipns" came into his possession. He, on the death of
chieftain Mach onald, went to America, but left the old pipes in Scotland with the MacDonalds of Loch Moilart, and they were sent to me by Mrs MacDonald-MacVicar of Invermoidart, and have now been inlentitied by his father's old pupil, Alexander Menzies, who herded the piper's cattle when a boy, Jolm MacIntyre, the brother of Robert, lived in the Alonzies Ramoch country, where he died ahout 1834-5, leaving a son, Donald, who had a farm called Allarich, at the top, of Loch Rammoch, Rolert MacIntyre, the last of the race of Monzies pipers, unfortunately having gone to Amerira, the rhief, Sir Neil Menzies, appointed Alexander I ewar as pin $\mathrm{m}^{\mathrm{r}}$ to Clan Menzies, but he went to Mit-Lothian about 1842-3, when Johm MacGregor was appointed to the office, which he held umler Sir Neil and Sir Robert, the present chief, until 1890, when he dien, and was sheceeded by his son, Neil MacGregor, who is now piper to Sir Robert Menzies, seventh Baronet.
[The Society is imbleted to Mr L. P. Menzies for the use of the blork of the Menzies Bappipes from the Red and White Book of Menzies.]

## III.

Notes on a swedish stafe-Calendar, Presented to the museun by the hon. John aberichombie, f.s.i. scot., datpd 1710. By II. F. Morlind sinfson, M.A., F.S.A. seot., Rewtor of Abehdeen Grammar sichoor.

This stall is hexagunal, of feet $5 \frac{1}{2}$ inches in length, of a light brown (staneel?) wool, smonth in grain. It the two ents knobs have been attached sulbsequently (?), rule in form, evidently intended to save the carving from rubling. The mues, symbols, dic. are well but not fincly eut.

This staff is remarkable, and, within my observation, unique in several conspipuous details:-

1. The fonms of the rumes employed for the sunday letters.

2. The commencement of the year with Jamary \& (mingue ?).
3. The realing, if we go ly the symbols, is from right to left, - . This is not uncommon on ohler staves.
4. The use of 15 symbols or letters: ocemring regularly to exery other sumblay letter: These ocenpy the position usually assigned to the ( dollen Number Runes or l'rime ; lat I have faited to discover their maning, or time anything like them on any other state-calendar. Begimning with the one attarhed to fannary \& (mall-knob end) these 1.5 signs are :-

(here inverted or "stuped" for comvenisner).

Some of these are limes; others apparently Roman letters; others again, neither. Undouldedly they are numerical, and probahly contain some methoud of finding the movable frasts: lhat I know of no cyole of 15 , except that of the Roman Indiction, with which I cannot homologate the ahove 15 signs.

The prominence given to certain more peculiarly Romish festivals (note those for the B.V.M., and " Ihl Souls," November \&), aml the ahsence of the Protestant November 6, (iustav Alolf, seem to indicate that this staft was made by or for a Rman Catholie; but this evidence is very incondusive Even the modern Protestant almanaks retain feasts abolished in practice ; and polahly November 6 was uccasionally marked on the staves in commemoration of st Lomard.
5. The rigils preceding the fustivals of the Virgin, Aposthes, Holy Romel, Vobe, Jhh Baptist, Ill Saints, and s. Stochal are prominently matkell hy a eross, sometimes slantel, to make room for the symbol of the feast following.
6. The symbols are often merely initials, or the firat two or there lefters of the saint's name, e.f., $\mathrm{TH}=$ Tihmortius $; \mathrm{NI}=$ Niehelas $; \mathrm{CA}=$ Catharime, se.
7. The staff is dated Auno 1710 .
8. This is the first stall 1 have sern whinh bears the " Bhterli-Ihays" or

motertaking. Such days are regnlarly indicated in the old Abbey Calendars of scotland, in the famons Codex Membramaceus of Worm, a Runic church calendar, dated 1328 , and in the calendar attribnted to Benle. The ohservance of these days, which was very wide-spread, $l^{\text {rerhaps miversal, though local and personal circumstanees seem to have }}$ introluced great varieties into the lists usually found in the above. I have noter marks, undoubtedly indicating "11ack Days," on several ealcmars of which I have photographs or illustrations. Frequently the tay is marked by a small wail or brass-heatent taek driven in above or below the day-letter. Here they are marked ly $\mid=$, finely scratched, but perfectly distinet. There are in all $2 t$ such marks, oceurring to-

Jan. 1, 足, 4, 29.
Feb. 11, $1 \lambda, 18,29$.
Mar. 1, 4, 14, 16.
$A_{1} \mathrm{r} .10,1 \hat{i}, 1 s$.
May \%.

Jul. 9.
Stic. 10, 28.
Oct. 6 ,
Nuv. 6, 10.
Dee. 11, 1 s .

Those in italie type 1 find in the lists of such days olserved in "Gaml" and Demmark, in Worm's "Fasti Iranici." The whole subject is a curious standy in itself; lut as I propose to examine it fully on some future occasion, it will suftice to remark here that the above agrement with Worm's lists renters the explanation given quite certain. The three exceptions, Junary 29, Fubruary 29, and July 9, were perhapes fronal and private.
9. The lirst rume of each month is indicated ly three strokes to the right.

The "Mark-lays," their symbols and meanings, are as follows:-

## Date.

$$
\begin{gathered}
\text { Symbol, its } \\
\text { in } 1.12, \text { in1 } \\
11,3: 7 .
\end{gathered}
$$

Deaning ami Saint, de.



## Date

| Fell. | 1 | No. | ${ }^{6}$ | $V$ igil. |
| :---: | :---: | :---: | :---: | :---: |
| , | 2 | " | 7 | Purification ( $\mathrm{i}=$ =" Renelse") B. V. 31. |
| " | 3 | " | 8 | Blasius. |
| . | 9 | " | 9 | Apollonia? |
| . | t.) | ., | 111 | Sigtrid Bo. |
| . | 22 | , | 11 | S. P'eter at Antioch. |
| $\stackrel{\square}{ }$ | 23 | * | 12 | Vigil. |
|  | 21 | , | 13 | Matthias Ap., "Leap- Year's Das." |
| Mar. | 12 | " | 14 | (iregory. Is the syimbol meant to denote the Equinox (O.S.) ? |
| " | 17 | " | 15 | (iertrude? Not very often marked. I suspect the R is for some abbreviation of the name, e.g, "'Rute" ?? (in German, "Trude"). |
| - | 21 | " | 16 | Benetict. |
| , | $2 k$ | ., | 17 | Yigil. |
| " | 25 | .. | 18 | Ammenciation B.V.M. "Mary mass the former," or in spring (i Vaar). The sume symblol recurs to her other days, c.g., July 2, \&-. with varying number of points and dots. Is it a fanciful $V$ for Virgo? |
| $A^{\prime \prime}$ r. | 14 | " | 19 | Tiburtius. "The first day of Summer," lache its prominence. The symhol is suggestive of $a$ sum and ratys? |
| " | 25 | " | 20 | Mark and his "(Gowk"(C'uckoo). "('uckoo-Day." |
|  | 31 | " | 21 | Vigil. |
| М1.y | 1 | " | $2 \cdot$ | Philip (and James), "Apostles Twain." |
| , | 3 | ", | 23 | Finding of the Holy Rouk. "Cross mass in Spring." Cf. Scptember 14. |
| " | 18 |  | 24 | Erik, King. |
| " | 2. | " | 25 | Urlanus. Frequently marked by a Giruin, especially of maize. |
| June | 11 | " | $26 ;$ | Damalas. Not often marked. |
| " | 15 | " | 27 | Vitus (and Modestus). Nut often marked. The symlrol is not attached to the day, and may belong to the $B$ of June 17th, q. . |
| " | 17 | " | 28 | S. Butolph, of Ikinhoe, or Ivamhoe. |
| " | 23 | , | $2!$ | Yigil. |
| $\stackrel{ }{ }$ | 21 | , | 30 | S. John Saptist. "Midsummer's Day." |
| " | 25 | , | 31 | Vigil. |
|  | 29 | , | 32 | S. Peter. Key. |
| July | 1 | " | 33 | Vigil. |
| . | 2 | " | 31 | Visitatio P. V. Mr Cf. Manch 25 , 心e. |
| ., | 5 | . | 35 | ? The modern Swedishatmanack gives Mesther. The ( m . of Worm ( 1328 A.d.) marks it merely as the octave (of S. Peter's Day). |
| " | 10 | $"$ | 36 | Kinut. Lee Knud (Dani=h). Knut, the Reaper. Segthe, as usual. |


| ［30 | Sintlon，as in 1 y 碞 on 1． 297 | Meaning and Naint，de． |
| :---: | :---: | :---: |
| Iuly 13 | N0． 37 | Margaret．Itsually marked to the 20th． |
| ．， 22 | 38 | Mary Magdalene． |
| 21 | 39 | Vigil． |
| ．． 29 | －． 411 | （？） |
|  | 41 | Olaf．Axe，as matm， |
| Aug．is | 42 | Dominie？Owwadt？ |
| 10 | 43 | Lawrence．Gritiron． |
| 15 | 44 |  |
| 24 | 45 | Barthomew．Note the absence of a Vigil to this ant s．Bamalas．Huch less prominence is tisually given to their dats on the Scandinavian calendars thin to the other $\dot{A}_{\text {postles．}}$ |
| 31 | ．． 46 | Ker？Arwid？？（modern Swentish Almanack）． |
| sipt． 8 | 47 | Nativity B．V． 1 l ．（＇f．Ampust 15，Se． |
| ，11 | 14 | Elesation S．Crucis．＂Ifoly Rood in Antumm．＂（＇f． May 3. |
| ．，20 | 49 | Vizil． |
| －． 21 | ${ }^{-1} 50$ | Matthew Ap．Ev． |
| 28 | 51 | Vigil． |
| $2 \cdot 4$ | ，52 | Michael．The symhol probaldy denotes a graduated sterl－yecel，in allusion to N．Michael＇s seales． |
| Oct． 6 | 53 | Eskil．Rarely marked．（＇f．my artialle，I＇ros＇．Aut．Soot， 18：2，p，36\％．The Morlernswedish Almanark grives ＂Brmmo．＂The two side stokis to the unexplaimet symbol are the marks of an＂mulucky day，＂rid， alove，p． 236. |
| $"$ | 5.1 | Birgita，Specially Swedisls． |
| ＂ 10 | 55 | Cereon？liarely marheal．Symber mintelligille． About this time（October 14，（alixtus），the winter half of the year begins．The omission of Calistus is romakille |
| 13 | ，Sifi | （？）An error for 1 th ．St（＇allixtus；almost always given． |
| $1 \times$ | ， 57 | Luke Er：An inserted L？ |
| － 21 | 58 | S．Urula and 11，0（n）Virgins． |
| 21 | 59 | Vigil． |
| 28 | （i） | St．Nimon and Jude．＂Apustles Twain in Dutumn． The day was commonly called Fyribut＝Forebonde； viale Proc．Aut．scot．（1891），sub dir 1， 325 ．Haнte the F ． |
|  | 61 | Vigil． |
| Nいか． 1 | － 62 | All Suints．Hallowmass，＂1helnerne．＂ |
|  | － 683 | All Somls．A Roman（atholic festival，abolishent at the leformation，but retainest in the moklem I＇ro testant Calendar，though not Prequently marked on the staves．Symbol unintelligille． |



Monday, sth Apmil 1895.
liEGINALD MACLEOD, Vice-President, in the Chair.
A Ballot having been taken, the following Gontlemen were duly elected Fellows:-

Charles E. S. C'hambers, Editor of Chumbus's Jourual, I (ilenciim Cresent.
A. W. Chishols, Goldsmith, 7 Claremont Crescent.

Sir George Duoglas, Bart., Springwoul Park, Kelsu.
Andrew Graverr Heiton, of Darnick Tuwer, Architert, Peeth.
The following Domations to the: Muspom and Libary were laid on the table, and thanks voted to the 1homors:-
(1) By Rev, Willam Telford, F.C. Mansu, Reston.
smath Jugranewd Vissel of hrown earthenware, $1 \frac{3}{4}$ inches high by $1 \frac{1}{8}$ inches diameter at the month, and ghazed only on the insite, with remains of flat projecting hanfle at the rim, fomel in exavating the foundation of the Frew ('lureh at lieston, Berwirkshim:
 Six ohd Wrest Africau Trade Beals (variotios).

Portion of a large Cinorary Urn, with twistal comb omamentation, fome at Mrunturk, purish of Trinity Gask, I'rethshire.
(I) By 1). I'. Mexales, F.S.A. Sout, the Iuthor:

The Real and Whita look of Menzies-The History of Clan Manzes and its Chiofs. tto, dilasgow, Isy 4.
(5) By the Committee formen tor fromete the erention of the
 Fis..I, siont.
Memorial to Willian Drummond of Hawthormden. Svo, Edin buth. Privately printerl.
vole xxis.
(6) By J. T. Prown, Fs.A. srot.

Caledonia, or a Historical and Topopraphical Accomit of North Britain. By the late Ceorg. Chahmers. New elition, Vol. VII. Now printel from the hitherto umplishel MSs. in the Alvocates' Library. fto, Paisley, 1894.
(7) By Prigallehurgon Lieut.Col. Wra, Johastos, of Newton 1) © , the Author.

A Genealogiral Account of the fescendants of James Young and Ruhel Cruikshank, 1697-1893. I'rivately printed, I894.
(i) By the Master of the Fulls.

Historians of the Church of York, Vol. 1II. Acts of the Privy Comncil, 157.5-77.
(9) By the suciety of Antiquables of Linnmen.

Proceedings of the sumbty of Antiguaries of Lombon. Smoml harime Vol. AV. parts 1 ant 2. Archæologia, Vol, LN: part 1.
(10) By the Britisil Arehembuitcal Ansuctathos.

Journal of the British Arehæologieal Association. Tol. L. parts 1-4.
(11) By the Arfhen logical Isextitute.

The Archeological Journal. Vol. L. parts 1 and 2.

There was also Exhibiteal:-
By Waler J. Kaye, Fsi.A. Soot.
Rubbing of the Rrass of Sir Ronger de Trumpington (1209), in Truapington Chureh, C'ambridgeshire.

Mr Kaye supplies the following notes on the mbling :-
The memory of sir Roger de Trumpington is prrpetuatel by a monumental brass laid down on the upper sufface of a canopient altar(omb) in the Church of Sis, Mary and Michael, Trumpington, Cambridge-
-inre. In luint of agn it shands serond on the list of Enghish hasan, being proweded alone by that in memory of Sir John Dankernom, at stakn d'dbernom in surrey, date 1277 . The knight is represmenter with his hamls in the attitule of prayer and his legs crossed. He is clat in a haturerk of chain-mail, with coif de mailles or hood, chansons or stockims, gloves, ame senouillieres, while a linen sureoat hangs from his shoulders to a pwint below the kuces. His shimeld, supported by a gruge patsing over the right shoulder, is convex, and bears the cont-ofarms of the wearer, which is repeated on the ailettes which formed the protection for the shoulders and neck. The lahel of tive puints only oremrs upon the ailettes: marks on the shield show the that the engraver had left his work mutinished. Sir Roper's head rests upon his tilting-lu-lmet, which is atterhed by a heary chain to his girdle. Hlis sword hangs from a hroal belt on the left-hamb side, its seablart leing alorned with four small shields, whereon are emblazoned the arms before mentionen ; the lower end of the sworl terminates in the month of a hound which crouches at the feet of its master. Straps wross the insteps of the fert sorve to retain in pusition very formilathis pryck spurs.

Additional interest is imparted to this hrass he the fact that sir Ramer de Trumpington's is the muly brazen elligy extant on which the tilting-lelmet is portrayed.

The following Commanications wer real :-

## I.

AN OGAM INs'RIPTION AT AbERNETHY, 1895. Py The Rigat Hon. THE EARL OF SUUTHEsK, K.T., LL.D., F.S.A. Seot.

Intronturtor? Nitice:-In the Sootsman of January 30th, I895, there apperath a letter from the Rev. I hegald Butler, M..A., minister of Shernethy in Parthishire, reporting the discovery of an inseribed tablet in the churchyarel of that place,-" a seulpturen stone . . . [atoont] 19 inches in length, 13 in brealth, 4 in thickness," which was exhmed " a little north of the fommation-wall of the ancient Celtic claurels [ibmolished in 1801], ahout $\pm$ [5] and a half foret muler the soid, vary near the spot where a senputurel stone withe exeised cross was found "a year ago." This newly discovered stone, contintued Mr Butler in the same narrative, oflers interesting traces of primitive art, learing on its face an inseription int ()ams, arompanied ly symbolic devices, consisting of a crown-like oljeet alwo the groups, aml a bird below them (see the diagram on 1. 249).

A few days after this diseovery, the stome was sent for inspection to the Mnseum of Antiguities in Elinhmeh, where, owing to peculiaritiss to be presently dischssed, doults aroser as to the character of its inseriptions, which, if not tietitions, ajpeared to have been tamperel with in morlern times.

Fio a few days more the stome remaned in Elinhurgh, from whish $1^{\text {date }}$ Mr Buther, with a courtesy which 1 gratefully acknowlelge, was gool mongh to forwarl this relie to myself, invitiug my opmion in regarl to it, and in several letters wory amply supplying me with information to assist the inguiry.

With these aids aml alvantages, 1 have consilurell the question in all its hearings, and have devotid many hours to a stuly of the stone; lont 1 regret to time myself still mathe to arive at any certan conelnshons, and my only comse is to set down what I have latarl, seene, ime noted in the mattere, withont expressing an opinion on cither silc.

Norration of the discorery.-The stone was foum on Thesiliy, Jamary 29 th, 1895 , in the situation alrealy deseriled, hy the sexton
and his son, who were opening a grave in the churehyard at Ahernethy, in presence of one speetator-Mr Mane, the discoverer, some tive yoars ago, of an (osm-hearing fragment, and mother anciont fragment inseribed with a representation of the crncifixion. The soil, on whith the men wore working with pick-axes, could not have been recently moved, heing " as hard as a roek" from long-contimued frost; it bore no traces of disturhanep, and, as far as known, had not heren moved for any promsu within the memory of man ; an interment, however, had taken phace some fourteren years ago in a contignons grave, which since then hath been undisturleel. Wh reathing a depth of live and a half feet (as the sexton states) the stome was notiend, lying among boulders supposed to lefong to the ruins of the old church, and so tightly packed with earth that it was diffienlt to raise it from its beal. The inswibend faew lay downwards, and the right elge, which was overgown with short green moss, was in toturh with the aljarent grave, and nuar to the eoffin. "Each [of the three ment $]$ saw the stone in its position when buriod in the soil, and helped to unearth it." ${ }^{1}$

A messenger wats then desjaterned to Mr Butler, who at onen went to the churehyarl. On his arrival he frum the Post-master and the l'arochial board Inspertor-who hat arrived immedintely after the diseovery-ongited with the finder in clearing the stome fom earth and sermbling it over with a wat hrms. "I at nuee stw the hird--ymbol," writes Mr Butler, "the crown-symbol, and the rentral line of Ogame." Ifter this, the strme was taken to the Parochial ()fliere, and
 Insisector, Aherne lhit, deted Wherch 6th, 1s95:-
" I was not gresent whon the stone was mearthel, hont was so shortly after, and as I thought it was a genuine sempture, I sont for you. In the lair where it was fonud the gravedigger had broken throngh what looked to me like atn ohf fommation, pincupally of ruble, with lime. This rubble, on far as my memory setves me, was on both noth and south sites of the lair [that was] leing dug, and on the month site, where the stone was found, the edge or sith of a collin of a rement [some fometen years ago, as since explained\} burial, a little below the ruble builitime wits expersed to view. It was possible the stone may have been standing on its enf", wath the Ereen prortion of the stone next the 8arfare : this is the only why the gromih of greanness can be accountel for. There hawe been some stones foumb, on the satme line, north and sonth from this, alout which there is modonbt thry are andent.
there, continues Mr Butler, "unknown to me, it was again scrubherl, and the inscription run over with the finger-nail of the finder." (On the following day, in Mr Butler's absence, " a gentleman came from Shandee to take a rubling from the inseription for Dr Anderson." shortly afterwards, as mentionel, the stone was sent to the Edinburgh Museum, whence, after it had been insperten, Mr Butler, heing then in Edinburgh, was gool enough to send it to the present writer, who has returned it to Alsmethy, where it now rests.

Arpuments uyeinst the Inseriptions.- 1 . In general character these inseriptions resemble no existing example. The stem-line, exactly one foot in length, is horizontal, aml as straight as if run on a muler, insteat of being irregularly hamtofrawn and vertical, as in practically all similar cases. ${ }^{1}$ Nuthing resembling the ares on the line, or the crown and hird above and helow it, occurs elsewhere. The symbels, both in style and charactur, are unlike any that are fomm on the seupptured stones of Pietlanf, though the (ggams are framed on l'ietatian models. The letters are practically all vowels, and seem to yield no definite mpaning. On no explanation can the legend be viewed as emborlying propur names in the mamer of all other Ogam epitaphs. 2. The workmanship is suspicious. Some of the lines and sores are mere stratehes, such as a common iron nail might protuce, while some, rather dreperp, are square at the top, as if cut with a small gronge or chisel. Two (accilental?) nicks make by the same instrmment alpear to the luft of the N formal better helow the crown. 3. The fresh whiteness of the lines ame seores is so glaring that, for the most part, as they now alpear, they cannot but he morem-sometimes altogether so, sometimes as regathe their interior surfaces. The harlness of the stone ("shar') silicious grit," as I am informed) proves that the clearing of the scores by wet hrush aut tinger-mail could not have affected their interior surfaces, nor could these processes have left any markings on
${ }^{1}$ The only examples within my recollewtion of Ogams on a horizontal stem-line are these: I. One worl, in company with a Hiberno Ruman inscribed name, on a stone it Clommacnois (Stokes, Chr. Ius., vol. i. pl. ii.) ; 2. A few gronps on small ohjects (Brash, (1y. Mon., pl. xli.) : 3. A few lrief inseriptions in Miss. (Brash, do.) : 4. An Osam fragment, of some three letters, found at Abrernethy about five years ago. All these, from their style, are of late origin.
weh a material. As the lines have unquestimally lown more or lese lately retonched with hard instruments, it is char that an unknown person at an unknown time has tampered with the inseriptions, and doubt is cast upon the whole ; for either tha stone was burime momewhat recently after remevation of its lines, or the full story of its treatment after the present uncarthing remains to be told. 4. The presence of moss growing on an ellge of the stone shows that that part of it mast lave been not long ago exposen to the air. Siuch vegctation could not exist on a stone that hat ben buried for centuries. 5. The whole design is surjpieions. The neatly balaneen arrangement ; the affectation of novel (Sgam forms (the ares-surgested perhaps hy diphthong ( hatracters in the Ballymote "kny") aminst commonjlate groms ; the casy symbolism of the crown and dove; the triteness of the initial capital hemoath the crown ; -all are suggestive of modern fingury.

Argments in fiurour of the Insertiptums-l. The inscription is much later than any other lapidary Ugam yet diseovered. The horizontal stem-line and the style of the seoring suggest familiarty with manscripts, on the engravar's part. 2. Granting-what camot be denientthat, as a whole, the surface of the work is monden, granting that it is mostly imposible to julge how far the lines are new and how far they are restorations of wher lines, there yot remain some cave (to he presently sperified) where the ohd graving ean lee distinguished from the H. w :
3. The moss appuared only on the stomes eblen, where it approathet a woflin in the aljarent grave, amb it has hern sugersten that some chemical action may have generated the growth. The sail, 1 am informesl, is not a clay, though it was hard and firm when excavateml. 4. The stome may have loen foumb, ame the inseriptions returched for examination when the whe charli was demolished in 1 sol, then thrown aside and burien with other framents amone the ruins. But after
 Fartlam, would any one have tronblel himself wer the inseriptions at a perion when antiquities wore little cared for and thams prewtically wknown? Questions hard to answer. Fion in $1 \times 01$, it is possible that, from mope entosity, sume one might have cleaned ont the stores and
fignres, and not unfaithfully refreshed their lines. These, however, are mere surmises, and the mystery seems likely to prove insoluhle, for the character of those concerned in the present case frees them from all suspicion of concealment or duplicity; and, were it otherwise, their maequaintance with recondite antiquarianism forlids the irka of forgery on their part. 5. If this work is fictitions, one question strongly suggests itself,-The forger having knowledge enough to frame so phansible an imitation, why did he fail to better it ly the easy process of tollowing the style and plan of anthentic inscriptions? If he sought for effeet, why refrain from composing a sensational legend, illustrated with mystical symbols, instead of ruming vowels in an improhahle sequence, and portraying common forms of ahoost langhable simplieity? 6. On ordinary limes the legronl somme meaningless, bat it may $l^{6}$. meelieval and non-Celtic, aml, as might be shown, not beyoml an explanation that wonld farly accomet for some of its peraliarities.

Ancllysis of the Inseriptimes.-No. 1. Are of eirele, below stem-line, inseribed with three dots. No. 2. Are of circle, above stem-line, arparently inseriled with three dots, but they are not vary char. No. 3. Are of eircle, above stam-line and near centre of groups, inseribed with one dot. No. 1. A. No. 5. U. An angled vowel, but the first seore is nearly straight. No. 6. U. Might le Nti, but (on analong of l'ietish inscriptions) the slant is insuffieient, and thongh the "key" sanctions this NG: group, it oceurs in no example known to me. Might bo Al:HA, the central score being broken, but spacing, group-character, and general considerations diswourage such a rendering. No. 7. 1. The "refirsher" has not marked this score, and it is larely visible. It shows (faintly) umber a strong light, and the space seems to require it. Nus. 8, 9, 10. OlL.1. Angled scores. The lower central score standing nearly milway letween the two central upper scores, it is hard to say whether these umbers should not be real as AlIO. I dent or point ahove the line follows here, and a corresponeling hollow heneath the line may perhaps he the semains of another dot. Nos. $11,12,13$. AHO. The lower strokes of No. 13 are doultful, for scarcely any depression exists leneath the modern scratchings. (On the whole I areept them, on gromels of probalnlity. Nos. 14, 15. A,O. Angles
vowels on a oparate stem-line. Possibly U , but the spaciug is in fatour of division. An unrefreshed enrved line continuing the uper line of the third seore suggests lyy its direction the ikea of a leaf-shatpel enchase of this intepemlent part of the inseription ; it is more probalily an arcilental mark.

No. 16. A seven-rayed Crown. Has bean thonght to represent the sum, but in that case the louly would be rombl, or at least its convexity would turn upwarls. The four central rays seem to meet at the points in pairs, forming leaf-shaped fighres, hat the terminal hase that proluce


Diagram of Inseription and symbuls on Stone foum at Abroethy, 1 Su5.
this dellect are mombermernes, as likewise is a faint outhe line designel 1.) give the right-haml raty a similar appeatace. This crown is shown in perspective, and looks modern ; some of its lines, however, are where than the restomations near them. Xo. 17. X or Z. I capital letter beneath the crown, wery doubtful and not well detinet, being [erhaps it
 indentations formed loy a small gouge or chisel, the same that has been used in cutting the heads of scores in group No. 6 . It is harel to arount for these marks: they seem to be intentional, lant form no part
of a device. No. 19. A Bird. Night be meant for the Christian dove, lut more resembles a crow or a sea-gull. The restorer has substituted a scratel for the real beak, which is just alove it, and he has omitted to refresh the eye. The actual legs are hard to detemine, as likewise the groum-line beneath, which (if existent) is not alove $\mathbf{3}$ inches long, though the restorr's scratches extend it widely on either side.

## Summary of the Lerpul.-AU UA [AO] OnA AHO.

Combusion.-The object under consideration bears no resemblance to any (Igam relic in Ireland, England, or Wales. Its letter-forms are l'iclavian, but not so its symholism, which rather approximates to the Mithraic, Gmostic, or Semi-Christian type. Its text, moreoverseemingly meaningless if viewed either as Celtic record or modern forgery, the preponderane of mwels forthiding the supposition that common worls are indicated in it cither hy contraction or initialling-undoultedly hears a likeness to some of the Helrew-gnostie legends of Alexamhiam origin. But though numerous Mithraic remains of the Roman periol have been fomd in lbritain, we could not assign the present inscription to so early a date, for it is evidently lates in style than any of the Ogam legends of Pictavia, some of which ahnost certainly belong to the eighth or mintly centuries.

It might, nevertheless, he a product of that medieval revival or survival of tinostirism, examples of which ahound in the form of inserileed rings and other talismanic oljects, and ocew among the marks of aneiont and modern Masonry. Whatever the date of his work, the inseriber serems to have had some acquaintance with finosticism and Ogam-writing as well as Christianity, hut to all appearance he has uspel his knowledge incongrnonsly, the lesend leeing confused and the symbolism dubious; while the (Ggams, hesiles leing ill-ent, and strangely jumbled in groups $6,8,9,10$, are drawn horizontally, mamuscript fashion, instead of vertically, are arranged on a meded stem-line, and are of a mixed type and crowded character, whirh neither please the eye nor compare satisfactorily with any anthentic example.

Under the circumstaness of doubt and difticulty yet attaching to these inseriptions, it would he idle to attempt an interpretation of the legend. 1 will merely, in conclusion, point out that each main section of it
(aceepting No. 7 as a score) reads forward and baek-aU UA-OHA AHO. This, taken with the rest, goes far to indieate that the inseriber, whether ancient, medieval, or molern, worked not intirely at rambom, but with a certain definite intention, whatever might be his object and design.

## H.

Traces of the cultt's of st fillan at killallan, renfrew. shllie. By J. M. MackiNLay, M.A., F.S.A.siot.

Houston and Killallan now form one parish, but were separato till 1760, when they were formally united by a decree of the Conrt of Teimes. ${ }^{1}$ Their real union, however, did not take phere till eleven years later, when the Rev. John Mrenteith, minister of Killallan, lerame inerombent of both parishes on the death of the Rev. John Carriek, minister of Honston.

One of the most interesting traces of the cultus of St Fillan at Killallan is in the name of the parish itself. This name means the chureld of Fillan. It is durived from the Gaclic rill. a cell or chureh, and Foolen, better known as Fillan, the F having lome lost through aspiration, according to a familiar rule in fiatlic. Of the three forms of the name, Killillan, Killillan, and Killallem, ${ }^{2}$ the tirst has now disappeared. The seeond is still in use in the district. The third is the one best known beyond the parish.

There must have heren a phace of worship at Killallan at a very early date, but concerning it we have no information. The date 1635 is inseribed on the lintel of the aneient parish church. After the chureh of 1 buston became the chureh of the mitel parishes, Killallan Kirk was allowed to go to ilecay. From the olld statistiod Acount of somblend we learn that, though no longer used as a plate of worshipe in 1791, it had still its row on. The strueture is mow an ivy-clah roin, ated forms the burying phee of the Batrochan family.

I am informme by the Rev. 1). Kirkwoot, minister of Houston and

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1 Whigiuts Parochialis Scotia', i. S1.
*The name has sometimes only whe \(l\) in the first syllable.
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Killallan, that when Killallan Kirk was mmoofel, the leell was removed to Barochan House. Wishing to get further information, I wrote to Mr C. B. Renshaw, M.I'., of Barochan. Mr Renshaw was from home at the time, hut Mrs Renshaw courtwonsly supplied the following facts : - "The bell of Killallan, about which you write, now hangs in a tree in the gardus here, and is in daily use. It has been recast. The original inscription was no doubt copied, and rums in a plain hand round the upper part of the hell. It reads thens:-"Carolis-Hou-Mo-Frit-1618-.' Then, on the opposite side,-'Killallan-Bull-Tarial Buryes, Fumuler, cilcsyonr, 1844.' The bell is an ordinarily shaped one, and no doubt was cracked at the time that Mr Fleming had it reeast." There is still a difficulty refouing to be met. Chalmers, in the thirel volume of his C'alulumiu, ${ }^{1}$ says, "The inseription on the church bell recorls the name of the saint to whom the church was dedicated, and who was regarled as the tutelar saint of the parish." The saint: name is not now on the bell. The most likely explanation is that the bell of 161 s was itself reeast, like the one of 1844 , ant that the original one hore St Fillan's name. The stone font belonging to the church stood, for long after the lieformation, ontsile the door, but was, at a later late, Jrailt into the wall of the suromaling gravayarl. ${ }^{2}$ In the neighbourhood of the chureh, and deriving their name from it, are the farms of Iligh and Low Kirktown.

The question arisus, who was the saint to whom Killallan churech was delicated? In referener to St Fillan, Bishop Forbes, in his Kalondais of Scottisle suints, remarks, "the Scottish saint of this name must lee either the saint whose commemoration is found both in the Scottish ant Irish Kalenlars on the 9th of Jamary, or a saint whose day is on the 20th of June." ${ }^{+}$The second of these is commonly known as Faolan, the Stammerer or the Leper. 1le was a diserple of Sit lille in the 6 th century, and, along with several others, was despatched loy his master on a missionary tour. IIe settled at Ratherran, iee, the

[^20]Fort of the Earn, now 1 huturn, in Comrie parish, Perth-hte, and save his name to the villayn of St Fillans, at the lower wht of Loch Lam, That this is not the saint who gave name to Killallan is proved loy the fart that St Fillan's festival was celebrated here not on the 20 th of June, but on the 9th of Jumary. In 1824, Chalmers, when describing Killallan, says, "saint Fillan's Fair is still heht ammally at this place in January." ${ }^{1}$ This fair has long hwen disomtinum, Dut its former "xistence is of value in settling the point in dispute. Wie have therefore to turn to the other st Fillan in our satere for the patron saint of Killallan. This saint is still rememberel in the name of strathfillan, Forming the super part of Strathochart, and ins the river Fillan flowing through strathtillan into Loch Bowlart. The dates of his death and his birth are not known, hat he is believed to have flomishel
 by bishop Forlese, the saint came of a nolle fannily of the swoti in Areland, and hat for father, Feriach, otherwise Ferolach, and for mother, kentigerna, who afterwards betork herself to a solitary life on Such Cailleach in Lowh Lemomh. The saint's le"ghe states that he was born with a stone in his month, and was thrown hy his father intu a lake, where he was ministereal to by angels for a year. H1, wats then foum by bishop, Iharus, who lought him up and instructed him in the Christian faith. The saint received the monastic habit from Abhot Mumlus, who is still rememberel in the name of Kilmun, on the Holy Looh, in Argyllshire On the death of Mundus, Fillan was appointed his sucecssor. It is not iortain where this monastery was. It a later date, Fillan is said to have gone to Lochalsh, where be built a church in honour of his mele it Congan, foumter of the momastery of Turritl in Abremenshire. In fact, as bishol Fintes remarks, "at the present day Kilkon amt Killellan, the churehese of Congan and Fillan, bear testimony to the truth of the Lasconle." ?

The chivef serene of hitlan's work was in Strathfillan ant its neighbourhool, prohahly in the district extunding from Tymbum to Killin,
${ }^{1}$ C'aldelunir, vol. iii. p. 837 , note. Vide also Urigines I'erocticeles sietix, vol. i. 1. 81.
${ }^{2}$ Kulevelurs of Stottish Suints, 1, 3:11.
where the church was desticated to him, and where he was held in such reverence that the mill was left ille on his festival till well on in the present century. The saint louilt a chureh somawhere in Strathfillan, on a spot miraculously imlicaterl to him. The site is not now known, but the ruins of Sit Fillan's Priory, founded hy Fing Rohert the Bruce, are still to be seen about half-way between Tyndrum and Crianlarielh. Not far from the ruins, in the river Fillan, is the Holy Pool, resortel to for the cure of insanity, from a very early date till within quite recent times. St Fillan's bell and erozier, now in the Society's Museum, require only to lee names to recall much familiar antiquarian lore.

There is a spring saterel to St Fillan at Killallan. It is situated in a fieln close to the chureh. Though now neglected, it was once regarled with consilaralle revarence. The writer of the article in the Ol, Statistical A woone of sootlane ${ }^{1}$ olserves:-"There is a spring-well callent Fillan's Well, issuing from mular a rork, shaded with bushes hanging over it, to which it is reported that the comntry-women used to bring their weak and ricketty children anl bathe them in the water, leaving some pieces of cloth as a present or offering to the saint on the bushes. This eustom continuel till ahout the end of the last (i.e., the 17th) century, when one Mr Hutcheson, who was then minister, causenl the well to be filled with stones."

The water used at baptisms in the chureh is believed to have been drawn from this well. There are now no lushes hanging over it, but some 20 feet higher up the field is a hawthom bush, crowning another small roeky hepight.

In the same field is an carth-fast boukder, known as St Fillan's suat. On the top is a circular hollow ahoat It inches across, forming quite a comfortable resting-place. To the right, as one sits, ant near enough to be within reach of the hand, is another hollow, irregularly oval in shape, 9 inches long hy alront $3 \frac{1}{4}$ broal. Arcorting to a local tradition, St Fillan sat in the seat and performed the rite of baptimm with water out of this cavity. St Fillan se+ms to have had a liking for stone seats. Ite had one that long stood beside the mill at Killin, but unfortunately it was cast into the river Dochart, flowing ${ }^{1}$ Vol. i. p. 316.
have loy, amb was thas lust. ILis namrsake, the wher Fillno. Altonly refement th, is said to have sat in a rocky seat on tho top of Imufillun, noar Comric. Tha stone received the nam" of St Fillan's Chair, ${ }^{1}$ am till the end of last contmy was assonciaten with a superstitions momely for rheumatism in the bak. The person to he chmel sat in the chair, and was then draceed down the hill hy the leas, the saint's influence guarantering recovery. To sum up the trases of it Fillan's eultus at Kilhalhan, we have his churell, his bell, his spring, his somt, and the name of the parish, in which is embeded the name of the saint himself.
111.

ARCHEOLOGICAL NOTES ON DUNVEGAN CASTLE. By LOCkhart
BOGLE, FAA. SCof.
The statement of Ir Johnson and others that " Marlailt, the I ban" had built a castle at humeman in the $9 \mathrm{~g}_{2}$ century is onn upon which it will not le diflicult to form an opinion. The carliest date that can be assignel to the original keep now existing on the top of the rock goos lack to the Ifth centurs. It is possille, however, that the summit may have been oriqinally cownel hy one of those mysterions brochs, of which them ate the ruins of tive in the neightomehood, on the shores of Lowl Thuveram, viz., Duns Thotaig, Osdale, Collonst, Borremag, and Cordorash.

In his theseription of the castle, buswell (1773) says:-"There is a very large untinished pile, four storeys high, which, we were told, was here when Leol, the first of this family, came from the Isle of Min, married the heciress of the MaceRailts, the ancent prossesmes of Dhusgran, and afterwards actuirel hy conduest as moth lamb as her hat got hy martiuge." The ahove-mentioned minots building is shown

*On the other hand, skone, in his semome of (lan Leml sken's Inablemelers. vol. ii. 1. 27.3 , state's that for the Norwegian origin of the M wheods there is mot the veatige of anthority, and, so far from this acconnt of their origin beimg sanethened
ly firose in lis view of the castle (1790) (fig. 1), and is mudoubtedly the okdest part of the castle as it stands. It was simply a massive oblong keep, with a small but lofty tower embeldell in the north side. From its structure we know it to have been built in the 1 the century, and it was restored to nse again about the end of last century. The Macleods of Cilenelg, otherwise styled of Harris and Dunvegan, hat charters of Davil 11. (1329-71) so this part of the castle which belongs to the 14 th century must have been built by them. I give a drawing, fomuled on measurements and researeh, of the probable ajpearance of the castle alrout this time, with its sea-wall girdling the rock, All is suggestive of nothing but vast strength and isolation (fig. 2).

Any vestige of what might he supposed to have been Macrailt's furtress ("xeep $p^{t,} 1^{w}$ rhape, what seems a curions elevation of the sea-wall to the northi) does not exist. Secular builling in stone and lime was introluced into Englaml, and later into Scotland, by the advent of Norman influence; and the statement made ley In , Johnson and others that the present keop, was built in the 9 th century ly the Danes is guite mutenalle.

In the sea-gate is presented an interesting study. A mawing, looking fowarls it from the sen, is given (tig. 3). The larger original areherl gateway can easily lre disemed, enclusing the smaller door-like entrance, which, from its apmearmer, I attribnte to the time of Rory More (15th echtury). The dimensions of the original entrance are 7 feet 3 inches wite hy 8 feet 6 inches high. Until the time of the 19 th Macleon (alout 17.50 ) this entrance was the only means of aceess to the castle,
by the e'kromiche of Mork, that reeord is dentitute of the slightest hint of any such origin, of even of any pasage which could be assumed as a gromm for stheh an idea. Nor dors the tradition of Norwegian descent appear to be very old, for in a mannscript genealogy of the Macleods, written in the 16 th century, there is not a trace of it. From the ealliest period in which they are mentioned in history, they have Leell divided into two great families of Marleod of Glenelg or Hatris, and Macleod of 1 cowis, the former leing of old the proper chief of the clan. They are said to have acquired the extensive lamds in skye (which they still hold) by marriage with the daughter of Macraik or MasArailt, one of the Norwegian nobles of the Isles, and from this connection, and the suceession which was ohtained by it, arose probably the traition of their being leseended from the Nurwegian Kings of the Isles.


and to it a rude flight of steps lod up from the edge of the sea. A somewhat similar arrangement existed at Eilan IHonan Castle, in Kintail. Boswell says the only approael to the castle, before the opening of the land-gate, was ly boat to the sea-rate.

In the drawing (fig. 3) can le easily seen the large triangular keystone of the arch, the other stones of which radiate but little. At one sike are two large vertical stones forming the cheeks ; those on the


Fig. 2. Dunvegan in the 1 the century.
other side have heen removed in reducing the entrance to its present size, which is 6 fret 4 inches high ly 3 feet 8 inches wide. The choeks of the smaller mitrance, though now so much worn, have been nicely carverl, facel, anul beaded.

Let us now look at another drawing, showing the same gate from the inside (fig. 4). Hore is adlitional evidence of the gateway having been built ur. On the right, part of a welge-shapeel mass of masonry
has fallen away, revealing a very large bram- or bolt-hole (9 inches square), which I somnded to the depth of 10 feet. This hole was intended for the bolt of the original wide arched entrance. I buring the hours of night, or whenever a surprise was possible, the massive beam would be drawn from its recess and the end inserted in a hole


Fig. 3. The Sea-gate, Dunvegran.
on the opposite side of the gateway, thus effectually securing a thoor which must have been of pnomous size and strength. The present door and lobt are modern. Two sets of former hinges for this smaller door are still visible.

Above the door can be seen the lower fringe of the outer arch, aml
between this and the horizontal lintel across the door stones have been loosely built. On the left sile, the arch has been also built into the masonry brought to the prortenllis grooves. I suggest that these alterations were carried out in the time of Sir Roderick Macleol, a


Fig. 4. The Sea gate, Duavegan, from the inside.
chief who flourished in queen Mary's period. This old ponderous door may have been an iron "grille " or grating, such as is to be seen in Fyvie Castle and others.

I now give a plan of the ground-floor of the castle. What is bhack is of ancient date (fig. 5). The walls of what are now the cellars in the north and ollest part of the building are of the thickness of 11 feet, and originally they formed one large hall, presumably the servonts' hall, with arched roof, and a heautifully arched fireplace (now bricked


Fig. 5. Dusworn Castle-plan of ground-floor.
up) at the south end. The modern cellar-toors wouh he windows to the hall. Immediately above it was another hall of the same size. which would be for the chief and his guests. The entrance to the keep itself was through the thickness of the north wall on a higher level than the gromd floor (as 1 have shown it in fig. 2). The pasage
is a yarel wide in a wall 9 feet thick, and is still used, learling into the chief's hall. On looking at the plan, a primitive stair will be seen passing through the thickness of the north wall, communicating on the way with the dungeon by a narrow slit in the wall (near which is a brickel-up aperture, which might repay exploration). This stair has a loop-hole at its angle, and communicates between the hall ahove and the lower hall.

The dungeon, as seen on the plan, is the ground-floor of the small tower. It is 4 feet 4 inches by 6 feet, and can only be entered through a syuare opening in the small chamber above, secured lyy a large stone with iron ring, and it extents into the gloom below, where it has been excavated out of the solid rock to the depth of 16 feet. It has a narrow loop-hole facing the north, but high up near the arched roof, so that the inmate of this horrible prison must have been enveloped in darkness or semi-twilight on the lrightest day. Here it is known "Iun Dubh," one of the early chiefs, who wadel through the blook of his nearest relatives to attain the chieftainship, hal imprisoned some of his victims. The bottom of the dungeon was strewn with the bones of sheep, which may in lyggone times have been thrown to the prisoners.

From the elevated entrance represented in fig. 2 there enters a flight of steps alrealy mentioned through the thickness of the north wall to a high arched space, 5 feet wide, which enters the mper hall. Off this arched space, and as a continuation of the steps, is an opening only 21 inches wide entering a chamber above the dungeon 6 feet by 11 feet, furnished with two loop-holes, and the stone and iron ring before alluded to. Entering the upper hall again at the south-west corner is a curious chamber in the wall, 4 feet 6 inches by 3 feet 6 iuthes, which has finely dressed cheek-stones, hinges for a good door, and a small loop-hole, and recess opposite. This probally was a place for concealment of valuahles in times of danger,-in fact, a kind of melieval safe. The upper hall hal, no doubt, the four windows it now has, but they must have been much smaller. The two storeys above it are now titted up as betrooms. Each chamber of the small turret above the elungeon has loop-holes, and communicates with the corresponding storey of the keep. In one chamber is a well-contrived hatrine-


Fig. B. Durvegan Castle-tower built by Alistion Contach.

this latter alone going far to determine the date of erection. It seems that an epilemic of buihting strong square keeps raged in the Isles in


Fig. 8. Carsel fragment. Durvegan.
the 1 th centurs, when the sonts besan to raise their heals after the battle of Bamnockbum,
"Alister C'rotach," or Th. Mumphachent, luilt early in the 16th century


Fis. : ('arved fragment, Dunvegan.
a very strong square tower, of which I give a drawing (tis. 6). It remains to-day ontwarlly as it was rasel by this chiof, a beatiful piece
of mediaval eastle building. A very steep and narrow winding stair communicating with the three chambers of the tower ascends to the crow-strpped roof. There is a passage round the edre of the roof, within the raisel outer wall of the tower. There are peep-holes to look throngh, and embrasures to fire throngh, if necessary ; the wall is high, and there is a sense of 1 ractical security from the enemy below, which


Fis. 10, Carvel figure, Dunvegilh. does not pertain to the modern erenellations on the arljacent roof. small stone cannon serve as gargoyles.

Fig. 7 is a view from land of the castle as it would have appeared in Alister Crotach's time ; a grand specimen of compact strength.

John Breac Macleod made many alterations and alditions on the eastle, as set forth on a slab of stone, of date 1686 , now lying in the court-yard. He was the last to keep up the old feudal style of life in the Mighlands, and retained his harper, jester, larl, and piper, who, with numerous retainers, thronged his lialls, and contributed to foster among his people the fame and glory of their chief.

There is in the court-yard a fragment of stoue, containing a carving of the early form of the thistle of Scotland (fig. 8), and another fragment containing a curious representation of what must be a bird (fig. 9).

In the court-yard, placed against the seawall, is a singular efligy in stone of a lady (fig. 10), which undoubtedly came originally from the chapel on the mainland at hand, of which building the mere shell now stamls. The shoes, with pointel toes and high heels, belong to the time of James 11. ; as also do the bunchy skirt, divided in front, and the high compressed bodice. The tight sleeves and head-dress are peculiar, perhaps Scottish in fashion, but belong to that period. I have little lesitation in putting lier down as the wife of John Breac Macleorl,


Efg. 11. Hanvegan-fom ant ald wale1 +..thur drawing.
whose name was Flura, daughter of Sir James Macdonald of Sleat. The slab setting forth the restoration is of date 1686 , and has a moulling carven on it, which shows it to be of a piece with the slabs (figs. 8 and 9), on one of which oecur the initials F M I) for Flora Macdonald, and on the other, J II L for John Macleod.

Nurman Madeol, the 19th chief, Boswell says, opened out a doorway on the land side, probably about 1750 , placing beneath it a flight of steps whilh reachel to the bottom of the rock.

The next view (fig. 11) is taken from an old water-colour drawing in the castle. It represents the castle after Johnson's time, when some alterations had been made. The handsome stone balustrade, with stone cannon to currespond with those on the tower, is of consilerably older date. In this drawing we ser that the old keep has heen renovated, and the small turret furnishel with a dome-like roof. In all probability, (ieneral Macleol, 20th chief, carried out these alterations about the ent of last century.
ln the next drawing (hy 1)miell, 1819) there ate great clanges (fig. 12). The moat or ditch is filled up and luilgel across, where two octagonal towers, with an arched doorway between them, form an imposing entrance. The stone steps leading down the rock from the former smaller door still exist in the entrance to the servants' portion of the builling. There is also a pair of wooden drawhitges.

In fig. 13, I give a view of the present castle, which has had some alterations ctibected on it by the late Madeod of Macleod.

It is known that there once existed in Dunvegan Castle mmerous pricelens relics, which were long cherished by the Macleods. Though it is not within the seope of this article to enumerate those which are still preserver, I cannot rufrain from mentioning some which have disappared amongst them-the harp of Poweriek Morrison, the blind harger of John Breaw Macleorl. Boswe!l speaks of Rory More's bow, "which hardly any man now can bonl"; and of his oaken bed, with this inscription, " Sir Rorie Macleod of Dunvegan, Knight. (iod send gool rest." Ite alson montions "some ohl pieces of iron armour, immensely heavy." l'emant speaks of a "round shich made of iron, that even in its decaycd state weighs near twenty pround."


The late Macleorl of Maclcod most courteonsly afforled me every opportunity and facility for making the above notes on that interesting


Fig. 14. Drinking•Hom, Dumegan.
stone-and-lime record of feutal power in the Highland-- Dunvegan (astle.


Fig. 15. Two-landed sword at I honvergan.

$$
\text { Muxday, 13th Ma!! } 1895 .
$$

THOMAS GRAVES LAW, Foreign Secretary, in the Chair.
The following Donations to the Museum and Library were laid on the table, and thanks voted to the Donors:-
(1) By Francls Tress Barry, M.P., Keiss Castle, Caitlmess.

Sculptured stone, being a slab, of irregularly oblong shape, from the pavement beds of the Old Rell Samstone of Caithmess, 3 feet 2 inches in length by 21 inches in brealth, and bearing incised sculpturings on one side only. The stone, which is exceedingly friable, had been lowken through the mildle, and a triangular space of the upper or sonlptured face separated into many small


Fig. 1. Soulptured stone, from the Birkle IIills, Keiss, Caithness. (1'2.)
fragments, which were, however, carefully preserved by Mr Barry, and after the receipt of the stome at the Muserm the whole were picced together and the stone bedded in cement. It was foumd on the smaller of the two sand-hills known as the Birkle llills, at the moth of the Water of Wester, on the estate of Keiss. These sand-hills are thus
deseribed by Mr Simuel Laing, who male some superficial examination of them in 1864 :- "They stand amidst the hillocks of blown saml, alont 200 yards from the sea-shore on the raised beach of sand and that shingle stones which can here be traced distinctly for some distance. The larger mound is roughly eonical, about 40 feet high and 120 yards in circumforence at the base. The lower mound commences about 100 yards north-east of the other, and is a long irregular momel, which may be taken roughly at 30 feert high, 100 yards long, and 10 yards wide. The surface of both morumes is of sand, covered with small stones from the auljacent raised beach, and, in the case of the smaller mound expecially, with a vast number of limpet or periwinkle sleells, and animal teeth and 1wnes."-(Laing's Prehistorir Remains of C'uithuess, 18b6, 1. 30, and Proceedinus, vol. viii. p. 47.) Mr Barry's recent excavations have disclosed the existence of the lower Iart of a very well-preserved hroch on the larger Birkle Hill, which is titled Castle Linglas on the Oxdnance map. The smaller mound has also been shown to lear the foundations of a dry-luilt structure, apparently of an oblong reetangular outline, and the seulptured stone was found among a number of other shals laid that in the area within these fommations, having heen placed there apparently as pavement. The incisel sculpturing is on one side only, and consists of two of the peculiar symbols of the early scuptured monuments, viz., (1) a dise or miror-like figure, with a smatler dise at one side, answering to the han lle of the mirror, ant the berly of the dise ornamented with two enneentric circles, surroundel by tive ares, not unlike a live-petalled thower figure ; and (2) a ligure of three ovals phaed side by side, and each intersectend in a peculiar way ly four murves in the centre. The mirror-like figure, or mirror-tase as it has been callend, oreurs on a growl many of the seupturet momments of the "arly incisel "lass, from Aberleenshire northwarls, and one bearing on the dise a four-petalled thower-like figure very similar to this oceurs at Inverury. The triple owal symbol is only known in Cathonse, howeser. Until guite recently it was altogether unknown, the first example having been discovered at sambide in 1ss9, and the second having been deteeted on the lack of the Skimet stone ly Mr.J. Romilly Allan shortly thereafter. This example from Koiss is therefore the thial linown of vol. xxix.

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these northern stones bearing the new symbol, and is consequently a most welcome aldition to the National Museum.

Circular Inise of rell samistone, $1 \frac{1}{2}$ inches in diameter and $\frac{5}{8}$ inch in thickness, foum in the course of the excavation by Mr Barry of the Road Proch at Keiss. The dise has heen artificially shaped and smoothed, and lears on one side (fig. ${ }^{2}$ ) some obscure markings like incised letters, and on the other (fig. 3) a number of incised markings within a border of two pratlel lines, which have a suggestive resemblance to runes. Enlarged photographs of these have licen submitted to Professor Stephens


Finc. 2 and :\%, llm' of Namlstone, from the Fond Broch, Keiss-(stightly enlarged).
of Copenhagen, Professor Pugge of Christiania, Mr Sonlerberg of Lund, 1) Bemhard Salim, of the National Museum, Stockham, and other authorities, hut without elieiting any lecisive contribution towards the ducilation of the nature and signifience of these inseriptions, if such they he. They certainly present more of the appearance of inseriptions than of ormament, and in this respect they ean scarcely be classed with the dises of similar form and material, but slightly larger in size, from Seatness, near Sumburgh Ifead, in shetland, which were also found in the ruins of a broch, and present ornamental designs on obverse and reverse.
(2) By Thomas John, is St Bernard's Crescent.

Perforated Wedge-shaped Stone Hammer, 11 inches in length, found in a moss at Auchencaim, Kirkcuthrightshire, in 1859.
(3) By Dr K. de Bres Trotter, Perth.
small stone Hommer of gneissose stone, fornd ten years ado at a tumulus on the farm of Toft Hill, parish of Tiblermore, Perthshire.
(4) Dy John Grahay.

Two Arrow-heads of reddish chert, from Louisiana, United stats of America.
(5) By J. Maxtone Graifame, F.S.A. Scot.

The Stool of Discipline of the parish of Monzie. This "Stool of Repentance" was the seat upon which the delinetuents foumd guilty liy the Kirk Session of otfences implying church discipline were phatel to receive their retukes from the pulpit in face of the congregation. In this case it is an ordinary ohbong ston of pineword, $21 \frac{1}{2}$ inches in thenth by 8 inches in luralth, aml standing 17 inches high. 1ts supports are two boards joined to the seat near the emis, and having a triangular picce eut out of the lower ent of each so as to make the stool stamd, as it were, on four feet. A round hole in the top of the stoml serves to put the finger through for carrying it. Bent for its height, it might have been an ordinary kitchen stool.
(6) By Frances I. Cimant, W.S., F.S.A. Scot., Carrick Pursuivaut, the Authon.

The (irants of Corriemony. Privately printed. $1+1,1895$.
(7) By V. Busurmis, Hewl-master, Govermment School, Vittorioso, Malta, the Iuthors.

Ifoliday Custums in Malta. $12 \mathrm{mo}, 1895$.

The following Articles for the Museum and Books for the Library, acpuired by the Purelase Committee during the Session 30 th November 1894 to th May I895, were also Exhibited:-

Eight polished Stone Axes, and seven oval Knives of Porphyry, part of a hoard fouml at Modesty, Bridge of Walls, Shetland, in 1894. [See the previous Communieation Ly Mr Kinghom.]

Polished perforated Stone Axe, with hollowed sides, found at Lough Erne, Ireland.
small Whetstone found at Leswalt, and another found at Markinch, Wigtownshire.

Twelve Dises of shale, from Portpatriek Churehyard.
Stone Axe, from Dunedin, New Zealaml.
1 ron Floor Camullestick, from Corsock, Ihmfriesshire.
Polished stone Axe, from (iithock, I mufriesshire.
Collection of Flint Implements, from Culhin Simuls.
Report of the Commission on the Oler Germansche Ractische Limes. Heidellserg, I894, fto, Part I.

Antiquités de la Russie Nerilionale. By Reinach, Kondakofl, and Tolstoi. Paris, I89I, 4to, Parts II. and 111.
'jurrall's English-Welsh Dictionary. Carmarthen, 1872, 8vo,
Memoirs of John Napier of Merchiston, his Lineage, Life, and Times; with a History of the Invention of Logarithms, Hy Mark Napier: Elinburgh, 1834, 4to.

Memoirs of the Maryuis of Montrose. By Mark Mapier. Edinburgh, 1556, 8vo, 2 wols.

Memmials illustrative of the Life and Times of John fraham of Claverhouse, Viscount 1)under. Iiy Mark Napier. Ediuburgh, 1859, 8vo, 3 vols.

Nugae Derelictae: Documents illustrative of Scottish Affairs, 12061715. By James Maidment. Elinhurgh, Is88, 8vo.

Genealogical Fragments. By James Mailment. Lerwick, I855, 8ro, 111. 15. Printed for private circulation.

Sicotland and Scotsmen in the Eighteenth Century. By Alexander Alarlyce. Edinlourgh, 1 sis8, Avo, 2 vols.

Histury of the Bury Schools of Scotland. By James Giant. London, 1576 , svo.

Memoranda of the State of the Parochial Registers of Scotland. liy William 1;. Tumbull. Elinburgh, 1849 , 8vo.

The (hikins of Invention. I sitndy of ludustry among Primitive Peoples. liy (otis T. Mason. Lundon, 1895, Evo.

Satan's Invisible World Discovered. By George Sinclair: Elinburgh, 1871, 8vo.

Anciont Lives of Soottish Sunts. By Kev. W. M. Metcalfe. Diasley, 189.5 , svo.

The Rude Stome Momuments of Ireland. By Col. W. (i. WirudMartin. Dublin, 1889, 8vo.

A survey of the Antiquarian Pemains on the Island of Immismurny. By W. F. Wakeman. Iublin, $1 \times 93$, svo.

The Evil Eye: an Accotnt of this Wirle-spread superstition. I;y T. T. Elworthy: London, 1895, Svo.

There were alsu Exhihited :-
(1) By Iames Patten Mac Tougall of Gallanach.

Colloction of Animal Poncs, and Implements of Stome, bronze or liras, fron and Puttery, from the rofuse-heap at the base of 1 han Fbomanin, Gallatath, Argyllshire. [Fice the subsequent Communication by lof Waseph Auler:on.]
(थ) By James Curle, jun., F.S... Sont., Librarian.
Nix Early Iron-Ire Broolns, from the 1sland of (intland, swalen. [See the subsequent Communication by Dr Jas. Curle.]
(3) By Whaham M'Laren, Arehitect, Perth, through A. (i. Remb, F.S.I. soot.

Stone Cup, with latmulle of steatitic stome, 63 inches in total lemorth, the hollow of the cap being 3 inches by $2_{3}^{3}$ inches, and $1 \frac{1}{4}$ inches in lepth, the handle broken, the interior ornamented with a hamd of irrequar oblique lines, apparently eut with a knife, found on the farm of Lochlan', near C'rietl'.

## I.

NOTES ON THE CONTENTS OF A REFUSE-HEAP AT THE BASE OF TIE FORTIFIED ROCK KNOWN AS DUN FHEURAIN AT GALLANACH, NEAR OBAN. Rerently Exravafed iy Mr J, Patten macdouqall of Gallanarif. By Joseph ANDERSon, LL. D., Assistant Secrethiy And Keeper of the Muselm.

The object of this paper is to describe certain rehies exhibited to the Society by Mr J. Patten Macl ougall of Gallanach, Oban, Argyleshire. They consist partly of a large collection of animal remains, and partly of a collection of artificial oljects, all found in the course of the excavation of a very larse refuse-heap, aceumulated at the base of an isolated stack of rock whieh seems to have been occupied as a prehistoric fort, and is known in the locality and shown on the Ordnance map as Ihun Fhenrain. This dum is referted to ly In Christison in his description of the Duns and Forts of Lome as follows:-
"I un Fhenrain, pronounced by a native Airen, with an emphasis on the tirst syllahle, 100 yards north of the head of Port Lathoich, and 60 south of Kerrera Sound, is an irrecularly shaped rock fortaliee of conglomerate. The ascent on the only accessible sile is hy a tortuous, dangerous path, commencing on a tongue of grass, and continued over slippery rocks and grass. The only evidence of fortifieation is at the cntrance, on wach side of which stones have been piled to heighten the little natural clifls. The available space on the level top is only 63 by 45 feet."

1 have not seen the place, hut Mr Patten Maw Wougall informs me that he is satisfied of the existence of some kind of defensive construction on the top of the rock, and that the refuse-heap below appears to be the accumulations of a long periol of occupation of the fort. Some idea of the extent of this accumulation may he formed from the fact that, from first to last, somewhere about 800 cartloads of earth have been removed from the talus in which the remains oceur, and that the refuse extends to a depth of between 15 and 20 feet from the upper surface of the talus, although at that depth the bones are almost completely decayed. The bulk of the bones and other remains sent to me
for examination were found at a depth of ahout 10 feet, and are for the most part in fairly grool preservation. The domestic animals representel appear to be the ox, horse, sheep or goat, and swine; the latter, however, julging from the very large size of the tusks, may in some cases have been the wild-hoar. The red-deer is also abmuntly represented, amb the roebuck is present, though not in such numbers. The bones are all more or less broken and sphit up for culinary purposes. This broaking and eplitting of the bones "for the marrow" or fat which they contain is a molern as well as an ancient custom, and hat therefore no spectal vigniticane as an indication of the time of the deposit. The mannfactured ohjects foum in the refuse-heap are not numerous, but they inchude articles of stone, bome, bronze (or hatas), iron, and pottery.

Stone.-Siveral quem-stones were foumd, the most interesting of whinh is a broken upper stone, $13 \frac{1}{2}$ inches in diameter, formed from a naturally rountel boukler of a greenish chloritie rock. The urper side presents the uatural and irrenularly rommol surface, the lower site being flattunel, anl the centre, which is $3_{4}^{3}$ inches in thickness, phereen with a hole $1 \frac{1}{4}$ inches in diameter, widening towards the upper surface into a cup-shapmel orifice $t$ inches in diameter, by which the corn was fed into the mill. There was apparently no provision for a lirt heins pheed in the eye of the quern to enable it to revolve freely, and the upper stone must therefore have rithen upon the lower one, with or without a "washer" between them. The most remarkable fenture of the stone, however, is that, after it was lroken irregularly across, and thms rendered useloss for Grimbing, the part of the that grimding face left was converted into at mould, for what at first sight looked like a rather long and narrow that axe-heal of bronze. The cavity of the mouhd, however, does nut conform to the shape of a that axe so closely as these fommers' stone moulds usually do, ant the probability is that it was a blacksmith's mould for fathioning a triangular crusie, hy boating into it the red-hoot phate of iron from which the shell of the crusie is fomed. The ravity is $6_{4}^{3}$ inches in length, $2 \frac{1}{4}$ inches broad at the wide ent, and $\frac{3}{4}$ of an inch in depth, the bottom being tuite flat.

Whetane or hurnisher of tine micacenns elaystone, $3_{4}^{3}$ inches in bength by $\frac{3}{4}$ inch in brealth, ant $\frac{1}{2}$ inch in thickness, tincly polished liy use.

Bon.-Nectle of bone (fis. 1), $3 \frac{1}{8}$ inches in length, with flattened head, bent to one side, and a cirenlar eye.

Neelle of lwone, $2 \frac{1}{4}$ inches in length, with flattened heal and circular ey".

Netting-needle (fig. 2), or similar implement of hone, $3 \frac{1}{2}$ inches in

length, slightly curvel both ways in the same direction from the middle, where it is berforated ly a circular eye, and tapering equally to both ends.

Stamp of bone (fig. 3), being a cytinder 23 inches in length by $\frac{1}{4}$ inch
in dianeter, with one rat rut into a stamp formed like a erow, with a prllet in wath of the four quarters. Similar stamps, but of laperer size, have been foum on Romano-fatulish puttery.

Pin of thon (tig. 4), $1_{4}^{3}$ inches in length, part of the point-end brokn off, the shank straight and alront $\underset{8}{\frac{1}{8}}$ inch diameter, the head globular and $\frac{1}{4}$ inch in diameter.

Broken protion of a kone pin wr neerlle, 2 inches in length.
lomkin or hoser of bono, $3 \frac{1}{4}$ inches in lenstly, pronted at lwoth enchs, but thicker and less tapering towards the one end than the other.

Foulkin or lorer of lome, 32 inches in longth, pointul at one emt, the other emd broken, and rowhly flattened on the under side.

Portion of bodkin or hone tool, 3 inches in length, one end braken, the other of spatulate form.

Three teeth of a heckle or wanl-comb, made of hone, 4 inches in longth. They are quite slender, regularly romalod and tapering equally to very fine points, the hases square in sectiom, and presenting the appearance of having been tixel in wood.

Two slender bones, $3_{4}^{1}$ and $4_{4}^{1}$ inches in length, the artienlar ends remaining, the shafts scraped lown, the points loreken away.

Bronse of Brecs.- I'emannular rins, slightly oval in shape, 1 inch lyy $\frac{3}{4}$ inch in diameter, male of a rounded wire somewhat less than $\frac{1}{x}$ inch in diametor, expanding slightly towards the extremities, which are close turether, but not juined.

Pin of bronze or brass (fig. 5), 3 inches in length and less than $\frac{1}{5}$ inch in thickness, having the upper part bent at a right angle so as to project about $\frac{1}{4}$ of an inch, and then bent to the left ant upwarls, so as to form a complete circle, the end being again bent forward in the line of the projecting part ant cut short otf. Except that it is mate of a wire of laronze bent into share, this pin bears much resemblance to a pin of iron (tis. 6) found in the Firmell of the Laws, Monitieth, Forfarshire. Another pin, with the upper part prajecting forwarls, and carryins an ornamented circular head, foum in the Broch of Bowormalden, C'athness, is of the same type, but has heen cast in a mould. A clay mould for casting this form of P in was sulsequently found in the Broch of Lingrow, near Scapa, Okney.

Pins with an open circular hearl, caried on a forward projection, are not uncommon both in Scotland and Ireland. They are, however, later than those of somewhat similar form, with dises carriel in the same manner, which belong to the Bronze Age.

Irom.-Pin of iron, 3 inches in length, with part of an open circularly twisted lanp at the end opposite the puint. Along with it is


Fig. 5. Bronze P'in, tound at (iallinach, Ohan.


Fig. 6. Pin of iron, from Laws.
a that slemder har of iron, $2 \frac{1}{2}$ inches in length by $\frac{1}{4}$ ineh in width, and somewhat less than $\frac{1}{8}$ inch in thickness, which is bent towarls one ent. l'utting the two together, they suggest the broken remains of one of those how-shaped fibula of simple form with a spring-pin, the partial twist remaining in the heal of the pin being part of the usual spial spring. Fibula of this form in iron have not hitherto been found in
sicotlanl, so far as I am aware, but they occur in the South of England in association with remains of the period of the Roman occupation.

Flatemed aml slightly bent skewer-like pin of irom, $6 \frac{1}{2}$ inches in length, with the butt-end rounded off to an expansion of ${ }_{4}^{3}$ inch in diameter, and tapering thene in a longe curve on both sides to the point. The thickness is scareely more than $\frac{1}{8}$ inch throughont.

Portion of an iron implement, 4 inches in length and 2 inches in diameter in the upper part, which has been tumed over at the sides as if to form a socket, widening to $2 \frac{1}{2}$ inches at the luwer part, which is that. It may have been part of the soek of an old plough or a cus-rthrom.
lortion of thin iron or steel, $1 \frac{1}{2}$ inclies in length and $1 \frac{7}{5}$ inches in wilth, with straight sides and rounded end, the sides and ends havins an equally tine edge, and the thickness in the middle not excecting $\frac{1}{x}$ inch. It resembles nothing so much as the broken point-end of a large broad-blated sword.

Portion, 9 inches in leneth, of the point-end of a donble-edged swordhade, $1_{8}^{3}$ inches wide at the upper end, tapering to 1 inch in wilth at the part where it hesins to toper rapidly to an acutcly shapen point, which is $1 \frac{1}{2}$ inches in length, having the angles at the junction with the line of the edge somewhat rommed.

Poffory.-Part of the upper portion of a vessel of unglazed pottery which has been at least 6 inches in diameter, and of semewhat gholulat bowl-shape, with a slightly constricted neek and everted rim, which shows the finger-marks of the potter beneath the turned-over part. It is mude of a tine and rather samly paste mixed with miea, aul has not been thrown on the wheel, but moulded by hand. In some parts the outside retains the irregularly imprested markings of the stalks apparently of grasses, impressed when the clay was soft. It has been burnel in :un open fire, and in shape and general character it bears considerable resembance to some of the pottery of the hrochs.
small triangular fragment (atsout 2 inches hy 1 inch) of the upper patt of a buwh-shaped vessel of the red lustrous ware commonly calliod Samian, slowing remains of the characteristically rommed lip, and a peenharly arrangel pattem of time linear ornanentation impressed on the surface und rneath the rim. The same varicty of omamentation
oceurs on fragments of Samian ware found in London, and now in this Museum.

In regard to the antiquity of this dsposit, there are no very definite inclications to be derived from the general nature of its contents. It is clearly a refuse-heat or kitchen-midden, consisting chiefly of the shells of mollosea ant the bones of animals that have been apparently consumed for fool. The shell-tish are the common edible varicties of the neighbouring sea-shore, and the animals are the common domestie and wild animals of the district. Their bones have been utilised, however, for the manufacture of bame implements of various kints, as well as for culinary purposes. some of the long bones of the larger ruminants have been split up in a peewliar manner, which seems to imply an intention of using them as curying tools. Lones similarly split by removing the larger portion of one side are still used for cleaning skins hy some tribes of North American Indians, and are said to be 'fuite well alapted to their furperse. Portions of the split bones have also been manufactured into needles and pins, borers, \&e., and the deer homs are sawn or ent across, apparently for conversion into tools or handles of tools. Some of the rib-hones bear marks of euts with keen-elged implements such as axes or kuives. Some of the sawcuts on the dect-lorns, however, are so rough and wide that they appear to lave lwen done with a more clamsy instrment than a properly made metal saw. These imlications are, however, too vagne to possess any chronological value.

On the other hand, there are no stone implements of Stone Age types or hronze implements of Bronze Age type's. The presumption is, therefore, that the dpposit may be assigned to some period well within the Iron Age, so far at least as its manufactured relins are concerned. And this is certainly lurne ont hy the few indications of corresponlence with a definite priod which the characteristics of some of these relics supply. If we t.ke the pottery, for instance, we find that the small fragment of Samian ware limits the period to some time after the Roman invasion of Pritain. This ware em searely be supjosed to have come into sicotland before the time of the Roman occupation. On the other hand, it is plentifully foum on almost all the Roman sites in Britain; and it occurs occasion-
ally : far north as Caithness and Orkney, where it can lardly be supposed to have been carried by the Romans. Like other articles of luxury and display with which the influence of the Roman civilisation had familiarised the inhabitints of Britain, its pussession was no donht an olject of ambition in places to which the Romans themselves had never penetrated, and where, though their power was neither felt nor feared, their merchandise was coveted for the profit it brought to the adventurous trader, and the local importance its porsession conferred on the fortunate possessor. It has been foum occasionally in the broehs of Cathness and Orkney, in circumstances which suggest that it was both rare and highly valuel, the few pieces found rarely implying the presence of more than one vessel in the same broch, and the fragments themselves sometimes showing lyy ohd breaks clamped with lead that they were considered more than ordinarily precious. The other piece of pottery from the refuse-heap has also a considerable resemblance to hroch puttery, and may well he of that perion. It camoot, at all events, be classed with any varicty of pottery known in this country to be of the Stone or Bronze Age, and must therefore be assigned either to the Iron Atre or later. On the other hand, it is not wheel-made, and has not been glazed, so that it does not go with ordinary medieval pottery.

The bronze and bone pins accord with forms in use of the same periokl. Bone pins with globular heads are plentiful among RomanoBritish remains, and also in the brochs. A pin of bronze, with an open circular heal carried on a forward projection of the stalk, was fomml in one of the brochs of Caithness, and a clay mould for making the same form of pin in one of the orkney brochs. The whetstone and the querns are not decisive of the priod further than that their presence prevents any higher antiquity being assigned tham that already given, although they might go well enough with a much later time of the occupattion, which is thus shown by the relies to have lasted from some time in the early centuries of the Christian era till some time in the Middle Ages.

## II.

## SKOTLANDS RIMUR. ICELANDIC BALLADS ON THE GOWRIE CONspiracy. By W. A. CRAIGIE, M.A., F.S.A. Scot.

The above trmur are found only in one MS., that numbered " $146 a$, Svo" of the Arma-Magnean Collection in the University Library, Copenhagen. This manuscript, now in an unhound and defective condition, is a luge collection of such poems, containing somewhere about 25,000 lines in all, and belongs to the first half of the 17 th century. It is in the small and beautiful hand of Jón Finnsson of Flatey, the island in Broadfirth from which Bishop lirynjoff obtamed the famons Flatpy-bouk. In its present state it has 434 pages, but some of these are blank; the rimur leing written straight on like prose, the numbre of lines to a page averages from 50 to 70 , according to metre.

Of the 24 sets of rimur contained in the MS., the one here dealt with is the eleventh, benimning on page 210 . It was the heading sliotlands rimur in the printed catalogue (vol. ii. p. 411) that drew my attention to them. The Icelamder Jon sinurdssm, in the catalogue of rimur compiled by him, thought that they related to the Gimpowder Ilot, from notieing that King James V1. was the hero, but on pernsal it soon became evident that the subject of them was the Gowrie Conspiracy. Though it could not be expecter that they would throw any fresh light on this event,- the author indeed was simply following the Latin account published under royal sanction, ${ }^{1}$ - it was interesting to tind an Icclandic priest pmotting the story into verse so soon after its occurrence, the date of the rimur being protahily atont 1610 .

From the middle of the 14 th century down to the present day rimur have heen the favourite popmlar pretry of leeland. While they may loe deseribel as ballals, they differ from those of other countries in the greater exactuess of the metre (alliteration being strictly ohserved, and combined with rhymes which are often very complex), in the use of leminys or circumbocutions after the style of the old Skaldie verse, and

[^21]in the way in which they are eonnected in cycles. The older rimut, indeed, are single poems, but as a rule the story is told in several, which are nearly always in different metres: thus a modern poet, Benedikt (iromblal, has lately published counyu-H'ótis rimur, 48 in number.
"Skotlands rimur " are cix in all; and although some leaves are wanting after page 236 of the ML., it seems that only one line and a word has been lost. The total number of lines is thus 1762 ; the lengths of the individual rimur will be given below. The title is perhaps not original, as the heating in the ML . is simply

## Rismlt sem Siera Einar filpmixdz

Son hefur ordt
i.e., "Pallads, which Sir ( $=$ Reverend) Einar Gudmundsson has composed," and in the last verse (vi. 42) the story is ealled skottu prittur.

Accurling to the usual practice, each rima is preceded hy some introluctory verses, which, being originally addressed by the poet to his lady-love, are technically known as the mansïn!n, (ir "love-sing." In many cases the original idea has quite disappeared from the mensïnurt, but a consentional trace is retained in sume slight mention of a fair one to whom the rime is supposed to be addrussent. To this class belong Sir Einar's, which are properly didactic moralisings, and lay special stress on the necessity of giving lue respect to the cleryy.

The rimur themselves, with their respective introluctions, run is follows:-

1. Mensimur of 30 verses: "Once I read a story which a doughty master had writton in clever worls. He tells of scotland and its mighty King, and hew two brothers plutted against him. Their attempt did not suceced, for the hand of the Lord protected him. Their fate is a warning tu all who seek to deal falsely, for the traitor always comes to shame, and yot he groes on blimdly. Ill tregen is alrays ill metiel. This is shown ly the fates of Julian the Apostate, killed hy an arrow from heaven; Nero, whose own doys tore him to death; Antwochus and Herod; Cyrus, who full by a woman ; the accusers of lamiel, whom the lions devoured. So must all other false men perish: the same (iod will visit the same sin with the same punishment, but it wouk be two long
to reckon up all the instances. My dull examples grow tedious to the dear maid, so I shall pour out the wine of song and go on with my stury."

The rima proper then tells in 72 verses how there was a King Jacop in Scotland, who hal a queen named Anua, daughter of the King of I) enmark. One time he went round his kingdom and came to Fullalanu. While at the chase one day he is met by Alexander, brother of the Earl of Goiver, who tells lim the story of fimling the strange man with the goll. The King refuses to lave anything to do with it, and rides after the chase.

The metre is simple, as may be seen from verse 35 :-

> Alexand hjet si orfat grei, itran kvaddi stilli, Greifans brónir af ciovive, gótt var Jeirra i milli.
II. Headet Önur skotsle. Metnsïmerr of 2s verses:—"Young folks onght to give heed to the matter of this poem, and not mind the metre of it. From youth upwards fear God and love knowledre ; rise early ; sive no heed to slae-wives, who only wimt to get money. Practise gool combuct and industrions habits. Be content with your own pusition in life. Saul and Usias lost their kinglum for interfering with religions matters. Never wish for any man to be disgraced. Arius tried to bring Athanawins into disrepute, hut utterly failed. Surlo practices are common ; men falsely aecuse others, but Achitufel's ill counsels do not always succeed ; the Lord can confouml them, and envions men are pail back with full measure. This is provel by our story, if I can only get on with it."

Alexamber semts his servant Andries to his lrother to tell him that he may expect the King. The King finally decides to ride to l'erth (Johomis stcelur, i. 36), accompanied hy the Earl of Mar (fireifi af Mayr) and sixteen others, of whm Lennox is refered to, but not by name. Alexander tries to perstade him to dismiss these, without shecess; the King aks Lemox what his opinion of Alexander is. At Porth the Farl comes to meet the King, and leads him to his hall. ( 66 verses.)

The metre is one of three lines: verse 3 is-

> Frai únglom skaltu óttast (ith og cloha fiam, Fubur, mointur, of framdur larsi; Ftanger er sat er prifnat nawi.
III. . Mermentr of 17 verses: "Though the ring-luekeal mail might wish for a love-sugg, I have lut little poetry from oblin. lint a littho scent of the fruit of song he gave me once: I have no need to be grateful fur his generusity. Let those rejuice who have heen more successful. Frientship is not shown th every man, and I wats never goorl at winning favour with the great. True friendship is rare over all the land ; mosit men look for some arlsantage, and are envious of all others who got wealth or fame. Seek not, then, to be praisel by the world: disgrace and loss may follow. IIe that sees in secret will reward you, anl lle will come one day to sit in judgment. May I be alle to see Ilim with joy, though my works are not so gool as they might be. I have not the Mensimys: art to speak ahout the fair maid, but I must try to give her the third ballad now."

The entertamment of the King and his followers is then describell. After dinner Alexander leals off the King by himself through four apartments, locking each door behime him: in a sluall room they find an armed man. Alexander threatens the King, who is defenceless, but Christ protects him, and Alesamber lays aside his weapon. The King makes a long specch, promising him parkon for his attempt. ( 7 : verses.)

The metre is dillicult : versio 17 is-

$$
\begin{aligned}
& \text { as) mivla um sprundio ljuisa. } \\
& \text { prisja hull fyrir purna !nitt } \\
& \text { púmun eg rerba as glís. }
\end{aligned}
$$

IV. "The last hallan left the King in a strait: now we shall hain a n'w enc:" (3 varses.)

Alexamber frnes ofl' to fotch his hrother, after making the King promise to keppluiet. The armed man swears that he will do him no harm. Meanwhite the company have missol the Kins, and are toht that he has ribden ofl, hut the porter denies this. The Earl calls him

> I The italics show the internal rhymes.

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liar, and, going away as if to make certain, comes back and says the King had gone lony ayo. The rest prepare to follow him. In the meantime Aloxanler returns and attacks the King, who defends himself as lest he may. ( 57 verses.)

The metre is still more complex : verse 12 nms-
Min tit pán er mjuikust bơn.
murture spjoiten ${ }^{1}$ beitir, forrast moro og falskligt tjou vi人 Frodir subier veitir.
V. Headed Fiunte sloutslie. The mansïmy! contains 3.5 verses. "I camot ofler men a feast of pretry: little of that has oidingiven me that will phease fine folk or young madens: rather it is for the old wife in her lout, yet I shall make a munsimugr that will eontain old instances worth hearing. Ahab had a wife, fair and false, who stirred him up against (iof and his servants, while she sheltered the wickel. For this they both peristred miserally, She trien to kill bilias, but the Lorel delivered him. Let all women then avoid evil, love pace, and follow virtne. 'Cohl sumetimes are women's counsels,' ${ }^{2}$ a fact that men often furget. No one ought to dularm to a servant of God, but rather prize lim lighly, for God's anger is sometimes quick; therefore beware of opposing him. Prosperity often lorings prite, but it is best to be moldrate: a man may he ruddy with lealth to-day and dead to-morrow. When I see people prond of themselves, I think what folly it is to deck out the bolly and neglect the soul. Let the imer man be adomed with virtue : that is the lest ornament. It is this that (iod will reward at the last day ; therefore let all keep themselves free from deeeit. He that lives a pure life becomes both king and clerk in God's kinglom. Here I end the munsingr, and tum again to the story."

The King finally reaches the window, and calls out just as his men come past. They all turn hack, and try to gain entrance to where he is.

Alexander is unable to woml the King, and is himself stabhed thriee by Ramsay, who enters the romm, and then thrown into the courtyarl

[^22]hy the King. The armed man walks ofl, terribly afraid. The Earl in the courtyal had pretended he had heard no cry: he is now scizal by "Tomas Eskim," but manages to get away. The King's men rush up and find Alexander nearly dead, and despateh him, he protesting his innocence. The Eirl comes up with five men and there is a tight at the chamber door, hut "Christ gave the King's men strength and comage," and Ramsay runs the Earl through. Meanwhile the other 13 of the King's followers are breaking down the other dero. ( 52 verses.)

The metre is fairly simple : verse 40 is-

> pegar ad heyrdu harma sut
> Herra sins i gandim út, inn un portid allir senn aptur snera kombsins menn.
VI. Lhensmugr of 5 verses: "Now we shall row the dwarf", heat (petry) for the sixth time, if men and women will deign to hear. I am not very skilful at it, hut 1 shall agsin essay it, if the mail will listen. Glin's ship (poetry) has but a slight breeze, yet I shall not give in until the seng is ended."

The King anl his men offer thanksgivings for his delivery. The town's folk assemble to avenge the Earl, and the tumult lasts four hours. The King has the leading men brought to him, and explains all. In the Earl's hroast is found a piece of parchment eovered with runes, on the removal of which his wounds bleel. The King and his men go to Falkland, and thence to Elinhurgh: there is universal rejoicing at his escatue. ( 37 verses.)

I fainly diflicult motre: verse 38 is-
Firdar ceifict Falka-lauls
og fara til Elinlougar :
par reb sitije heitir brands,
ber uú ei til sorgar.

The sulfects of Icelandic rimur are mainly taken from the dictitinns sagrat, and comparatively few are based on historic incidents. It is therefore not a little eurious to tind such in event ats the diowrie Conspiracy selected for this purpose by the elerical pret, whon hats thus produced what is perhaps the only attempt to alorn with poetic colun-
ing a highly romantic oceurrence. What led sir Einar to select his subject it would be useless to inguire ; he probably thought it a goul one both for the incilents and the lessons to be drawn from them. In point of technique his rimur are very fairly done; and, from their date and the place of their composition, are interesting as a literary curiosity.

## III.

Notes uron three early iron age brooches from the island of (otland, sweden. By Janes curle, Jun., W.s., f.s.A. Sowt. er Lund., Libiahian.

Throughout Europe, with the disaplearance of natiomal costume, there are gradually passing away many mational forms of personal ornamentsthe hrooches, the clasjs, or the norklaces which before the tays of savings Banks often represented the earnings of many years ; and in their place the moslern goldsmith displays an immense number of patterns brought together from every source imaginable, patterns which are eontimually heing changed or laid a-sile as fashion alters. We we apt to forget, as we wath the chanse, how in earlier times a race would ibntify itself with a buckle or a brooch form, or a series of omanent patterns, retaming them through the conrse of many centuries. We are apt to forget how gradual was the process by whieh a new omament was evolval from a simpler carlier form, or an ohl fattern changed and alterel by a gradual degradation.

It were an easy matter to illustrate this ; but my purpose is rather, with the knowledge of these facts before us, to endeavour to determine the $1^{\text {wition }}$ of three brooches of a somewhat rare type in the long series of ornments which have come to us from the graves of the Iron Age people of the lsland of Goutlame.

I purchased in $1 \times 92 \mathrm{aml} 1893$ in Wishy the two bronches, figs. 1 and 2. Buth were deseribed as having been found at Levide, in Gutland. In meither case did I olitain information as to the oljects, if any, fount in association with these hrooches, which might have helpel to detimitely tix their position. Buth of them, as well as the thind specimen,
to which I shall refer later, are practically of the same type, and I do not remember to have seen it in Stockholm, or elsewhere in Swedish collections.

The two brooches from Levide are of bronze, overlaid with thin plates of silver; they belong to the type ofter describerl as low-shaped from its rurved stem. They present so many features of resemblame that there can be little ilonit that they belong to the same periol. The lower ent


Figs. 1, ㄹ. Browhes from 1.evid, (iotland. it
1s expantel in the slape of a fish's tail. The mpper eme of the bronch is fa-hioned in a peculiar triangular shaje; fig. 2 lneing somewhat imperfect, this feature is not futly slown, but enongh remains to prowe that it possessed it. The highest part of the bow is urnamentend with a circular entargement. In fig. 1 the lower end is deentated with lines of niello, which hats also been employed to ornament the triangular piece of
the upper end. The ends of the base and the apex of this triangle, as also the how, have been further ornamentel with small round projections, now lost, but we may reconstruct these from the ormaments which remain in fig. 2. At the lower end of this brooch a small silver projection, or lin-head, forms the centre of a triangular space, edged with a gilt $^{\text {in }}$ beatel wire; this is enclosed by a plain band of silver, and the whole brooch is utsed with a healed silver wire. The enlargement of the how carries a rouml, button-like omament of silver, with a gilded centre, edged with a bearled wire; a button-like ornament of similar form,


Fig. :3. Broneh from Got. land. (1.) which ornamented the apex of the triangle, is preserved ; and doubtless ornaments of a similar kinl were placed at the ents of the cross-bar which forms the base.

Tuth lrombes are of a somewhat eomplex form. We may safely infer that they have been evolved from a simpler type, and that they have had as their ancestor a brooch of which the fundamental parts were a simple curved stem and a cross-bar, terminated with two knohs of bronze, which was attachel at right angles to one end. Round this bar the wire was wound which formed the pin. Such a brooch existed in Gotland. Fig. 3 represents a Gotlandic bronch ${ }^{2}$ which appears to occupy a position midway between this ohler, simpler form ant the type represented ly the Levide brooches. It possesses, in common with them, an expansion of the lower enl. It shows the same circular enlargemont of the how. The end of the stem has been prolongeil at right angles to the cross-har, and in one specimen of the same type, in my collection, this prolongation is of equal length with either of the cross-arms. All three are terminated ly small bronze knohs cut in facets. Now, if we add two pieces of metal so as to join the emt of the stem with the eross-har, we practically arive at the type of the Levide brooches. The olgject of the

[^23]cross-bar, as I have already indicated, was to give a fastuning to the pin, which was formed of a piece of wire, one end of which was wound round the bar, thms forming a spring. In fig. 3 it is employed in this way. The knohs at the end were originally designed to keep, the bar in its phace. On comparing figs. 3 and 1 we find that the cross-lar in the latter is merely an ornament ; and that the terminal knohs having ceased to be a necessary part of its construction, their plaee is taken ly circular ornaments. From this transition from an useful to an ornamental function we may infer that the Levide browes are of a later type than fig. 3 , and it is highly probable that they are directly developed from it. This evolution of the upper part of a tibula is by no means uneommon, and we may trace it in Central Europe as well as in the Noith. Not infrequently the upor part lecomes a semicireular plate, from which, in the earlier examples, the terminal knobs of the stem and cross-lar still project; gradually these terminal projections disappear; and as the decorative skill of the motal-worker increases, this semicircular plate 1reomes rectangular, so as to afford wider scope for ornamental treatment. This latter phase of development is vory markel in the later Gotlandic forms of the Trutonic bow-shaped fibula.

The type of hronch represented by figs. 3 is of frequent oremmence in (entland ; it lelongs to the Early Iron Age, and to the period when the direct influence of Roman culture was still felt in Scandinavia.

The resemblance between this brooch and figs. 1 and 2 is so close that I do not suppose any long period elajeed loetween them; and this prolalility is further strengthened by the fact that the methot of decoration which we see on the broches, especially on tig. 2 , is in itself characteristic of the period of Romam intluence, It this period the distinct characteristies of cotlandic art had not as yet arsorted themselves, hut rather there existed a elose relation between the ormament patterns of the island and those of Demmark or the Scandinavim mainland. ${ }^{1}$

It is in the Inainixh graves, as might be expectod, that we fimb the greatest number of oljeets bearing the stamp of loman culture, and it is among the ornaments taken from these graves that we find the methoul of deeration of the Levide Prooches.

$$
{ }^{1} \text { Ilitdebrand, op. cit., p. } 23 .
$$

The characteristics of the ormamentation of this period are the overlaying of surfaces with plates of gold and silver, the decoration of these plates with lines of headed wire and small rosettes, or larger button-like ornaments, of whicln the centre is formed by a projecting pin-head of silver, surrounded ly a band of metal with vertical flutings. In the Torsherg fimd we see this particular methorl of ornamentation employed on a shield-plate, in association with heads and figures which display a classic origin. ${ }^{1}$ still more markedly do we see it in the large fibulae in the form of a svasticn found at Nordrup ${ }^{2}$ or Varpelev, ${ }^{3}$ in Zeeland, in association with glass vessels of (ireek or Roman origin, or at Sanderumganrl, ${ }^{4}$ in Fyen. The Nordrup fibula has had seventeen of these button-like ornaments, the Varpelev fibula had twenty-one, that of Sanderumgard has bad twenty-nine, though many of them have been lost. These broorkes may be considerel as being the products of the northem art of the 4th century. One of them was found in a grave at Nyrup, ${ }^{5}$ in the north-west of Zcelaml, with two gold solidi of the years 308-350 A.D., while in Norway a specimen was found at Aak Gryten, in Romstal, ${ }^{6}$ with a barlarie imitation of a gold coin of Magnentius $350-$ 353 a.D. In Sweden the same tibula is foum in Skane, ${ }^{7}$ and the same lutton-like decoration oecurs in a large tibula foum in Wester Gotland, ${ }^{8}$ associated with a glass cup, usually an indication of the lioman period. It is this lutton-like decoration that we have in fig. 2 ; and when we find it associated with the same silver plating and beaded wire omamentation as that employed in the svastica-shaped fibule, I think it may be assumed that both belong to the same periol.
llaving this in a measure fixel the period of these lrooches, let us pass to the thind (fig. 4). I purchased this speecmen in 1893 from a dealer in Stockholm who informed me that it had been fornd in Gotlam. It is centirely of silver. The type is the same as those already deseribed, only that the circular cularement of the stem is awanting, and
${ }^{1}$ Mestorf, I'orgrschibhtlich Altertlë̈mer aus Sichleswiy-Holstcin. Fig. 672.
"Petersen, Nordiske Fortilsminder, 1. Hefte, 11. ii. lig. 1.

" Nomblisker Furtidsmimelr', I. Hefte, 1. 17.


* Muntelins, Autiquites Suciluisis, fig. 338. * Irid.. fig. 320.
the lower end of the brooch has been rounden off somewhat differently. There are not wanting signs, however, that it belongs to a rather later stage of development than figs. 1 and 2; the cross-bar has departed more from its primitive form. The two arms are no longer extended at right angles to the stem, and it is to be observed that the prolongation of the stem, which in fig. 1 biseets the triangle, has become in fig. 4 the ornamental centre-piece of what is really a foursited figure. The hearded lines have disappearel, and the button-like ornaments are cut ont of the solid metal. In the lower part of the stem, and continum over the curve, we lave, instead of the headel lines or niello deeorations, an ormament which is derived from plants, and prolalily is a degrabed representation of the leaves or tendrils of the aeanthus or vine.

This ormament is characteristic of the early Northern type of how-shaped hrooches, which belong to the epoch of the great Tentonie migrations: indeed, it is seareely to be found in sicandinavia associated with any other class of ornaments. These howshaped hrooches which display this metherd of omamentation are not fomm in the Danish graves with the svastica-shaped hrooches; they belong to a rather later prriod. Irofessor Montelins, in a recent chronolusial stuly of the Jorthern anti-


Fige 4. lifooch finu fiothand. quities prior to the coming of Christianity, ${ }^{1}$ has grouperl torether soms of the most charateristic specimens of these hrooches, and assigned them to the 5th century. The six specinens which he illustratus are all of them more highly developed than fig. 3 , and 1 should foel inclined to attribute it to the earlier part of the 5th century. The browhes, liss. 1, 2 , and 1 , thas appear to me to exhilit the transition which must have

taken place about the end of the 4 th century, from the method of ornamentation based upon the imitation of filigree work characteristic of the ornaments from Torsherg, Varpelev, and other Dimish cemeteries, ${ }^{1}$ to the ornament derived in a measure from classical designs, which, under the influence of the Teutonic migrations, found its way into the North.

How this plant ornament came to the North is in itself an interesting problem. As I have already indicated, it appears in Scandinavia only in comection with a single group of early brooches which are attributed to the 5th century. In all the specimens illustrated in which it occurs we note this point of similarity-the twining temdrils never break into leaves on flowers. I think we may infer from this that the Northem metal-worker did not seek, in using it, to reproduce any form of plant with which he was familiar, but mather that he had borrowed it from some foreign sonrce, and copied it in ignorance of its signitication. There can be little doult that it came from the south. It is characteristic of the phase of art of the Teutonic migrations; and, in association with the bow-shaped fibula, we may trace it across Europe, from the Crimea to Ifungary, through Southern and Westem Germany to Seandinavia, or across France to England. (only we must note this diflerence, that whereas in the North the filula is associated with a plant ormament in a state of degradation, we find it in the suoth side by side with ornaments learing graceful representations of leaf and tendril.

This assaciation doulthess resulted from the mingling of the traditions of the Ryzautine or the Roman art with the arts of the harbarians, and it is at those points where the barbarian tribes must have come in contact with the higher civilisation that we find it lest exemplified.

One of these points is the Crimea. When Ir Macpherson published lis Antiquities of Kirtch in 1857, the importance of accurate records of excavation was not so widely recognised as it is now, and we may search lis prages in vain for any exact statement of the association of the various oljects which he figntes. He makes it, however, sufficiently plain that in the so-called Yarangian tombs, rock-cut chambers, in themselves indicating an advanced civilisation, he found side ly side this bow-shapel fibula, typical ornament of the barharians, with deficate 's. Muller, Dhi Thirr-Ornomentik im Norden, 1. 20.
vessels of glass, the forms of which are no less typieal of Southern manufacture. And here we find figured among the personal ornaments a little buckle of bronze, now in the British Museum, which is ornamentel with a well-executed leaf design.

In Ilungary we meet with the same mingling of the two cultures: designs characteristic of the Kourgan tinds of Southern Russia are mingled with patterns which display a classical origin ; the lwowhapeel fibula is found side loy side with belt-elasps, ornmented with vine or acanthus patterns. Not onfy do we find these designs carefully and gracefully executed, but heside them we find the degraded forms of the ornament, as we see it in fig. 4.

From the cemeteries of Kesthely in Ifungary we have some admiraile examples of belt-elasps and bolt-mountings ornamented in this way with rich foliage patterns, or the strange griltin-like anmals which form a emnecting link with the Russian Kourgan finds. ${ }^{1}$ Fig. $5^{2}$ represents a lelt-mounting from Kesthely, showing a well-executed leaf dusign. Beside it let us place a luckle found in 1sis at szilagy-Somly ${ }^{3}{ }^{3}$ near Groswardein in IInngary (fig. 6). Comparing these, there can be no doulst that the origin of the two pattems is practically the same; but while in fige 5 the leaves are comparatively well designed, in fig. 6 we have an unsneeessful attempt to reprodnce them ; the design has demenorated, and insteal of leaves we have meaningless spirals, aproaching to those with which the (rotland metal-work'r has deenrated his tibula. In fig. $7^{4}$ we have another helt-mounting from Kesthely, showing a degraded leaf pattern, muelt as we have it in tig. 4 .

It. would be unwise to assert that all these leaf patterns, which are characteristic of the epoch of the Teutonic migrations, hat their urigin in lhmgary or the Crimea; the same process of copying and the degradation of a pattern can no donbt be traced further West, hut 1 think it is prolable that from Ilungary the leaf patterns first foumb thoir way into the North. In Lipp, from the evidence of the coins foum at
${ }^{1}$ Lipp, Di' Giraberfitider rom Kistherly, Buda Pe-th, 1585.
" lipp, op. cit., tig. 69.
: Hampel, Der finlifiuml rou Negy-s'ent-Miktos, P. 175, fig 11 s .
${ }^{4}$ Lipp. of cit., fig. $1 \$ 7$.

Kesthely, attributes the cemeteries there to the latter half of the 4 th century. Now, we know from the evidence of coins and the close


Fís. 5 and 6. Puckle from Kesthely, and belt-mounting from Shilagy-Somlyo.
similarity of oljects found in both countries that at this period Nouthern prolucts were finding their way through IJungary into 1 lenmark, and doutbless into Semminavia. Ir Mihlemand, in his Allienlempistia


Fig. 7. Belt-munating fiom Festhely.
parullore, has deseribed some interesting finds which afford proof of this. It will be sufficient to cite one of these. In 1797 there was

[^24]found at this very Szilagy-homlyo, from whence comes the huck la. H2. 6, a clain of gehlen wire, from which there humg a munber of monature golden charms-a sworl, a shield, an axe, a phoughare, aml a vinc-leaf ; also a lall of rock topaz momated in gohl, and onamonted with two lions drinking from a circular vessel. Together with the tind were twelve large gold medallims struck for the Lmperors Ilaximinian, Constantius II., Valens, Gratian, and Valentinian, eovering thus the pred from $290-380$ A.D.

In 1865 a tind of coins and omaments was made at Bankstrup, in Fyen : in all forty-severn gold pieces were rocovered: the earliest was somed for the Emporur Trajan, the latest for Constantius II., thus emhracing a period from 249-351 A.D. ; and with the coins there was discovered a little gollen vine-leaf, with its ring for suspension, and a small golden plate, also fitted with a loop, unen which we have again the same design of the two lions drinking from at enf : the execution is ruler than the mounting of the Rzilagy-somlyo topaz, hat the eommon origin of both designs is ummistakable.

## IV".




In the Promedings, vol, vii. p. 335, there is a pavsing mention of the existenee of a Stome Circle on the farm of Nether Torrs, Kelton ; and in vol. xiv. p. 2st the late Mr MWiarmid teseribee the circle of stones at the $1[0] \mathrm{m}$ of Daltallachan, in Carsphaim. These are the only notices of romains of this kimd in Kirkcullorightshor hitherto hrought hefore the suciety.

In working out the distribution of the stume circles of any distriet, one is at the outset coufrontel with statements maule ly former ohservers, espectially the compilers of the statistical Acotomes and the antlor of ('aledmia, in whose minds a very clear conception of the use ant purnose of such relies has crystallised itself, to the eflect, in short, that all circles, the stones of which were conspicmusly large and
massive, especially if also tall in proportion to their hreadth, were of necessity "Druidical temples."

The writers above mentioned seem not to have been aware of the existence of numerous more or less circular groups of stones, possessing, it is true, none of the eharacteristics named more conspicnously than other grouls, and yet, for want of better evidence, fully as mueh entitled to elaim the honour-if it be so-of that favourite appellation. And, as a comollary to this, neither do the same writers appar to have noted that many a half-ritled cairn is to this day surrouded at its base by huge stones, which, if their interepaces were thoroughly cleared of smaller stones, wouhl stand out upon many a heak moorland as noble examples of stone circles.

It is a matter of conviction now, since working ont this record of our stune circles, that hal the eairns been left alome, in Galloway at least, the myth of "Druidical temple" had never gained adherents. For, as I shall presently show, there is searcely one instance in the country bounded hy the Nith and the Cree of a stone circle which at least may not have been the base-stones of a cairn.

My researeh leads me to classify these remains under three groups: Cireles wholly dustroyel ; Cireles partially destroyed ; and Circles still apparently complete.

## 1. Circles whully destrayed.

The six examples once, on fatirly authentic record, existent, have been male away with between the years 1790 and 1870 or thereabouts.
(1) Near the "Roman Camp," Bombie, in the parish of Kirkendbright. Aceording to Ir Muter, the stones " were seized by some vandal for the building of Buckland Bridge."
(2) A small Circle, also mentioned in N.S...t. as being some two hundred yards distant-lirection not stated-from a mote on Boreland of Partun.
(3) Near the manse of Kirkguzeon ; aceording to my informant, Rev. J. (iillespie, not now diseoverable.
(4) Also in Kirkgunzeon, and stated in N.S.A. to be close to "the
site of the very large cairn at (ilaisters." Now, at this spot there are three sites of what I took to be caims. Two are neat and circular, the third oval and very moch larger-evitently the site of the cairn mentioned in N.S.A. Hat the compiler of the parochial notice really seen these remains, I do not doubt that all the three ringe would have been deseribed as the sites of cairus.

For better elucidation of this peint, I append a plan (see lig. A.) of these three groups of stone remains. All these spatees are slightly hollow, deepening towarls the centre ; the large oval one is not clearly


Fig. A. (ilaintels.
marked wit by stones, but its grassy rim is more detinet than the the others. Ifs two diameters are 66 feet ly 45 feet. On the north are of the mithle circle are nine well-definel and large stons, lying ats shown, and two others on the S.W. are. The spaces hetween are also stony, but these eleven stones are conspicums. The diameter of this cirele is 60 feet; and a level space of 21 feet seprates it from the small circle, exactly its counterpart in general features, hat with one very massive stone on its western are. This small circle is 60 yards
distant from Breckonside Burn, and the group is nearly two-thirds of a mile north of Glaistors farm, about 300 feet alove sea-level.
(5) and (6) In Kirkbean ; one on the farm of Airdrie; but though mentioned by llarper in Rambles in Gallurcty, Mr G. Amott, in the Trans. I! is. and (iall. N. H. and Antiq. Sme, says, "at present no trace of these can be fomm, and tradition fails to give even a hint of their probable sites, for which a earoful search was made during the Ordnance Survey of 1893."

If the surveyors were searching for a circular gromp of prominent monoliths, disappeintment was almost bound to follow. It is possible that these stoms, loth of which tigure in the books as "Iruid temples," are now overgrown by whin and briar, and would evade all but enthusiastic searching.

## 11. Circles partlally destroyed.

(1) S.E. of Little Balmae, Kirkendright. This was insutieiently


Fig. 1. Drummore. examined by Mr E. A. Ilornel and myself in 1887, and formd to consist of five granite houklers, all of them large, in sitn, and the midgy grassy hollows of five others-removed, no one ean say when. In the centre of this nearly true circle, 90 feet in diameter, is a slight mound, possibly artiticial.
(2) W. of Balmae House, and near the base of Knockshimnie, four stones in situ, all, I think, granite, and the sites uf six others as distinetly observable as in the last instance. $\Lambda$ massive stone lies outside the circle on the s . Diameter 72 feet.
(3) Irummore-Close to the fine, massively ramparted fort there, and in a hollow letween it and loumber, there are four great stones, all that now remain of a circle of nine which was so far destroyed, much to the
late Lord sclkirk's inlignation, in $1 \times 67$, by one samuel Jully, then tenant of the farm. The former completeness of this circle is attested


Fig. 2. Park of Tongland.
ly Mr J. Blacklock, late of Kirkculbright Acalemy, and Mr J. Watson of Twyhholm, who stuppliel me with the ahove name and date. Of the four stones now remaining (sve the flan, fig. 1), that at the S.E. juint is quite flat and stands 2 fect 6 inches above: ground ; the S. W. one, rough and ridey, is 2 feet high, while the others, alsu, flat, are a hare 12 inches above ground. The 5 lust stones were very much higher,-ahout 5 frot above ground, say my informants. The probable diameter was about so or so fect. I lime continued due s. from the S.W. stone would bisect the N. ramparts of Irummore Fort. This eircle is not named or shown on the 0.31.
(1) Parl; Tomplemu.- (m) a ridse of Tonglamd 1till, 32.5 feet alowe seat lovel, and 20 x yards W. of the stealings,


Fig. 3. Park of Tonglanel. there arr three stones which at once arrest the eye-they are so Vol. xxix.
unlike any others near by. Two of them (see fig. 2, sketch from the $\mathrm{S} . \mathrm{W}$., and C and B on the plan, fig. 3 ) are conspicuous by size and form. $\mathcal{C}$ is 3 feet 5 inches high and in girth 5 feet 4 inches, B 3 feet 2 inches ly 6 feet 1 inch in girth, and overhangs towards the central space $11 \frac{1}{2}$ inches. Near the midulle is a prostrate stone ( A ) measuring 4 feet $\because$ inches by 2 feet 10 inehes. On examining the ground carefulty, the remains of another stone S.E. of the centre and the grasey ridges of the sites of five others are clearly discernible, as shown in the plan. The two main liameters are 36 feet and 21 feet 6 inches. These stones are neither named nor drawn mpon the O.M.
(5) Bulaman, Tonylani.-In a fich called the Cowpark, S.E. of the stearlings, on a high hillock, is a grassy rim full of embedded stones, not mentioned on the U.M., nor, so far as I know, definitely claimed as a stone circle, but as much entitled to that designation as many others. 1 ts diameter is 44 feet; the stmes are mostly small and irregularly pheed ; it is evidently the base of a cairn.
(6) Torrs, Kelton, at the eastern base of Erne Hill, abont 215 feet alove sea-level, and distant from Ernespie House only ${ }_{6}{ }_{6}$ th of a mile. The O.M. names it "Irvidical circle," and shows three stones. It the date of my visit to the spot in 1891 there were only two stones, and there were no further indications to suggest the sites of the others.
(7) Torkirm, Kirkgun:pon.-Between the railway and the roal, about 300 yards E, of the fortlet at Torkirra, is an irregular cirele of large granite lwakers, the stones themselves being very irregularly phaced, and the contour hroally oval, the curved sides bounded on the S. by a straight one. This site, which was but cursorily examined during a long day's exploration of the forts, measures some 84 feet across its greatest witth. It dors not appear on the maps, nor is it called either a stone circle or a cairn, but it is most obviously the remnant of a good-sized cairn.
(8) Misth Auchentarie, Anvoth.-There is here, at 500 fect above sealevel, and abont 230 yards E. of Auchenlarie Burn, one mile from the sea, a well-detined grassy rim, circular and stony, evidently the outer vestiges of a cairn. Its diancter is 36 feet. On its N. and N.E. are tive earthfast stunes, the highest of which is 4 teet 10 inches above ground ( 1 B in
the plan, fin. 4), the next is 3 feet 8 inches, the third 3 feet, and the other two prostrate. Neasured in the same direction, the interspaces are 12,18 , 12, and 6 feet respectively. At a print 24 feet due N. of stone C is a stone of about the same size, and at 27 feet S.S.W. of the tallest stone stands a tall, tapering stone 4 feet 6 iuches. To the S . of this same stone B , at a distance of 51 feet, there juts out a piece of rock bearing the cup- and ring-markings deseribell and figtured in my recond for Kirkeudhrightshire. ${ }^{3}$

These stoness are shown on the O.M. under the usual name of "1ruidical circle."
III. Circles appamentliy complete.
(1) Gitonquirkien $17_{10, n:}$ - The rather small eircle here extant is one of there named and dawn on the O.M. It is exactly $\frac{1}{4}$ mile W.S.W. of Cairnywanie: N.W. of it 217 yarls is the sito of a secomd, and beyond that, in the same line, about 60 yards, the site of a third; S.W. by W., 217 yards oll, is an


Fig. 4. High Auchenlaric. exposed and empty kist-vach. This last I have seen, but the f wo stom circle sites must have beeme totally obliterated since the survey, at there is no trace of them now. The site of the one remaining is ot grasey level, 52: feet above soa, $\frac{3}{4}$ of a mile S.S.W. of the farm, and 1]s yards past of the Englishman's Burn, in a reetangular'spere cht off by its curment. There is no trace of a raised central mound nor of an earthen ridge in the line of the stones, which are 1 wenty-cight in mumber on the circmenfore. These are nearly all rathes romh water-wom boulders; none of them is large, and all are quite low, the two highest ${ }^{1}$ See Irmeratinge, vol. xxix. 1. 90.
(shown on the plan shaded, fig. 5) being but 3 feet above ground, and the only stones that are narrow and slightly rectangular. The stones are set with evilent attempt at regularity, one markedly wide space of $\&$ feet interveming between the two on the S.W. are, and two very narrow spaces dividing the morth stone from the north-east one and the fourth and tifth stones on the same are. The eiremmference taken through the


Fig. 5. Glenquicken Moor.
centre of the stones is 225 feet. The diameters also are unusually equal :-

$$
\begin{aligned}
& \text { N. and S. centre to centre of stones } 51 \text { feet. } \\
& \text { E. .. W. .. .. .. } 53 \text {,, } \\
& \text { N.W. , S.E. .. .. . } 51 \text {. } \\
& \text { N.E. . S.W. ., .. ., 52 .. }
\end{aligned}
$$

The whole interior area is covered with smallish stones, tive of which (shown in plan), thong considerably larger and heavier than the rest, are easily moverl, and even raised up, -a task impossible of performance hy any man single-hamied with any of the earth-fast stones of the circumference.

The centre of the circle is occupied by a tall, massive granite houkler, 6 feet high by 12 feet in girth.
(2) Mills, Luchrutton.-Drawn on the ().A1. as a circle of nine stones, on the 500 foot contour-line, 1 mile almost due s . of Cullochan Castle, and nearly 1 mile S.W. of Castle Hill Mote; it is named " Druidical circle, supposed." At the date of the J.s.A. there were nine


Fig. 6. Hills, Lochrutton.
stones, themgh the circle went by the name of The So ven (ire stances. Probably it had some connection, now forgotten, with The (ire stane in Inmfries, some of its stones seem to have hern moved about, and one other removed altogether, and, 1 think, somewhat recently, as
its site (see F in the plan, fig. 6) clearly bears the shape and impression of a large stone materially difterent from the small nomeseript hollow at 11, which is supposed to be the site of another stone, and also quite markedly distinct in character from the rudely oval hollow, some 15 fret within the circumference, and which is probably the result of a little diguing done here some years ago by Camon Atkinson. Ontside the circle at $L$ there is another probable site of a stome. The two main diameters are 81 feet $N$. and $s$. and 78 E. and W. The interspaces measured in line with the width of the stones gives a circumference of 232 fect. None of the stones stand more than about 3 feet above srouml. The eircle oceupies the flat summit of a slightly raisel antificial mound, and there is no trace of any former accumulation of small stones within the space enclosed by the stmes.

A further interest attarhes to this circle from the fact of two of its stones bearing what 1 believe are gemuine artificial cup-marks. These are fomm on the east stome (a llatish " whin," much smoother than the majority), and are three in number, in a perfectly straight line, 10 inches long, the direction being east and west. These cup-marks are the smallest known to me in the district-searcely more than half an incle wide.
(3) Itom of Dellallorhan.-Cluse th the farm, almost milway between the Water of Jongh and Carsphain Water, at the base of a momul called IHom Moat. 1t is dotted on the O.M. as a true circle at a point a little over 600 feet above sen-level, and is named " Drnidical circle, supprsed." Daltallochan Caim is about a thind of a mile away on the N.E.

The circle consists of thirtecn stones, irregularly placed around the summit of a slight elevation. Three of the stones (M.II on the plan, fig. 8) lie in a nearly straight line, the others forming a deep semi-oval. They vary much in size ; hut ouly the two which mark the limits of the greatest diameter ( $\mathrm{\Omega l} \mathrm{E}$ ) can compare with the stones in, e.\%., llolywood Circle. My sketch, wactly enpiesl from that taken on the spot (see fig. 7) shows at a glance this varicty in size of the stones on the S.E. are. The circumference measured throngh the centres of the stones is 210 feet. The greatest diameter, centre to centre of stones $M$ and E, is 74
feet; its ontrary diameter is 63 feet ; the N. and S. diameter, \& to II, and the E. and W., D to L, are 65 feet each.


Fig. 7. Daltallochan.


Fig. 8. Daltallochan.
(t) C'andrasilfe, Anueoth, almost in contact with the hase of a cairn. It consists of fourtcen stones, ten of which are rather thin whinstone flags
set up on chge, and, with the four others, which are small houkters, forming an almost exact circle 66 feet in diamete.. See fig. 9 . The diagram has been compressed so that the space N . of the cairn-base to a solitary stone ( 1 ) represents on the ground 180 feet. Thirty feet further north is a second stone, and again 30 fect is the edge of the small cairn-site. ${ }^{1}$
(5a) Lairlmannarth, Tomplanh.-This, the Park Circle, and the circle at Gilenquicken are the only three examples having a central monolith. 1 t is drawn on the O.M. on the 400 foot contour-hine as a circle of five stones with a sixth in the centre; and in the N.S.A., Rev. D. S. Williamson writes (1)ee. 1843), "there are eleven stones, with a twelfth in the centre, the summits of them all just appearing at the surface of the gromen."

This circle, which stants close to a cairn which is S.W. ly W. of the farm of Upper Laidmannach a little over half a mile, now consists of ten stones, all smallish granite loonkers, equidistant from each other, on a circumference of only 63 feet ; and its central stone, also of granite, has fallen prostrate into the praty ground which yrar by year is covering the stones and rendering their identification a very difficult matter. The shape and size of the ten stones cannot be determinet, as only a portion about the size of one's bead is visible; but the monolith measures 5 feet 6 inches in length by 3 feet broad, and rests 14 inches above grounsl.
(57) Lairdmamach.- It is yarts N.E. of the base of the neighbouring cairn is a group of stones, which I take to le part of a very small stone circle, the diameter of which is only 12 feet.
(6) Lochrinnie.-This very peculiar group occupies the summit of a lill in the very extreme north-eastern comer of the Stewartry, midway letween Lochrimnie Farm and Lochrimnie Mote, about 700 feet above

[^25]
$10$



sea-level, and on the north of the Blackmark Burn, which here joins the Castlefem Water, forming the bounlary between the Stewartry and Thuffiesshire.

The holed stone (see H in the plan, fig. 10) has been placed on the



0
$60^{\circ}$
O
$96^{\circ}$

75


Fig. 10. Lochrimnie.
erown of this hill, the sides of which for some distance descend very gralually ; and, at the ten prints shown, there are stones forming an irregular eircle, the greatest diameters of which are 200 feet by 172 feet, the N.W. and S.E. being 167 feet, the circumference 588 feet. ${ }^{1}$

None of the stones are prominent, some only just showing above the surface of the ground. The loled stone, a thin hroad slab of harl "blue whin," stands very notrly on the E. and W. diameter. Its dimensions are 3 feet 2 inches by 2 feet 6 inches hy 6 inches. The hole measures about 5 inches in wilth. We were told by the ohl

[^26]gardener at Craigmuic (Thomas Totd, who remembers the steme when perfect) that the upper part hat heen wantonly destroyed (ree fig. 11). Within the circumference, at a point 63 feet N.W. of the lobed stme, lies a lame flat stone, ahout 5 feet by 2 feet, and 30 feet $\mathbb{W}$. of it is a small, low heap of stomes ( 15 and $S$ on Plan).

During my earlier antiquarian rambles in Cralloway, many other


Fig. 11. Holeil Stone.
partly circular relics, of much the same character as these at present describen, were casually observed, especially in the moorland districts of Tongland, (firthon, aul Anworth; but in the following summary 1 have placed the names and chatacteristics of the remains now pased in review, in the hope of its being useful as a secorl of ancient structures only too rapidly disappearing from the face of the earth.

## SUMMARY OF STONE C'RRCLES.

## 1. Circlen wholly dentroxed.

1. Near "Ruman Camp," Bombie, Kirkudbright.
2. .. Boreland Mote, Parton.
3. .. Kirkgunzeon Manse.
t. .. Glaisters, Kirkgunzeon.
4. .. Airdrie, Kirkbean.
(6. In Kirkbean.

## 11. (irfles partlalli deatroyed.

1. S.E. of Little Balmae, Kirkeudbright,
2. W. of Balmae IIonse, .,
3. Drummore, ..
4. Pirk, Tongland (with central stone),
5. Dalaman.
f. Torrs, Kielton,
6. Torkirra, Kirkgmzeon,
7. High Auchenlarie, Anwoth,

| (1) $\begin{aligned} & \text { 1iameters. } \\ & \text { (0) feet. }\end{aligned}$ |  |
| :---: | :---: |
| $72 \times 72$ |  |
| ? $90 \times 90$ |  |
| $36 \times 21 \mathrm{ft} .6 \mathrm{in}$. $44 \times 44$ feet. |  |
|  |  |
| ? |  |
| $84 \times 74$ | . |
| $36 \times 36$ | " |

## 111. C'ircles apparently complete.

1. Glenquicken Mtor, Kirkmalreek (with central stone', $.33 \times 51$ feet.
2. Hills, Lochrutton,
3. Holm of Daltallochan, Cansphairn,
to. Candlside, Anwoth, $81 \times$ is ..

4h. ., ..
5a. Laislmannach, Tongland (with central stone), $7 \times 63$,
5.
.,

6. Near Lochrimnic Mote, Dalry (with holed stone), $30 \times 30$, $21 \times 21$, -1×21", $12 \times 12$. $2(\mu) \times 172$,

## V.

NOTES ON THE "ROMAN ROADS" OF THE ONE-INCH ORDNANCE MAP OF sCoTlaND. Br JaMES MACDONALD, LL.D., Vice-PbesiDENT.

## 4. The Roxbcrensmibe Roans.

From the English Border two old roads enter lioxburghshire, named on the map Watling street and the Wheel Canseway. The former is regarded by writers on the antiquities of the distriet as a continuation of the Northumberland road of the same name; the latter, of the Cumberland Mailen Way. Both are popularly believel to be Roman.

1. Watling street.-I bout a mile after crossing the sources of the Counet at Chew (ireen, this old road leaves English soil and proceeds in a north-westerly direction across the Cheviot Itills. In penetrating this rauge its course winds consilerally, as it has to accommodate itself to the nature of the ground. Its hrealth varies from 6 to 10 or more feet. Its track, which has been skilfully chosion, is level and covered with grass, having sometimes low mounds bounding it on either side.

A mile or two further on, and at sume distance from the roal on the right, is the remarkable Mote or Fort of Buchtrig. On the left, a little in alvance, is Woten Law ( 1398 feet), crowned by two closely atjoining rectilinear forts, which are defended on three sides by triple ramparts, but are open on the west-the sille most distant from the hollow in which the road runs. The traveller has now reached a pass in the last of the Cheviot heights. Suddenly the southern Scottisl uplands hurst on his view. To the north-west the there conical summits of the Eiklon Hills are seen rising abruptly from the plain. Further west, and more distant, are the peaks of the Ettrick IIills; north of the Eildons, but still farther away, are the Lammermoors; while the pieture is filled up ly that succession of low, rounded hills and fertile vates, varied hy the presence of intrusive masses of trap, such as the 1hunion, near Jedlurgh, that give to these uplands a character of their own.

At the end of the pass, on the right, is the "strecthouse" of the "ralnance Map, once a shepherl's dwelling, hut now have, rontless waths.

Thence there is a rapid deseent towards the Kale Water, which is crossed just below Towforl schoulhouse. ${ }^{1}$ Itere the ground begins again to rise. The road then lends somewhat to the north. Soon it passes, on the left, a large rectilinear enclosure, within which is a smaller one, both laving traverses "in front of the openings or gates." Near them stood the "Strecthouse" of Ruy's plate, ${ }^{2}$ but it has long since disappeared. The larger camp is of the same type as that on Torwood Moor, Dumfriesshire. ${ }^{3}$ Following the road, which here separates the parishes of Oxnam and Ituwnan and is still in use, though kept in had repair, we gradually ascend to Pennymuir, where large sheep-fairs were formerly held. Su far, there has been nothing to distinguish our road from old or partially usel roads in other parts of the country. Whether the homans hal any share in its construction must depend on considerations apart from the appearance it now presents.

From P'emymuir to Cumzierton IIill and onwards to the Oxnam and Ilownam road-a clistance of about 3 miles-the traveller continues to ascend in the same direction as before. Here the road, now all but disused, is of greater breadth than at Towford. Though its course is not that of a straight line, the windings are not very markel. The rombay is much cut up and in wet seasons parts of it are swampy, esprecially just ahove Pemnymuir. On the left it is fencel by a stone dyke, while the right is unprotected at first, except by a shight mound here and there. The whole ridge along which it runs is uncultivated, and pastured by sheep. Rather more than half-way between Pemnymuir and Cumzierton IIIl, on the top of which is a British fort, we pass a so-called Inruidical circle on the right, and further on a smaller one on the left. North of Cunzierton Hill the character of the road continues the same. A wire fence runs on the right for some distance, replaced, where the frotpath to Chatto lranches off, by a stone dyke. At intervals here and there it is raised in the centre ly what seems to be a line of large stones. In one or

[^27]two places they have the apparance of having been fitted into each other artificially. By-and-by it may be observed that there are similar rilges or layers of the same kind elsewhere than in the centre, and even beyom the line of road altogether, as if the stones are either natural to the soil, or else lecayed portions of the mptilted rock still in sith. Along the sides of the roadway small pits are to be seen, from which material haif no doubt been taken to reprir it at the time it was in use; but most of this has since been washed out of the hollows that now render its surface unesen. Shortly before reaching the IIownam road, its contour becomes more distinctly and somewhat regularly rounded. But, as in the case of the ridge of stones already noticed, the curve is now in the centre, now towards one sile, now towards another,-evidence, apparently, that the rominess of surface is due to the operation of some natural causes, and not to the haml of man. At one spot, indeed, the raised centre has been exposel, to some depth, by the unceusing action of a tiny rill, and shown to be solid rock. It would thms seem as if the present hollows hat been softer $\mathrm{p}^{\text {narts }}$ of ont-cropping strata on which the romd had been laid down, whieh, worn away by the rains ant frosts of winter, were left mullled after the roal ceased to he used for trattic: while the higher portions, whether occurring in the eentre or at either side, are of a texture hand enongh to withstand better and longer these destrutive atoncies. For some time the roadway has been from 20 to $2 t$ feet wide.

On reaching the spet where the road to Ifownam, alreaty mentioned, branches off to the right, we turn somewhat sharply to the left and find that this road-that leading from Jellourgh through Oxnam to 11 ownam-oretupics for about 2 miles a portion of the track of "Watling shreet." It lirst the latter bomes slightly to the left, rumning thereafter due $\mathbb{W} . N . \mathbb{W}$. to Jedfont Bridite, a distance of $\bar{i}$ or 8 miles. Its surfare, now grassy and almost level, is sepmated on both sidus from well-cultivated tieks ly moumls, ditehes and sometimes rows of trees. This marked clange of sone is casily acenunted for. "Watling strect," not far from its list contact with the Hownam roal, laves the comparatively lawren (ireywake of the Cheviot range and enters a fortile tract of country, the umber-
lying rock of which is the more kindly Old Red Sandstone. Smiling fields accordingly succeed the less luxurious herbage of the lilly uplands. Here purtions of the road are still made use of by the farmers through whose land it runs, and at whose hands it receives oceasional rebairs. In constructing it, the ground had, where necessary, been levelled, and a shallow trench sunk in it to receive stones or gravel. In the midule, extending to a breadth of 18 feet or so, is a truek for horses and cattle, lined with a broud margin of grass on either side. To keep the whole level secms to have been the chief object of those who last used it. There are no kerbstones, no pavement of that stones, no raised line of stones set edgeways in the centre. It has been sail, indeed, that the roadway was once paved, but that the stones were long since removed and used for building. Of this, however, there is not a shadlow of proof. That, in a district abounding in stone, it should have been everywhere completely demuded in this way of a stony covering, may be conceivable, but seems highly improbable. On the portions of it still in use for farm purposes a flattish stone may oceasionally be seen tilling some hole made in the track, though unbroken stones or metal is oftener now used in doing so. Its great breadth, and the care with which its sides ham at one time been fencel, deserve attention. In addition to a normal Ireadth of 24 feet, often exceeded, there is sometimes a ditch 6 feet wide on one side of the roat and a mound 12 feet broad at the base on the other,-making, in all, a breadth of 42 feet. In some plates there is a ditch inside this mound, and a mound outside the opposite ditch, so that the roadway has a diteh and mound on either side. This may be seen at the top of the ridge near Remiston, where the descent to Oxnam Water begios; and such was probably at one time its form wherever it passed through highly cultivatel soil. Its almost perfect straightness and its borders of trees render the "Roman" road from Shiblen Hill to Jedfoot a very prominent feature in the landseape of that part of Roxburghshire.

Just before the Oxnam is crosset, there is a bluff of some extent, formed by the junction of a small rivulet with that stream. It is steep, on the side next the latter, but kess so where it abuts on the "Roman"
roak. On one of the remaining sides is a field, of which it was thit lately a part. Here is a slight depression which may mark what wats oner a ditcls. Along the fourth side runs the Cappuck road. The bluff is an the farm of Cape Hope or Cappuck, belonging to the Marguis of Lothian. When it was being ploughed, eight years ago, foundations of building were tiscovered. Exeavations, then ondered by Loml Lothian, werw carried out under the supervision of Mr Walter Latillaw, Jmblurgh Abbey, of which an account, with plan, has been publisherl. ${ }^{1}$ Tho lower courses of walls, supported by buttresses, were revealed; a portion of a Roman inseribed stone was found, together with some articles of Roman manufaeture, ehiefly pottery. These, with other indications, placo it beyonl doubt that Cappuek had been the site of a Roman or a Romano-Dritish settlement, for a longer or shorter period. No trace of it surounding rampart or wall seems to have been got, but the exavations were only partial, theat part of the station still remaining mexplorea.

From ()xnam ford the roal argan rises till it reaches the waterkhol between that river and the Jed. During the lirst part of its descent lonce it is little naed, even by the neighbouring farmers, and is conson quently so much eut by the rams that in wet weather it is harlly fassable even on foot. Is it approaches Jedfoot railway station, however, it passes into a roarl in daily wse." . Ifter this, "W atling street" is lost for a time: lunt it is evident that it had passed through the nrounds of Mount Teviot, one of the seats of the Maryuis of Lothian, for two miles further on it reappears a little to the north-west of Ancrum Honse, ruming in exactly the same direction as it did from shilulen lill to. Jedfont. Planted over with trees the rowl is again a conspictonts whect. "For three miles and a half of this part of its comse it forms the boundary between the parishes of Ancrum and Maxton," "disapperimp in the present Incrum and st Hoswell's road, which keeps for a mile or two the same straight course. Reyond this, no thatees of it are now visible
${ }^{1}$ Proccelings of the Beruetrkshim Nuturutists' Club for 1893, PP. 382-s.

- In traversing the roal last summer, I was favoured with the use of a Ms "Journal of a walking tour over the line of the Roxburghshire Watling street," by Mr Francis Lymu, F.S.A. Scot., Galashiels, which 1 fount of ereat service.
${ }^{3}$ Jeffrey's History unt Antipuities of Roxburghshirc, vol. i. P. 231.
in Roxhurghshive ; hat it must have passed northwards between the Eildon llills am the Tweal, crossing the latter into Berwickshire at Newsteal, or, according to others, at Gattonside. Near Newstead, numerons Roman remains have been foum on what there are gool grounds for helieving was the site of a Roman station. ${ }^{1}$

As regaris the history of the road, nothing ean be founded on the mame "Watling strect," applicel to it loy Horsley and others, as well as on the Orluance Map. This epithet is, I believe, an importation from the other side of the Border, whieh, except from bookn, is quite mknown in Roxhmrghshire. Even in England, Watling Street is by no means symonymous with Roman roarl. It is a term of Anglo-Saxon origin, and of somewhat uncertain meaning; lout the breadth of its application may be gathered from the fact of its being used by Chaucer of the Milky Way.

There are, however, circmustances which indicate that the ronte our ruad takes was that by which the Rumans generally entereal Scotland, and that part at least of its course, if not the whole, may have heen lairl down by them.
(1) On the Northmberlanl Watling Street, leading from the Southern Wall tuwards the Cheviots, are two Roman stations-llalitancum aml Bremenimm. Their position seems to show that they were intended to guard the great Southem Wall, as well as to protect the road traversed lyy the lesionaries when they marched northwards beyon the Cheviots. It York, as the military capital of the whole province, such expeditions would he usually urganisul ; and communication with the seat of government in that eity, would be kept up by the most direet route. There is thus every reason to lelieve that when the Romans invaded North Britain, they, for the most part, entered it hy the east, and not the west side of the island. Although the road from Chew Green-the terminus of the Northumberland Watling street-to shiben Ilill affords no "virlence lyy its construction that it is a Roman work, and although no Roman antiquities have heen found along it, yet we are not entitled, for
${ }^{1}$ For notices of the Roman antignities diseovered here, see varions papers by the late Dr John Alux. Smith in the Procedimys of the Soricly of Antiquarics of Scotlend, vol. i. pp. 28-38, 213-7: val. v. 1p. 107-8, 360-2; vol. ix. 1P. 588-9, \&c.

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HOMLAN IOADS" OI THE ORHNANCE WAP OE & OTLA\IN. 323
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Wh.h reatons, to ileny that the Romans used it, or even made it, if other facts seem to point to a different conchusion.
(2) From thibden llill to Melrose, the case for its having nut only heen used lint even laid down by the Romans is much stronger. The markedly direct line in which it runs for a long distance differcentiates it from all other old roats in Scotland; and the Roman stations of Cappuck on the Oxnam, and Newstead or Red Abbey near Murose, appear to lu satisfactory proof that this portion of the roal had been plannel lyy Roman engineers at a time when the Romans were masters of the conntry. For we can sarecly conceive of their having a line of stations that were unt comueted hy a road with one another, and with some base of operations whence reinforcements could be drawn.

At the same time, it is equally true that the name "Prove Ruad," which was universally applied to it lefore the days of IIorshey, and is still the only one known to the unsophisticated shepherds of the Cheriots, denotes the purnose which it chiefly served during the sixteenth, the seventecnth, and the first half of the eighteenth century; and may account for some of the peculiarities of cunstruction to which attention has been drawn. The original road was perhaps the track ( 18 feet wid") to which reference is made above, while the additional and almormal extension at each side, covered with grass, was intended to afforl the means of sustenance to cattle and sheep without their having to stray into the adjoining fieles, from which the mounds and ditches were meant to exchude them. From shibden IIill sunthwards, where the land was moor or natural pasture of no great value, strch precautions were not repuired.
2. The $11 \%$ Col Causeray. - helley ${ }^{1}$ is the authority to whom we are chicefly indebted for a motice of this road. Itr considers it to he a contimation of the Emglish "Maiden Way;" a riew shared by archaxologists south of the lorder, who descrile the course of "this great military way " as ruming from overborough in Lancashite to Dewcastle and thence onwards to scotlanl. Jeffrey writes: "It . . . enters scottish gromsl at lhealwater, when it assumes the name of

the Wheel Calseway. The appearace of the roal between the wall and Beweastle [ie., during part of its course through Englami] is described as leing alrove 21 feet lnoad, and made with sandstone. The stones are laid on their etges, and generally in the centre ; on the sides they are found lying that. Where streams of water cross the path, they are carried below it hy means of culverts huilt on the sides, and covered with large tlags. It presents the same features in this district [ie., in s. Ruxburghshire] where it has not been destroyed by the lamers converting the stones with which it is pavel into fences for sheep walks." Then follows an account of the line taken by the road, which is said to cross the Peel Burn at a point where there is a strong fort. Turning to the right, it runs along the ritge known as the Wheel Rigg, passing close by the site of the wh Wheel Church am making for the summit of Neclslaw. Jetliey is perfectly clear and consistent in what he says. lle speaks only of one roal-the Wheel Canseway, which he helieves to be Roman, and as to the line of which, in this part of its course, he las no mamer of douht. His view is the satue as that adopted in the Grdnance Map, which, indeed, furnishes the best possible ilhstration of his text.

In Maclauchlan's Notrs on ''amps in Nortlnmiterlamet (Lomdon, 1867, privately 1 minted) we get a somewhat different acconnt of the matter, The writer's man interest is in camps, anl his reference to the roal is more or less incidental. Probably this aceounts for the want of clearness in what he says. On one point there can be no donbt. The road which Jeffrey ealls the Wheel Couseway, Maclauchlan calls "the Irove Road." The description he gives of the line of this "Drove Road" corresponts exactly to that followed ly the "Roman Road" of Jeffrey and the Ordnance Map. Gur two authorities, then, are in agreement as to the course of this radi, lut they difter entirely as to its early history.

Maclauchlan, however, goes farther. At tirst, indeel, he is somewhat cautions about admitting the Romans to this district at all. "It is said that the Romans had a way from Jedburgh, over the Wheel Causeway, into both Northumberland and Cumberland. Part of the line over the Wheel ligy looks like it ; and there are remains of a small square camp
on the side of the way, which possibly has heen used by them as a post of observation. But, Roman or not, the line of communication, up ly the sourees of the Jed, and down ly those of the Liddel and Tyne, coukl not have escaped the notice of the very emly inlabitants; so that, for the passage of cither people or cattle, the course of the Wheel Causeway must lave been very early estallished as a Drove Roml" (p. 56). Su far there is no inconsistency. The "line over the Wheel Rigg" is apparratly the Wheel Causeway, a Drove road, and a prossille Roman rowl.

In a fontmote to the paragraph just quoted a new view is put forwarl. There we are tohl that the author had examinel the gromed in company with a friemd. They emsilered that they "could trace the line of Roman linul, about 80 yards on the west of the present Irove Roal, when it reaches the Rigy from Bayrawforl. . . . . It bemls slightly t. the westward, and appeared to us as crossing the Wormscleugh Burn. . . . . We came to this conclusion from seeing some stones on wach sile of the brook in the line we were examining. But, beyont this, we contle trace nothing satisfactorily; thongh, if not Komam, there is a probability that a Irove or other road passed this way to the camps at Caldron Fint." In further references in his text, this theory of a acond roal is tacitly adoptinl. Jeffrey's roal is delinitely pronomeed to be "an ancient British Wiay," aml is ealled the lrove Lioat (p. 57). The (Xachanchlan) Roman Wiay is apparently illontitied with the Wheel ('mseway, and is ragardel as a separate line, also running along the Wheel ligg (p. is). I reference to "the oblique manner in which the Drove Roul roms hy the side of the Roman Whay for some distance" rompletes the materials at our dispesal for julging what Machanchlan helieved to have been the course of the roads.

Evidently he considers that the two roals, in passing from the head Waters of the beel tewserds Fishand-for it must be horne in mime that lu. lorks unon them as leading from sootland into lingland, not riep cerse -pursued a parallel comse along the top of the ritge known as the Wheel Rige, there being about 80 yarls of an interval between them. On nearing the southern extremity of the rilge the brove land swormes to the left amd leaves the Wheel Rigg by erosing the Peel burn at bagrawfonl. This, it may be repeated, is the comese followed by the

Roman Road of Jeffrey and the Orlnance Map. Maclauchlan's Roman Roal, however, which lies to the west of the Drove Road, swerves to the right at the point of divergence, and leaves the Wheel Rigg by crossing the Wormscleugh Iurn. This hurn, it should be explained, runs along the valley on the west sille of the Rigg, while the Peel Bum runs along that on the cast sile. The following sketch map will make these statements clearer :-


A recent visit to the district failed to furnish any evidence that could anpurt Maclanchlan's hypothesis of a secoml road. ${ }^{1}$ Even the "Drove lomal" is now harely traceable at some points of its course. Careful inquiry among the natives estahlishel the fact that mo tradition of any wther road exists. The track which still survives is most commonly known as "the Drove Ronl." Some hat heard it catlen "the Roman Rowal." I fow of the oller people recollected its heing spoken of as "the Wheel Causeway." The only person who was familiar with all these names was quite positive that they applied to one and the same
${ }^{1}$ "'There are in the line some remains which are called a part of the Catrail or lict's Dhke; hat this has no authority beyond tralition." Maclanchlan, E. 57. note.
line if roarl. Maclauchlan's own statement on the the. "tracio" hu discovered is far from confident. Jeftrey, before him, had sem nothing of a secoml road, nor did the officers of the Orthance Survey - who sanuot he acensed of sepptieism in matters of this kind-leare any recorl of such a rowd upon their map. The balance of evib+nce, then, is eertainly not in favour of the hypothesis of two distinct roals.

Roturning now to Jeflirey's theny, we lime nuselves face to face with an altogether ilifferent questiom. The existence of the rowd is umbultate What we have to ask ourselves is: "What proof is there that it was a Roman maul?" The only evilunce of any value in such a case, apart from the existence of Roman stations or similar remains close lys, is that which can be derivel from its construction ; and this, we haw sern, leals. Naelauchan to pronomee mhesitatingly mainst its being Roman. In matters of this kind it is perhaps unsafe to be dogmatic, but it may las suid at once that the present condition of the road does not justify the conclusion that it was the work of Roman engimeers. Owines to the changed ciremmstances of the conntry, Teftrey's "Wheel Canspway " is mapilly disilpearing under the natural growth of momland vegotation. For it is no lonser used for enmmunication of any kiml. Where its track is still ummistakalle, its most characturisti. foature is a grass-grown, rambed ridge, somewhere about a yard broml, marking the centre of the poul. At one point aceident enables us to form a tolerably complete 1. We of its original structure. On either side of Pagrawforl, where the Dend Bum is crossed, the line of the roul is the easiest means of aseondink the slopes of the valley formed by the brow. Elsewhere the banks are storp. Aml so the sheep, in passing from one hill to another in seard
 Ahont 100 yards. This portion, which is lare of vensation, exhibits m trace of anything lout the most primitive mainerims. Lamen stones of varions shapes have evinhatly been late down to keep the track solid in wet weather: But thene is not much system in the mamer they have been arrangon, and cortainly nothing like the chatomate amb rowulaty constructed abseway which Joflrey's acement womld leal one to "xpent. Vet, an far as one could cather from farmers ame shoplomes, thin wat the part of the man that was in most perfect perervation.

One other point requires notice. Jeffrey allades (p. 248) to "a strong fort " at Dagrawford, and seemingly would have us conclude that the fort was comnected with the Wheel Canseway: Maclauchlan makes Jeffrey's "strong fort" a British camp, and places a second camp, directly opposite it-the Drove Road passing between them (1m the southern (or eastern) bank of the Peel Burn, immediately before erossing the ford (1,58). These he supposes to have been encampments built to defend the passage. It is certainly the case that where the road descends towards the bum, there are on either side of it sundry mounds of earth, which may be artificial. But such a description of the fortifications as we have in Maclatehlan can only be arrived at on the $p^{\text {rinciple of rar pede Herrulem. So far as present }}$ appearances go, these "camps" or "forts" supply no data on which to luild positive conclusions as to the history of the Wheel Canseway.

These arguments are in no way intended to eall in question the opinion of English archæologists that the Cumberland Maiden Way is Roman, of that the Wheel Canseway at one time led from it into Scotland. In mesliaval and later days, when the Maiden Way, like other Roman roads, was in genetal use, an extension of it into Scotland as a drove road became both useful and necessary : and in this sense it can be freely admitted that the one road was a continuation of the other. But the evidence before us seems to forbid any definite statement as to their having formed part of one system constructed in Roman times.

## VI.

THE MONUMENTAL EFFIGIES OF SCOTLAND, FROM THE THIRTEENTH TO THE FIFTEENTH UENTURY. BY HOBEPT BRYDALL, F.S.A siont.

The enstom of carving monumental effigies in full relief does not seem to have come into vogne in sootland till the thirteenth century-this being also the case in Enchand. From the beginning of that periorl the art of the sculptor had made great progress both in Britain and on the Cimtinent. It the close of the twelfth century, artists were begimning to depart from the servile imitation of the work of earlier carvers, to think more for themselves, and to direct their attention to nature ; more ense hegan to appear in rembring the luman tigure: form was more gracefully expressed, and drapery was treated with muclı greates freedom. When the fourteenth century drew wowards its end, design in seulpture began to lose something of the purity of its style, move attention loing given to dotail than to general eflect ; and at the dawn of the sisteenth century, the sculptor, in kiotlame, hegan to degenemte into a mere carver.

The incised slab wats the earliest form of the soulptured eftigy, a treatment of the firgur in tlat relief intervening. The ineised slabs, as well as those in that relief, which were usually formed as coffin-lids, did not, however, entirely disappear on the introduction uf the figure in full relicf, examples of buth being at Iondreman Albey and Aherlalgie, as well as elsewhere. In interosting example of the incised slab was eliscovered at Creich in Fife in 1839 , while digrging a grave in the old chmeh; on this slab two figures muder tabrumale-work are incised, with two shiehts bearing the barelay and lomglas ams: hollows lave been sumk for the faces and hands, which were probably of a difforent material: thel the well ent inseription ilentities the figures as those of Divid Barelay, who died in 1400 , and his wife Helent Iouglas, who died in 1121 . This slat, like the one in relief at therdalgie, is designed more after the mamer of a monmmental lorass, of which them sem to be no early
examples left in scotland, and only one or two of a later period. That of the Regent Murray in Elimburgh, it may be noted, is a palimpsest, the reverse showing part of an inseription.

The organisation of the Roman Churels in Scotland at and for some time after the reign of Queen Margaret being so closely associated with that in England, we naturally find the few aarly scottish effigies as similar to those in England as the ecclesiastical architecture of the two countries up to a certain period; and the monumental effigy being so intimately connected with elnurch-huilding, examples probably have at one time or another existed wherever a eathodral, abbey, or church was mected. The existing examples are distributed between Dundreman in the Stewartry of Kirkeudbright, and Beanly, Elgin, and Fortrose, in the North; and westrarl as far as the island of Bute, de., to Seton in thr East. I houbtless the great St Clairs of Orkney worv at one time representel in the far North, being connected with the Pouglas and other more southern Renttish families, as we find some of the great island chiefs in the north-west attempting to perpetuate the memory of their ancestors after the manner of the descendants of the Norman knights. Those effigies existing in the distriets where the Celt continued to hold his sway, including most of the western islands, are, with one or two exceptions, of a different type (as figs, 1 and 2 ), and are seattered over these localities. One of this elass, which is pointerl out as representing the mighty Somerled, lies on the ground at saddell,-a monldered mass, nearly corered with moss and lichen,-and in costume closely corresponds with that of Maelean of Coll at Iona.

While we have it upon safe anthorities that certain tombs or eftigies, such as those of the Bruce and Robert Il., were seulptured on the Continent and in England, toubtless the greatest munler were exeented in scotland. The stone which has heen nsell can frequently be insutified with that fomm convenient to the locality, and the work Was pohally done ly companies of earvers travelling from place to plaee, as their services were required. Thus, the fine eftigy of the Bishop at Fortrose lics muler a great arch, the earving on the mouldings of which are of such a high cpuality as to preclude the itha of suth work beng dune by natives of that locality at that period: and the spletudis
efligy of the knight at Inmeld is eut in a preculiar stone, still to bre found not very far ofl.

When the total number of efligies now remaining in Scotland, of the

frig. 1. Marlean of Ituss of Mull, Iona.

periond here dealt with, is smmmed nup, their ton oftern dibipidated condition taken into consideration, aml the nememons roceata which
we now see racant, there is deep reason for deploring the loss which Scotland has suffered from the many destructive causes which have made the country so poor, comparatively, in these interesting relics, The absence of any examples in the Abbeys of Dryburgh, Jedburgh, and Kelso, is easily accounted for by the fact that these edifices, lying in the very track of the wars between Seotland and England, could not fail to suffer injury and destruction from the Sonthem invaders, and the fierec rengeance taken by the Douglas on his country's foes for the destruetion of the tombs of his ancestors in Melrose Lbbey is part of the history of that beautiful ruin. In the Northem and other distriets the quarels between jealous and vindictive harons; the destractive march of Cromwell's troops at a later periol; the disturbanees during and after the Reformation; and the gralual deeay conseguent upon the long-continued neglect of such nolle structures as Ahbroath, Elgin, and lumblane Cathedrals, as well as of the numerous churches reated by the foulat lords for the folk of their manors, sufficiently account for the small number left, as well as the condition to which they are reducecl. In addition to these eanses, it has also to In. borne in mint that, while the ordinary carvings of cathedrals amb ahbys were being ruthlessly tom down and nsed for insertion into the wall of a barn, the front of a cottar's house, amd even a common lyke, the more valuable material of which some of the effigies were formed could hardly be expeeted to eseape from the long-eontinued pillage and destruction. Even in the present day, unprotected eftigies at Beauly, Dunkeld, Rothesay, Elgin, and Dalkeith are rapilly mouldering ont of all interest: and as time goes on the number left will continue to diminish. The marhle tomb of Mary de Couci, laughter of a long line of illustrious and chivalric ancestors, and second wifn of Alexander 1l., "supported by six lions of marble, and a human figne reetining on the tomb," which stood "in the milst of the church" at Newlattle Abhey, is a thing of the past; of the tomb of the great bruce, concerning which we real in the Exchequer Rolls that it was exceuted in Paris and sent to Sootland ria Bruges, to be erected in the choir of Dumfermline Abbey, only a few mable fragments, which wary suppused to form a part of it, were mearthed in $1817-18$; a
tombstone prepured in England for Rolert II. durine his lifetime, and derorated at Ifolyrood by Andrew the painter, for the royal burial-phace at Scone: the tomb which the same Andrew wronght upon for the father and mother of Robert II.; that of James [II.. for which the Exchequer Rolls show payments extending from March 1501 till July 150 s ; the efligy of Margaret, daughtor of Robert 111., and wife of Archibald lmouglas, once in Lincluden Abbey-all have long ago dis,ppeared. If we except the fragment of the euttin-lid of William the Lion in Arbroath, the eftipy known as Marjory Brmee in Paisloy, and the unidentified stewart of Bute which elaims allianer with royalty hy the presence of the scottish royal arms over the arched recens-we have no remains of royal eftigies in scotlamd.

Coneerning the eftigies of church dignitaries, a great number have also disappeared, while of those which remain, none have escaped severe mutilation or decay; not one of the almost featureless figures now retans the hand which was once raised in benediction, or the other with the seulptured crosier which it once bore. Of the tomb which is supposed to have been commemorative of Walter Panter, abbot from 1411 till 1443 , only a portion of the hase remains among the ruins of the stately Abbey of Abroath; the beatiful and elaborately carved hawk marlle tomb of Binhop Kemerly, who died in 1446 , after foumting " ane triumphand Collenge in Sanet Androis, called Sanct Salvitouris Colledge, quhcirin he made his lear verry curionslie and coastlie," hat long been void of its figure; two effigies, that of Bishop Lughton within a decorated reeess, and that of Bishop (Gavin Dunlar, who dies in 1532 , in the transept walls of the old cathedral of St Machar at Areverem, are decayed out of all interest, which is also the catse with those of Bishop, Winchester, who died in 1458 , amd Bishop (oblumba Dumbar, who diet in 1435 , in lilgin Cathedral. To thesp may low atherl one attributed to Bishop Ochiltree in Dunlame Cathedral ; while lroken fragments of similar figures are at Arbroath, Dunkeld, Fortrose, and other phaces. The rude colessal fragment, said to have been part of a figure of Dishop John Innes, who died in 1411, in Elgin Cathedral, was probably part of the architectural enrichments of that noble ruin.

The most mumerous examples are those of knights and nobles who achieved fame for themselves on the field of battle, attained distinction in the government of the realm, or had heen liberad benefactors to the Church. Among those not incluted here are one at Oronsay, and another at Arcchattan, the eftigies being after the type of Mackenzie of Kintail at Beauly. In the Church of St Clement at Rowilil (Rotil, or Rohld), in the island of Harris, are three effigies, which have been previously figured ami lescribed ly wr lioss, architect, lnverness, in the nineteenth volume of the Proceentings. Two are recessed in the wall of the nave on each side of the sonth transept, and one, very much decayed, lies at the end of the transept. The most important of the three, that east of the transep, bears an inseription which appears to show that the tomb was crected in 1528 by Alexander, son of William Macleod of Dunvegon, and has the baek of the areled recess claborately filled in with earved panels of sacred and secular suljects. The figure wears the usual conical laseinet, surrounded by a jewellen wreath, short camail, close-fitting jupon, military belt, peaked knee-picees, and short olitusely-pointed sollerets. The armour on the thighs is dovetailed, but on the front instead of the sides, as is usual. The comesponding figure, in the recess west of the transept, is much more rude and simple, and the one within the transept seems when it was new to have resembled. in a general way, that to the east of the transept, the guard of the sword, however, being reversed, while it is straight in the others, and a dagger is at the left side. On each figure the sword, held hy the hands, lies straight in front of the figures, with the pommel on the breast and the point between the feat. Refering to the mouldings, transept atches, and the arches of the tomhs, In Ross remarks that the impression conveyed hy their general character is, that the church was the work of an amateur who had seen and was trying to imitate good work; and the same may lee said of the effigies.

Harily worth preserving, on account of their decaym condition, are two effigins (figs, 3 and 4) lying upon the ground outsile of Bourtie barish church, the knight measuring six feet to where his toes have been. They evidently helong to the late thirteenth or early fourteenth century, and popular tradition associates the knight with de Longueville
who fell in the battle of Inverurie, which was fought in the memediate vicinity.

The efligies of knights in seotland display much less vanoty of

contume than those in Enghanl. The great pointed hasemet contimmen, in many cases, as the typical monumental heatpreer loner after the
periol when it wan actually in use, and the same remark applies, to a less extent, to its appendage, the camail. Mameliers in front of the arm-pits are rarely seen, the figure of Gordon of Futhven being, so far as the writer knows, the only one in scothan on which they aprear; and tuilles-thigh-pieces depending from the taces round the waist-d lo not appear at all. The kuightly helt, which was worn upon all occasions, in the hall, at the banquet-table, and on the fich of battle, during the period in which it was in use, is often exceerlingly rich, and shows consilerable variety; it was always worn round the loins, supported or kept in its place by means of a strap, or belt at the back, or fastened behine upwarks to the waist. The sollerets, which are nearly always obtusely pointer, show little variety of form.

Effigies of ladies are not very numerous: the two or three which are


Fig. 5. Efligy of Dulf of Muliavat at Dull Hollse Mausoleum.
not inclulel are most inconveniently placel fon drawing from ; but an they present little variety of costume, and are almost duplicates of those siven, their omission will not be so much regretted.

Still more rare are figures in eivil costume: in audition to those given, there is one (fig. i) at loufl House mausolenm, more curions than interrsting. It was removel from the parish church of Culten in 1790 , and is supposed to represent John I uff of Muldavat, a reputed ancestor of the Earls of Fife ; it bears the date 1404, but probably belongs to a later period, as the figures, which are in a modern form, show signs of having leen re-cut.

The recurence of one type of efligy in places sometimes near to and
sometimes remote from each other, points to the imitation of one type of costume ly different and succeeding seupptors, as well as several by the same hand. Thus the tomb of Kenneth Nackenzie of Kintail in general design is very similar to the much more beantiful and Irobably earlier one of the Bishop at Fortrose; the eftigies at IIouston are almost duplieates and of about the same period as those in the not far off church of lenfrew ; three in Elgin Cathedral are of the same type as that of Gordon at Ruthen, near Rothiemay; at Abericen the figure of Irvine of Drum is somewhat similar to that of Menzies of Pitfocdels, from the not far distant elurch of Naryculter, and still more to that of Lord seton, at Seton, near Prestonpans, on the south side of the Firth of Forth; while the wives of Jolm Collison, of Menzies of Pitfoldels, and Laly Seton are dressed alike, and have the tassels or knots at the comers of the cushions under the head all of the same pattern.

In strong contrast with the splendid English specimens, such as are at Canterbury and in Westminster Abbey, with their beatifully enamelled heraldry and metal tigures, the Seottish ettigies, with only two or three exceptions, are of ordinary stone. The exceptions are of marble, and the only suggestion of any other material entering into their composition is the empty hollows for the faces and hands in the already mentiones ineised slab at Creieh. Also in contrast with England, Scotland pussesses fewer detached specimens, narly all those now remaining being recessed in walls, and there are none with pillared canopies; such of these as may have existed, from their more prominent positions, would be the first to sulfer at the hands of the destroyers.

There is no doult that many of the scottish efligied tombs, if not all, were coloured and gilt; traces of hoth are said to have been seen on the base of the tomb of Walter l'aniter when it was discovered at Arborath, and even yet distinct vestiges of sueh appear on the upper part of the monumental tomb of James, 7th Farl of Iouglas, at Donglas.

With the decline of Gothie architecture, the carving of recumbent figures hegran to cease, although occasional examples of much later periohs are sometimes to be mot with, such as that of Maclellan of Bombie (hig. 6), in Kirkeudhright. $l_{11}$ the sixteenth century, the few efligied tombs which were erected began to assume more the chatacter of arehitectural VOL XXIX,
monuments, anl the skull-and-cross-bone mode of decoration began tu


Fig. 6. Tomb of Maclellan of Bombie, Kirkcudbright.
displace the herahlic shield. Churches ceasel to be built upon anything
like the scate of the old eathedral, or with any pretension to beanty of architerture ; and as any kind of edifice which kept out wind or rain fairly well was considered good enough for the services of religion, there was neither room nor place for any of those effigies which form so impurt:unt a part in illusirating the history of the past.

Worn aml mutilated as they are, their study is still full of interest to the artist, the antiquary, and the historian. They are almost the only examples left in seotland, representing the sculpture of the human lighre, of the periods to which they belong, and to an extent afford reliable registers of the appearance and enstume of those " whose prowess stirred the nations" or whose "coronet counterpoised the crown."

## Bishop or Abbot.-Arbroath Abbey.

This efligy (fig. 7 ) is preserved in the chapter-honse of Arlroath Albey, with various other fragments comectel with the old edifice. Although incomplete, the example is of interest on account of the fair state of preservation of some of the details of the costume. The position of the hamds and of the staff of the crosier are plainly indicated ; the folds of the cope are executed in a graceful and skilful manner; the enrichments are particularly clalonate and delicate; and the abundance of jewels and pearls suggest strongly the early part of the fourteenth century as its probable date.

It measures over all 4 feet $6 \frac{1}{2}$ inches, and the tomb to which it belonged is said to have borne an inscription.

## King Whllam the Lion-Abbroath Abbey.

This monareh, who is credited with having first ahbeted the lion rampant as the bearing on the arms of the Scottish Kings, dien at stirling in 1214, and was buried in front of the altar in Arbroath Abbey, where his tomb was discoverel on the 20th March 1811. The fragment (fig. 8), which is preservel in the chapter-house of the Abbey, is evidently part of a cottin-lid, and is cut in :t dark spottel marble, described as mahrepore. It exhibits a remarkably high degree of artistic skill in the treatment of the drapery, as well as of the lion under the feet. The robe, although much longer, has some general resemblance to that on the etligy of Richard I. of Englamd which was found at Rouen, and the belt is similarly arranged, with a slightly different pattern. The anmoniere, a purse for containing alms, belongs to the type of the one apparing on the efligy of Queen Berengaria on her tomb in the Ahbey of L'Fipan, near Mans, and the hands were probally folled on the breast, in prayer. I most peculiar feature is the presence of remains of four small figures in the act


Fig. 7. Eftigy of a Bishep or Abbot, Arbroath Abley.


Figs, \& Efligy of king Willim the Lion. Int anth Albey.
of arranging the drapery ; the very slight portions remaining of those at the waist show indications as if of a strap passing under the heel, while the most complete, the one at the feet, is a very elegantly designed figure of an angel, inverted, robed, and winged.

The fragment measures 4 feet 2 inches.

## Sir Alan Swinton.-Swinton Church, Berwickshire.

Sir Alan Swinton, a baron of the reign of William the Lion, wats the first of his line bearing the name of Alan, and the fifth in descent from Elulf, the supposed Iounder of the family, who was living alout Itrio. The Swintons of Swinton derive their name from the lands in Berwickshire now constituting the parish of that name, the whole or greater part of which they at one time possessed. The supposition is that their name originated from the lands being infested hy wild-boars, and popular tradition attributes the first acpuisition of the lands by the Swintons to the prowess of an ancestor in delivering the district from the ravages of these animals. Another legend represents Ednlf as having received a territorial grant from Malcolm Cammore as a reward for his valour and loyalty in aiding him in his struggle for the recovery of the Scottish throne. To the Priory of Coldingham, founded by King Edgar in 1098, David I. had granted the superiority of the lands of Swinton and others, in Lotbian, by a charter dated at Peebles in 1126. Sir Alan is sairl to have rhtained a charter of the barony in the reign of William the Lion from Bertram, who was Prior of Coldingham about 1188. He died about the year 1200, and his name and attributes-

> "The giant stature, and the ponderons mace, Which only he of Scotland's realm could wield,"
are borrowed by Sir Walter Scott for his hero at the battle of Halidon IIIII, although it was not lought till two centuries later, and the Swinton who fell there was a Sir John. ${ }^{1}$

The eftigy (fig. 9), which is built into the wall of the parish chureh, is very rudely executed, and may very probahly belong to the period to which it is assigned. The slab behind the effigy bears a peculiar arrangement of the Swinton arms, which are a cherron between three boars' heads erased, the erest lreing a boar cbained to a tree.

A vault in front of the monmment and under the floor of the church, on being opentd, was found to contain a coffin and three skulls, one of which, being unnsmally large, was supposed to be that of Sir Alan. A east of it was taken and presented to Sir Wralter Scott, who placed it beside a similar one of King Robert Bruce in Abbotsford. There is a story of a ghastly glare shed through the mullioned window by the setting sun on the Swinton skull being


Figs. 9 and 10. Recessed Tombs, with Elfigies of Sir Alan Swinton, at Kwinton Church, and Alim, Lood of Galloway, at Dundremnan Abley:
acce,ted by Sir Walter as a presage of tidings which he received on the followins day of a calamity which had hefallen one of Sir Alan's descendants. ${ }^{1}$

## Alan, Lord of Galloway.-Dundrennan Abbey, Kirkcudbrightshire.

Dundrennan Abbey is supposed to have been founded in 1142 by Fergus, four years after he first appears as Lorl of Galloway, and two years after his great neighbour, de Morville, founded the stately Abbey of Kilwinning. His predecessors as Lonls of Galloway were Ulgeric, and Dovenall who fell at the Battle of the Standard in 1138 ; and besiles Dunireman, he, as well as some of his succensors, founded other abbeys. Fergus was succeeded ly his son Uchtred, who founded at Lincluden a priory of Benedictine nuns, and the monmment is supposel to commemorate Uchtred's graudson Alan, who was buried in Dundrennan Ablees: ${ }^{2}$

This Alan, Lord of Galloway, was a great man in his time-, Srotorum longe potissimus, as he is namel by Buchanan-and was also denominated Alan de Dumfries. IIe was a member of the stock of the Norman aristocracy which overran England and the richer portion of Scotland; was Constalle of Scotland in 1233, and one of the great barons of England who extracted the Magna Charta from King John. When the Norwegians hat settled in some of the Western Isles, and the Seottish kings failerl to olitain possession of these ly treaty, Alan of Gallıway, assisted hy Thomas, Earl of Athole, was encouraged by Alexander III. to act against the harly aml enterprising Norsemen. The fleet of Alan alone consisted of 150 ships, small craft of course, lut very formidable in piratic warfare, and the expedition was so successful that Olaf the Black was expelled from his kingtom of Man. ${ }^{3}$

Alan was the last native prinee of Galloway, and Threave Castle, which was built in the fourteenth century, occupies the site of his fortalice. ${ }^{\text {. }}$ A man of amiahle disposition, he was anxious for the welfare of his people, spemding much time in improving his territories, reforming the laws of his country, and alvaneing the interests of religion. His bounties to monasteries were very consideralle; he grantei or confirmed many of their charters, and relievel Galloway from the demands of the monks of Kelso. ${ }^{3}$ In 1209 he married, for lis second wife, the eldest daughter of David, Earl of IInntinglon, the king's next brother ; and it was the eldest of his two (or three) children ly this marringe, Devorgilla, born in 1213, who founded Sweetheart Alber, where she deposited the heart of her husband, John Baliol, of Bernard's Castle

[^28]in England. Roger de Quincy, Earl of Winchester, by marriage with one of Alan's daughters, obtained great possessions in Scotland, and by her right became Uigh Constahle.

The remains of the tomb (fic. 10) are in the north wall of the eastern aisle of the morth transept, and the figure is cut in a grey stone similar to that of the building. The shoulders rest in a shallow socket hollowed ont of the slab, aml near the head is a small heptagonal hollow, about half an inch deep. The luft sile shows no iuterest except the scabbard of a ponderous sword, and the fragment measures 5 feet 4 inches long, and 1 foot 10 inches actoss the shouliders.

## Marjory Abernethy.-St Bride's Church, Douglas.

In the restorel Kirk of St Bride, at Doughas, in Lanarkshire, which figures prominently in sir Walter Sirott's Cestle Inengerous, among probahly the most interesting group of tombs now existing in sentland, is the detached and much decayed figure of Marjory Ahernethy, who died in 1259. She was married to Hugh Doughas, younger of Douglas, uncle to the gool Sir James.

The figure (fig. 11) is the size of life, and the bave or end is terminated by a spiritedly earvel piece of foliage, shown over the figure. Some doubt has leen cast upon its extreme antiqnity, on the presumption that if it then existerl, it would have been destroyed by the English when they held possession of the patrimony of the Douglases, and that it must bave been exeented after the English were expelled. This, however, is mere supposition, although very probahly it was then much injured.

## Sir James Doulas.-. St Bride's Church, Dotglas.

A decorated and mouldel niche, of a later periox than the figure it contains, in the Kirk of St Bride, at Douglas, bears in its apex the Douglats Arms-it nam's heart, with three stars in chicf-as borne by the Douglases hefore the heart was ensigned with the imperial crown at a much later periol than that of the efligy (see fis. 12). The figure is that of the (ivol Sir James, the comrade of the Bruce thronghout his adventurous career, who lives in the pages of Froissart as one of the most doughty and most chivalrous knights of the periok, aml is refercel to by Fortun as "in his day a brave hammerer of the English." A page to Bishop Lamhortom of St Andrews, he, in his eighteenth year, joinet Bruw's stamdard, after the death of Comyn, and was present at the coronation at sicome.

HIe was the chlest son of William, fourfl Lord of Douglas, whose estates had been given by Ehward of Euglamd to the Lord Cliftorl. After the imprisomment and death of his fathor, he was elucated at the court of Frimee, and during the course of the long war waged against England for the inde-


Fig. 12. Eftigy of Sir James Douglas, st Bride's Church, Douglay.
pendence of his country, is said to have taken part in seventy lattles. He was never married, hut left a natural son, William Douglas, known in history ats the Knight of Liddesdale.

The incidents of his life fill some of the most familiar as well as most romantic pages of Scottish history, and the well-known ciremmstances of his death are recorded on the recent inseription placed beside the tomb: "The Good Sir James of Douglas, killed in battle with the Moors in Spain, while on his way to the Holy Land with the heart of King Robert the Bruce, 25th August 1330."

The stature of the figure corresponds with the description which is given of him in history, where he is sometimes mentioned as the Black Douglas.

## Hugo de Arbuthnot.-Arbuthnot Church, Kincardineshire.

The old parish church of Arbuthnot, delightfully situated, overlooking the river Bervie, about milway hetween Berrie and Fordoun, was founded in the thirteenth century. It still retains a portion of the building of that periol ; patched up in a rude mamer after the Reformation, it remained so, uncared tor, till 1890, when, hy the efforts of the Rev. Mr Spence, the parish clergyman, it was disenemmber of its unsightly galleries and some other eneumlrances, and judicionsly restored.

The first on record of the family of Arluthnot was Hugo de Alserbothenoth, who possessed the lands of Arbuthnot ahout 1160. The effigy (fig. 13) is now lying in a chapel dedicated to the Virgin, which was founded by Robert de Arbuthnot towarls the end of the fifteenth century, and commemorates Hugo, the third of that name, and the fonth lairl in succession. He was designated Hngo Blundus, or Hugo le Llond, from the flaxen colour of his hair, and was a liberal benefactor to the clergy, especially to the monks of Aber1rothock in 128.

Although now appearing as a detached toml, it was probably at one time recessed within a wall. The shichls bear, on the first a fesee cleque, the second and third the Arlmthot arms, and a part of the latter appears on the fourth, which is incomplete. From the sparing of the shields, there have been probably five of them miginally, and it is stated by Nishet in his Hereldry that a shield in the hase loure his laly's arms-three chevrons-she being probably a daughter of or nearly related to the de Morvilles, who were for several generations Constables of scotland. The large shield bears portions of the Arbuthnot arms only.

The monument measures 7 feet 5 inches in length, and is of common freestone, the intervals between the stones bearing the shichls being filkel in with plaster.

Fig. 13. Efligy of Hago de Albuthot, Arbuthoot Chant-

Malise, Earl of Strathearn.-Dunblane Cathedral, Perthshire.
The ancient earldoun of Strathearn was one of the most powerful in Seotland. The enpidity of James I., who brought about its reversion to the Crown by contending that the snceession was limited to heirs-male when it jassed into the possession of Madise, son of Sir Patrick Graham, so exeited the vengeance of the uncle of the young earl, that it led to the murder of that monarch in the monastery of the Dominicans in Perth in 1436 . Some two centuries earlier, ahout 1256, we find an earlier Mulise, Earl of Strathearn, aeting in concert with the Earl of Gloucester and others from England, and the Earls of Dougtas and Crawford, surprising the Castle of Edinburgh and relieving the boy King, Alexander III., and his yonthful queen, the Princess Margaret, from their real or pretended detention in that fortress. In the regency which was soon after appointed for the government of the realm and the custoly of the young King-then about fourteen years of age-the same Earl Malise was on the list which ineluded the clergy and nobility favourable to England, as one of the English party.

It is probable that this is the Earl whose effigy (fig. 14), with that of his Countess, lies on the flow of Dunblane Cathedral. The two figares are hewn out of one block of a common hard grey stone, and are said to have been discovered in the ehoir, sumomenting a leaden coftin inseribed with the date 1271, and attributed to Malise, eighth Earl of Strathearn. The roughened surface of the neek suggests the texture of mail ; the shield bears no traces of arms; anl the Earl has no sword or other weapon. The figures measure about 6 feet 9 inches to the toes; the Earl is 1 foot 8 inches across the shoulders; and the slightly convex shield is 2 feet 10 inches in length by 18 inches in width.

In the graveyard of the parish church of Bonrtie there are two effigies (see fiss. 3 and 4) very similar to these: that of the knight is decayed out of all interest, and the lady is merely three unshapely fragments of stone. Lucal tradition assigns these effigies to a de Longueville and his wife, the former of whom, it is said, took part under Bruce in the fight with Comyn of Buchan on the aljacent hill of Barra, where the natives profess to point out the trenches constructed hefore the lattle of Inveruris. These figures measure abont 6 feet in length, and no arms are traceable on the shield, which is unusually broai.

## Walter Stewart, Earl of Menteith.-Priory Church of Inchmahome, Menteith, Perthshire.

Some 15 miles beyond Stirling, in the old district of Nenteith, lies the leantiful Lake of Menteith. It contains three islets, the largest of which, anciently known as Insula St Colmoci, contains the roofless ruins of a priory chureh and other adjacent buildings.

The old Celtic name-Inchmocholmoc--has given place to its modern form of Inchmahome. Its religions house was founded in the thirteenth or early fourteenth century, and appears to have been originally in the Diocese of Dunblane ; the Priory is mentioned also as belonging to Cambuskenneth ; and an "Adam, Prior de L'lsle de St Colmock," swore fealty to Edward I. of England iu 1296. At a more recent time it was the home of the ill-fated Queen Mary during part of her childhood, and a small arbour of boxwood still remaining on the island has been traditionally associated with her name and memory.

History mentions that Walter Stewart married the younger sister of the C'omntess of Menteith, wife of Walter Comyn, Earl of Menteith, connected with whom a dark story arose in Scotlaud. This Countess is mentioned as having enconraged a criminal passion for an English laron named Russel, and was openly accused of $1^{\text {wisoning }}$ her husband in order to make way for her paramour, whom she married with indecent haste. For this she was disuraced and compelled to leave Scotland, after being despoiled of her estates; Walter Stewart and his lady were then advanced to the eardom by the parliunent or assembly of the clergy and barons of the kinglom. Their second son was the Sir John (Stewart) of Ruskie who betrayed Wallace.

Walter Stewart was a man of considerable importance among his peers. He is said to have accompanied Lewis IX. of France in the disastrons crusude of 1248-49, and to have distinguisbed himself in repelling the attack of the Norwegian King Haco at Largs in 1263, where his hrother the High Steward-the Scottish Hardyknnte-was in command of the right wing of the army. About the year 1286, a Walter Bulloch, Earl of Menteith, was one of those who accompanied the Princess Margaret to attend her marriage with Eric of Norway, alont which time we also tind Walter Stewart, Earl of Menteith, joining the other Scottish nobles who met at Bruce's Castle of Turnberry, in order to faveur his accession to the throne.

The figures (of which two views are given in fig. 15) lie on the ground in the centre of the chancel of the church, and the hlock of stone measures 7 feet 6 inches in length by 4 feet 2 inches in breadth at the top, narrowing downwards.

## Effigy of a Lady.-Paisley Abbey.

In the centre of the dripping aisle of Paisley Abbey, an effigy which is popularly attributed to Marjory Bruce, daughter of King Robert, locally known as "Queen Blearie," lies upon a large motern rectangular structure measuring 8 feet 2 inehes by 24 inches, and 3 feet 10 inches in height. The effisy (fig. 16) measures 6 feet 4 inches, and is thickly coated with old, hard paint. The back of the head has been mended with plaster or cement; a rose decorates

the foreheal, from which the hair hangs to the shoulders in heave, elumsy locks, which has probably been the restoration, perpetrated by a local mason, of a decayel head-dress, who may also be responsible for the thinning of the arms and the hands, the sharpening of the band across the breast, and the cutting of parts of the folds of the dress at the feet into a surgestion of the lead and tail of an animal. The narrow girdle across the waist has a small buckle near her right side, and in the centre there seems to have been an ornament of some kind with a pendant, hetween which is a small shield. At her left side hangs an alms-purse, and the dress and mantle extend beyond the feet, terminating in folds, the elevation of the end being decorated with foliatel carving, as shown in the aceompanying figure (fig. 17).

The effigy was discovered while sinking a grave in the centre of the chowir


Fig. 17. Elevation of cnil of Elfigy, Paisley Abbey.
of the Abher, in front of where the high altar stood, the spot being marked by a handsome memorial in gramite and Sicilian marble, hy command of Her Majesty Queen Victoria, on her visit to Paisler, as a descendant of the great Bruce. It is of the same type as the eftigy of Marjory Abernethy at Douglas; there can be no doult of its belonging to the perion popularly ascribed to it ; and from the phace in which it was found, it is not unreasonalle to assume that tradition may be correct in attributing it to the daughter of the Bruce.

With regard to the structure upon which the figure now lies, including the eanopy over the head, it was erected at quite a recent date ly a minister of the Abley, a Dr Bogue or Boog, who eullected fragments of seulptured delris lying in various parts of the Abber, and had them wronght into the structure upon whieh he phacel the etfigy. On the that vertical surface of the canopy are the figures of our saviour on the crose, with a label inseribed INRI, with a female figure near His right side, and a Madonna and child near His left.



Underneath are three shieds, the central large one learing the Paisley arms, and those on the dexter and sinister side. respectively, a fesse chequé between three roses, ami a lion rampant over a fesve cheque. The two sides of the lase have insertel into each, six small figures of ecelesiastics; one has a riland inscribed Johes d Lychtw, another ropert Wyshard, and a thind sohes d lichtaee, polahly referring to an Ahbot of Linlithgow and Bishop Rourert Wishart, who diel Bishop of Glasgow in 1346 .

## Effiey of a Kinght.-C'hurch of Old Kilpatrick, Dumbartonshire.

This effigs (fig. 18) is interesting on account of the remains of two little angels, one on eath side of the head-a characteristic very rare in existing Scottish efligies, although of freopent occurrence in those of England and other comntries. The example, from the costume, lelongs to the late thitteenth or beginning of the furteenth century, and seems to have no history. It is of freestone, rather rudely proportionel, and lies exposed on the ground in a little enclosure at the south-east corner of the graveyard at Old kilpatrick, in Dumbartundire ; the total longth of the stone is 6 feet $5 \frac{1}{2}$ inches.

## Effigy of an Ecclesfastie.-Dundrennan Abber.

This curions stone (fig. 19), which was formerly in the chapter-house of the Alley of Dundremnan, is now erected within a recess in the wall near the entrance to the nave. The costume is the cowl and hood of the C'istercians, and it is usually assigned to the early part of the fourteenth century.

On the left lireast there is slightly but very definitely formed the hilt and upper part of a dagger, with rounded pomuel and curved guard. On the little figme underneath the fect, an incision in the aldomen allows the bowels to protrule, and the legs are bent inwards at the knees, the feet having slightly pointel shoes. Sarious meanings have been attached to the small figure, none of which seem satisfactory. The presence of the dayger is also difficult to account for.

The stone is of a close, haxl grain, and measures 6 feet 7 inclies from the top of the crosier to the lowest knee of the small fignre, and is 1 foot 8 inches arross the top.

## Bishof or Abbot.-Elgin Cathedral.

Recessed in the wall of St Mary's aisle in the venerable Cathellral of Elgin is the unidentified figure of a bishop or mitred abbot (fig. 20), of probably the thirteenth century. In the guide-book to the ruins it is mentioned as having "heen eallet the tomb of Bishup Alexander Stewart, who was ortained in 1482 , and died in 1501 ." The slight traces of omament, and the style of carving


Fig. 19. Efligy of an Ecelesiestic; InumIreman.

of the ramial under the feet, are alone sufficient to cause it to be assigned t. a much earlier date, while the form of mitre is of the type prevailing in the thirteenth and early fourteenth centuries.

## Bishor.-Dunblane Cathedral.

It the north wall of the choir of Dunblane Catherlall lies this effigy of a bishop (lig. 21), which has heen usually referted to as that of Finlay Demock, a Bislup of the see at the heginning of the fifteenth century, who is said to have milf the first lridge across the river Allan at Dunblane. The style of carving, the short form of the mitre, and the monlding of the old arch, which was ronked hy a new one of the same style during the recent restoration, point very evilently to the thirteenth century as the perion to which it ought to be assignel. It has bren sughested as probable that the figure represents Bishop, Clement, a preaching friar of foreign birth, who is sail to have received the tonsure from it Dominic, and at whose accession to the See in 1233 it is stated that "the rents were barely snthcient to maintain him for six months ; there was 110 place in the eathedral where he could lay his head; no ehapter ; only a rustic chaplain saying mass thrice a week in a roolless church." After a pontilieate of fifteen year, his energy resulted in his leaving it "a stately santmaty, rich in land and heritage, servel by preliendary and canon."

The effigy, of common freestune, measures 6 feet 9 inches all over, 8 inches of which are oceturied by the animal at the feet.

Another effigy lies within a rudely arehed recess in the nave, which is supposed to be that of Nichael Oehiltree, a Bishop of the middle of the fifteenth century, who richly adomed the building. It is now decayed out of all interest.
Bishor-Forthose Cathedral.

The beautiful ruin of Fortrose Cathedral is built on the summit overlooking the Moray Firth, ahont 11 miles by water from Invemess. One of the walls contains the remains of three tombs ; one of these is attributed to an allesed Countess of Ross, or Eufamia Leslie, who possessed the property of the earldom of Ross, and dicd before 1358 , lut the figtore, if it ever bore one, is gone, and the carving, which was once celchated for its leanty, is nearly quite effaced ; a second tomb hears the broken frament of a bishop, the face of the tomb deeorated with an arcade; and the third, which is tolerably complete, is the one here given. (Figs, 22 and 23.)

Which hishop the tomb commemorates is not known, although the name of a Bishop Fraser has been attached to it ; tradition associated it with the second Bishop of the see, but that places it at a period very much earlier than its style. The workmanship is of a very superior kind ; part of the moulding is filled in

Fig. 22. Elligy of a Biblop, in Fortrose Cathedal


Fis. 23. Eleration of the Tomb of a Bishop, Fortrose Cathedral.
with most beantifully carved clusters of acorns and oak-leaver, famblathy copimt from nature ; and the frasments of two smatl lions at the spring of the arch. nearly as sharp as when they were chiselled, are mose elegantly designed, ant earved with the most exquisite tasto.

Furtrose, although now a cuict village, was celelrated in its day, not omly on wocont of its cathedral anl the castle which has now di rappeared, hut for it $\alpha$ position as a seat of learming, Its old name was ('hamonrie, so ealled from its ecelesiastical position as the seat ol the Bishop ol Ross, and the lact that within it were kept all official documents and writs connected with the chmeln ama lands in the diocese. In 1455 Fortrose was finally united to Rusemarkic, nearly a mite further north, by a charter of Janes 11 .

## 

In the churehgard of the parish chareh of thendalifie, a slab of haek marble (tig. 24) eommemorates one of the Oliphants of Aberdalgie. It was formerly in the ohl parish chureh, whieh was adjacent to Aherdalgie Castle, and wadestroyed hy ('romwell's troops in $16 i .51$. A new elureh was ereeted in $17 / 3$ on a site near to the ohd one-probably where the stone is now placed-and the carving was covered by another slab, supported ly six 12 -inch pillars, in 1780, by Lawrence Otiphant of Gask; the latter slab bears the inseriptinn, "1lic jacet dominus Willielmus Oliphant, dominu* de Aberdalgy, qui ohiot quinto die mensis Fehruarii, amo 1329 ," with the Oliphant arms-gules, threw cresicents.

The earving is in very flat relidf, and the charamer of the design partakes more of the nature of a momumental brass than of a piece of senlpture. The fignre, in desigu, costume, and arrangement, corresponds very closely with that on the lrats of Rolort Allyn in Hemel-hempeteal, Herts, which is assigned to the period of Henry IV. ( 1399 1413) ; it also has a resemblance to the tigure on the lorase of Sir John de Argentine, of 1382 ; and the surcoat, with its studs, is very similar to that on the lrass of Sir Dliles Stapleton, at lngham, of 136\%. There is thms reason for leblieving that the carving belongs to a later perion than 1329, as given on the monern inseription.

Sir William Oliphant was an adherent of King Robert Brues, and was one of the Seatish mangates who sulseribed the famons letter to the Pope, in (320), asserting the indepentenee of the kinglom. He wiss sumeded by his mon Walter, who received in marriage Elizaboth, a youngre daughter of King Roblert.

In the absence of siottish mommental brawes, the carving is mont interesting, as showing the same elass of design. It measures 8 leet 2 ly 4 feet 3 inches, and is about 9 inches thick; the surface is rapilly scaling ofl, and a considerable prortion, including the face, is filled in roughly with phaster.


Fig. E4. Shah with Elfigy of sir William Oliphant, Aherhalgin Church.

Prolally it is the only example of the kind in scotland, a somewhat similarly desjgned one at C'reich, near ('npar, being executel in incised lines.

## 今tewart of Bute.-St Mary's ('hapel, Rothesay.

In the raineal Chapel of St Atay at Rothesiy are three effigits.
The rule slab (of which a representation is here given in tig. 2.i) is destitute of history, although trulition sometimes rlams it as the figure of the great sumerleal, as is the cave with another stome at suldel, in kintyre.

The tomb (fig. 26) wecupies part of the south wall of the mined Chapel of St Mary at Rothesay, amd trom the cotume and architectural details it may line assignen to the latter part of the fourteenth century. No record seems to exist as to who the figure represents, or of any inscription which the tomb may have borne. That it is commectel with at Stewart of the royal line is certain from it. heraldry; but throughont the centuries when the Stowarts were dominant as monarchs of the comatry, or prominent as territorial harme, history has asemei ated so many of the name with the varions localities that a solitary unrecondel tomb, containing upon itself the only information as to the cause of its erection, i alinost imposible to le illentified with any prorticular indivilual.

Tradition in this cave :aserte, and mects with the common acceptance, that the figure repesents Sir John stewart of Bonkil, who fell at the dixastrousbattle of Falkirk in 129s. The periol of the con tume precludes this supposition ; and even if it hal heen erected to his memory at a mulh later date, one Would reasonably expert to find still some trace of the bonkil arms. Another conjecture refers it to John Stewart, Sherifl of Bute, a matural son of Rohert 11, who died in 1449; at claim of a more ambitions kind las been put forward for it on behalf of King Robert 11., with the snpposition that it was the one prepared during his lifetime; while another


F"ag. 25. Slahwith Fillicy, in st Mary's. Ruthesay. suggestion has been made that it was erectel by leobert It. in memory of his father, Walter, the "eighth High stewand, who married a danghter of Robert Bruce, and died at Pathgate in 1322 or 1328 . $0_{n}$ the opposite wall, similarly recessed (hig. 20), is the souldered fragnent
of the ett - of a lady and haly-little more than a shapeless stone. It bears f1.. :ums, and the lase contains some remains of small upright figures, of which there have heen eight, but the debris ${ }^{n}$ nseseses almost no interest.


Fig. 20. Tomb with Elligy of a Stewart of Bute, St Mary's Chapel, Rothesay.


F"ig. 27. Tomb with Elligies of a Laty and Iufant, in st Mary - Claytl. Puthony.

## Patrick Douglas - Dundrenxan Abbey.

This slah (fis. 28), which was formerly in the chapter-house of Dumdreman Abber, is now erected agninst the weat wall of the nave, within a recess. It is


Figs. 28, 29. Slabs with Efligies of l'atrick Donglas and a Nun, at Dundremman Abrey.
rulely executed in very flat relief, with a well-executed inscription in raised letters. The only peculiarity about the carving is on the oak-leaves on the sinister side, the holes in which, tividing the leaves into segments, having been executed with a drill. The inseription, when complete, is supposed to have read :-"hic jacet dominus patricius doglas quondam cellerarius de dundrama qui obiit anno domini mcccclaxx orate," \&e., althongh the word here given as a coutraction for "dominus" appears on the stone very elearly as given on the illustration. It measures 5 feet $6 \frac{1}{2} \operatorname{lig} 2$ feet 9 inches.

## Ixcised Erfigy of a Nun.-Dundreñan Abbey.

Althongh incised slabs were not intenled to be noticed in the present paper, this, on account of its similarity in style and proximity of position to the slab of Douglas the (ellarer, has been included (fig. 29). It was formerly in the east aisle of the sonth transept, where the fragments composing it do not seem to have oceupied their present positions, whieh are most probably now correct, in relation to each other. According to the old arrangement of the parts, the inscription reat:-"hie jacet . . . . ehea . v si . . . domina pr nondam . . . biit ano d Meccext," which was supposed to have read, "hic jacet domina blanchea virgo sit domina prioressa fondam oliit ano domini Mccccole" The inseription as it now reads thflers materially, and the word "domina" followed by what reads tolerahly elearly "oreher" at once suggest the name of "Orchardton," the rombl tower of which name, about five miles from Castle Douglas, on the route to Anchencairn, is supposed to have been built by Uchtred, Lord of Gallowity, in the twelith century.

It is peeuliar to find a mun axsociated with a monastery-the Nuns of Linchaden belonged to the order of the Benedictines, and the Monks of Dundreman to that of the (istereians-bat the presence of the slab here may prerhaps be accounted for on the supposition that it commemorates a benefactress to the monastery, and of kinship to the Lorls of Galloway, who are represented in the same Albley lyy the elligy of Alan of Galloway.

The slab is of common stone, and measures 5 feet 3 by 2 feet 10 inches.

## James "the Gross," Seventh Earl of Ducglas.-St Bride's Church, Douglas.

James "the Gross" was grand-mncle to William, the sixth Earl of Donglas, who, with his brother, was executed at Ehinburgh ('astle, through the iniluence of ('richton and Livingston. We assumed the title of Warl of Donglats on entering into possession of the estates, the greater part of which then reverted to lim. Aldiongh a man of fierce and determint charater, and living in an age when revente was esteemed an almost sacret obligation, he was singularly supine in respect to the conduct of Crichton and Livingston. Ilis memory
has leen stained with a slight suspicion of having commived at the execution, as, after a short period, he was in the closest bonds of intimacy with those who had destroyed the heal of his house. The French property and the Dukedom of Touraine, being male fief, returned to the Crown of France ; and the large mentailed estates in the counties of Galloway and Wigtown, along with the dumains of Balvenie and Ormond, reverted to William's only sister, Margaret, the Fair Maid of Galloway, who was afterwaris married to William, Earl of Doughas, the son of James " the Gross," thus agrin uniting the estates.

The monument (fig. 30) is in the Kirk of St Bride, at Douglas, and the architectural portions have been partly restored. The arms surmounting the tomb show, quarterly, first, the Douglas arms of three stars in chief-being the old learings of the fimily before Douglas became a strname-over a man's heart ; second, a lion rampant for Galloway ; third, three stars (two and one) for Douglas; the furrth, which is now effaced, probably hore a saltire and chief, for the lorlshij, of Galloway, or a lion rampant for Liddesdale, the latter being ditferenced ly colour from the Galloway arms. The second of the figures on the base is habitel as an ecclesiastic, and the head-tress of the last is supposed to indicate that she was ummarried; these probably represent the family, and the shiell seprating the groups has the Donglas arms, as above, impaling Saintclair of Orkney.

In point of design and execution, this is the finest of the Douglas group of tombs, ani the earving of some of the details resembles very closely similar parts on the walls of Mchrose Abley. It is said that the mutilations were largely the result of some of Cromwell's troopers having been 'Iuartered there. Portions of the arms on the wall show distinct traces of having been coloured and sibled.

The fullowing recent inscription is painted beside the tomb:-

> "James, 7 th Earl of Donglas
> and first Earl of A vomlale, smmamed the Gross Died in 1443
> and his wife, Lady Beatrix Sinclair."

- Hic jacet magrus et potens princeps, Dominus Jacolus de Donglas, Dux Tonroniae $^{\text {P }}$ et comes de Douglas, Dominus Amnandiae, Gallovidiae, Litdaliae, et Jetburgh Forrestiae, et Dominus de Balveniae, Magmus Wardanus Regni Scotiae versus Angliam, \&c. obiit 24 die mensis Martii, amo Domini 1443."
"1fic jacet Dumima Beatrix de Sinclair, Filia Henrici, Comitis Orealum, Domini de Sinclair, \&e., Comitissa de Douglas et Aveniae, Domina Giallovidiae."


## Sir John Loss.-Parish Church of Renfrew.

Within a recess in the wall of the modern parish church of Renfrew are two efligies, resting upon a sculptured base (fig. 31). Over the recess is the modern


Fig. 30. Tomb of James, The Eal of Douglas, in St brite's Cinm.h, Douglas.
inscription :-"hic jacet job(anne)s ros miles qu"̄(n)dam dominus de hawkhede et marjoria $\mathrm{n}(\mathrm{x})$ or sua or(a)te pro ipsis qui obiit." The effigies are almost identical with those at Honston ; the armour of Sir John Ross does not seem so well understood, owing probably to some cleaning which the effigy (fig. 32) has undergone; and the mail on the shoulders is of the ordinary kind, while that on the Houston figure is more like the older kind known as "rustred." Details of the figures on the lase of the monmment are given in fig. 33.

In Crawford's description of Renfrew, 1710, and also 1718, is :-" Adjoining to the church there is a spacious Isle, the burial place of the family of Ross :


Fig. 31. Tomb of Sir John Ross and Marjory Mure, in Renfrew Parish Chureh.
as also on the south side of this chmreh lies the statue of Sir Josias (sic) Ross, of Hawkhead, and Marjory Mure, a danghter of Caldwel, his wife, as big as the life, with their coats of arms over them, each carved in one stone." Then follows the inscription, differing slightly from its present form, especially in the name Josias, obviously an error. At page 305 of the 1818 edition of the same book, referring to the Mores or Muirs of Caldwell, is :-" Next is John, whose charter under the great seal is dated 1476. By Elizalieth his wife, John More had a danghter Marjory, who was married to Lord Ross of Hawkhead. This lady lies interred with her husband, under an arched niche, in the choir


Fig. 32. Elligy of Sir John Ross of Hawkhead, in Renfrew l'arish ('hmoly
of the clurch of Renfrew. He is in armour, and she in the dress of the time. The Caldwell arms, being three mullets on a bend, within a border engrailed, are still to he seen over the tomb." An article in the Renfroushire Magazine 1846-47 says :-" Under an arch in the old church of Renfrew lay the figures of Sir Juhn Ross of Hawkhead, and his lady, Dame Margery Mure, having


Fig. 33. Details on the base of the Tomb of Sir John Ross of Hawkhead.
over them the following inseription (as now given). This relic of antigutywhich, though severed from its antique connection of statue and inscription, is still to le seen, the statnes within the aisle, the inscription over the arch." In an address to the flasgow Archeological Socicty in November 1860, the late

Mr Jannes Smith of Jordanhill sail :-"In the wall (of the old church) there was a fothic arched recess or niche, formerly containing the momment of Sir John Ross of IJawkhead and Marjory his wife, with the lollowing inscription : - Hic jacet (ive.). The monument consists of a massive pedestal or sarcophagts, alornel with coats of arms, upon which reclined full-length figures of the knight and his lady, much tilapidated, but of a high style of art." The monument now retains no trace of the Mure of Caldwell arms, they having probably been destroyed when the present church was rebuilt.

The Inch Castle was one of the ancient seats of the Russes of IIawkhead, and stood near the burgh on the river Clyde.

Apart from the local tradition, as detailed in the Rufreusshire Mugazine alrealy quoted, we find Sir John Ross, as "Ross of Halket," along with two of the Douglases, aceepting a challenge from three Durgundian knights-the two Lalains and Meriadet, Lord of Longueville-at a tournament held at stirling to celcbrate the nuptials of James II. and Mary of Gineldres. In this encomer the scots were not so successful as Ross was in the local tradition, the King having thrown down his gauntlet, as a signal to stop the contest, when one of the Douglases was felled by a blow from the axe of his opponent.

According to Nisbet, the barons of Hawkhear are supposed to lee the descendants of oue Peter, who in the reign of IIenry I. took his name from his place of residence, called Ross, in the East Riding of Yorkshire, whose greatgrandchild, Robert Ross, was sent ly King John of England to King William of Scotland, and is said to have married a daughter of that king. The larons of Hawkhead are mentioned as being eminent in the reign of Robert II., when one of the muncrous Sir Johns obtained the harony of Melville by marrying Agnes, daughter and sole heiress of Sir John Mclville of that llk. He quarterel the arms of his mother, three crescents within a bordure, charged with eight roses for Melville, with his paternal arms, a chevron chequé between three water loudgets. Nisbet adds, "the cherron eheque was not carried to difference from any other family of the name, lut, as I take it, to show that they were dependants and vassals of the High-Stewards of siotland."

The Sir lohn Russ whom the monument commemorates acquired the lanls of Arthurlie in 1439 from William Stewart of Castlemilk, and in 1445 other lamls from Robert, Lord Lyle. On the 9th March 1450 a commission passed the great seal in his favour as Sheriff of Linlithgow for life. He marriel, for second wife, Marion Ballie, of the family of Lamington, relict of John, Lord Somerville, and attempted to divoree her, and died prior to 1501. John, the first Lord Ross, was so createl about 1503 ; he was dexigued " of Melville" during the lifetime of his grandfather, whom he succeeded in 1501, and fell at Floiden.
Alogether there are ten eoats of arms on the monument. On the breast of
the knight is a small shield bearing the Stewart fesse ; on the base (see fig. 34), the shields lear (1) the arms of Ross, (2) Erskine, (3) Ramsay, (4) Scotland quartering Stewart, (5) Scotlaud, (6) Stewart, (7) Yans, (8) Ross, and (9) Ross.


Fig. 34. Shitelds of Arms on the base of the Nonument of Sir John Ross.

## Effiey of a Knigit.-Parish Church, Cupar.

The effiry (fig. 35), which is locally known as "Muckle Fernie," is built into the wall of the parish church of C'upar, in Fifeshire. It has been referred to as that of Sir John Arnot of Fernie, who is sail to have fallen in the last crusale, but of this there is room for eonsiderable doubt. On the shiell over the reeess are three lions' heads erased, separated by a har ; and the same bearings, without the bar, appear on the breast of the figure. This has no similarity to

the arms of the Arnots, which are, Arnot of that Ilk, a chevron between three stars (Fifeshire) ; Arnot of Feme, Fern, or Fernie, a cadet of Arnot of that Ilk, the same bearings differenced in colour ; and Arnot of Batcomie, the same als Arnot, but with a bordure. Among other families, there is the ancient one of Scott of Balwearie, in Fife, bearing three lions' heads erased, and it is probable that the effigy belongs to a member of that family.

The figure is thickly coated with white paint, and measures 5 feet 9 inches from the top of the helmet to the heel. The helmet is not quite so pointed as usual on Scottish effigies of the period, inclining more to the form of the salade; and the fan-shaped elbow-pieces, long-spiked rowelled spurs, and form of sword lelong to about the middle of the fifteenth century. On the bare hands a curiots cord-like marking on the surface is probably intended for the veins, and a ring is on the forefinger of the left hand.

## Alexander Stewart, Earl of Buchan (?).-Dunkeld Cathedral.

This interesting monument (fig. 36) stands in the choir of the Cathedral of Dunkeld, which part of the edifice has been restored, and is now used as a church. Being detached from the wall and placed in a corner, the front and one end only are accessible for examination, further than showing that the carvings seen on the front are continued all romes.

The common understanding is that it commemorates the notorious Earl of Buchan, son of Robert II., by whom he was permitted to rule over the northern parts of Scotland with a power little short of that of the King himself. In the exercise of this power he showed himself to be "little less than a cruel and ferocious savage, a species of Celtic Attila, whose common appellation of the 'Wolf of Badenoch' is sutticiently characteristic of the dreadful attributes which composed his charaeter, and who issued from his lair in the Nurth, like the devoted instrument of Divine wrath, to scourge and atllict the nation." The most notorious act of his life was the sacking and plundering of Elgin Cathedral, a great part of which, along with the eanons' houses and the neighbouring town, he burned down in 1390, on acconnt of a quarrel with the Bishof, of Moray, who hal givena decision against him. For this sacrilegions act, he lad to do penance in the Blackfriars Chureh at Perth. He died in 1394, and is mentioned as having leen married to Eufamie, the widow of Walter de Lestie, in 1382 ; she afterwards took the veil, dying abbess of the convent of Elcho before 1398, and was probably buried in the Cathedral of Fortrose.

As given in Rogers' Monumonts and Monumental Inscriptions of Seotlend, 1871, the inseription read :-"Hie jacet Alexander Senescalus, tilius Roberti Regis Scotormm et Elizalyeth More, Dominus de Buchan et Dus. de Budenoch, qui obrit viycsino quarto dic julii." The words given in italics are there

Fie 3ti. Tomb of Alexander Stewart. En! of Poman ('), in Dunkeld Cathe irm
stated to be eut in a different kind of stone and comparatively modern, and it is added, the restorer had mistaken the date, as Alexander the Wolf died on the 2 oth Felruary of 1394. The latter date is also given as the correct one in Mr Chisholn Batten's Churtcrs of Beauly Priory, where the date on the tomb is referred to as being wrong.

On the only part of the tomb accessille for examination the inscription now reads :-"ame. et dns. d/e badenach qui obiit vige/simo quarto die julii/ m (?) qui om (?)." The inseription is on four separate pieces of the same kind of stone: the first part has a dot separating the words, and the last part, besides not carrying out the realing, is narrower than the others. It has evidently been retouched, but it is difficult to aceept the supposition that the restorer could have altered the 20th of February to the 24th of July without completely cutting away to a new surface, which does not seem to have been the case.

Also, when the style of armoru is considered, which, with its fam-shapeal ellow-pieces, camnot be assigned to an earfier date than 1420 , if indeed so early, there is gool reason for doubting the assumption that the tomb is that of the Wolf. It is often easier to demolish a theory than to establish one, and it is difficult to even conjecture who it is that the effigy commemorates: if the date, so far as given on the tomb, is to be disearded as unreliable, and the date of the style of armour recognised, it might with more reason be supposed that it was crectel in memory of the more noble John Stewart, Earl of Euchan, who was slain at the battle of Verneuil, and buried in France ; but even this is open to douldt.
The figure measures fully 7 feet from the top of the helmet to the heel of the left foot, and is carved in a greenish kind of marble, similar to a stone which was quarried in Glen Tilt, near Blair Athole, a number of years ago, and meant to be used for fire-places and similar purposes. It is broken in four pieces, which join closely together at the chin, the waist, and below the knces. The left arm is broken; the hands have not been gauntleted; the lelt foot is brokeu at the toes, and the whole of the right foot is gone.

## Archibald, Fifth Earl of Douglas.- St Bride's Church, Douglas. $_{\text {Che }}$.

In the Kirk of St Bride at Douglas, uuder a handsome canopy, lies this silent record of the renown gained by the Donglases on the battlefields of France, when its chivalry under the sacred oriflamme of St Denis, contended with the invading armies of Enyland. The figure is that of Archibald, firth Eurl of Douglas, second Duke of Touraine, and Marshall of France (fig. 37). lle is habited in his robes of dignity, his left hand holds the baton of office, and the right hand holds the cord which fastens the robe.

He was the son of Margaret, daughter of Robert IIL., and Archibald, fourtlı


Fig. 37. Tomb of Archibaht, Fifth Earl of Douglas, in St Bride's Church, Douglas.

Earl of Douglas, who hat the title of Duke of Touraine conferred upon him by Charles V1I. of France, and who was buried in the church of St Gratian at Touraine, having been slain at the battle of Verneuil.

This fifth earl was the most powerful baron of his time in Scotland, and the revenues from his estates in his own country and in France probably equalled those of his sovereign. He was one of the ambassadors to England treating for the ransom of James I. in 1424 , and was appointed lieutenant-general of the kinglom ly James II., but only exereised this power for a short period, having livel for little more than a year after being nominated to this high office. He died of a maligmant fever at Restalrig, on the 26th of June 1438, or according to Tytler, 1439. A note given by the latter from a MS . in the Advocates' Library gives :-"Obitus Domini Arehibaldi Ducis Turonensis Comitis de Douglas ac Domini Galwidia, apud Restalrig, 26 die mensis Junii, amo 1439, qui jacet apud Dorglas."

The canopy has been very much restored, but the figures have evidently not been tampered with. One of the small figures is missing ; and although the tomb itself is rather more quaint and elaborate than that of James, the seventh Enrl, it is inferior in taste of design and quality of execution

## Bishof Robert Cardeny.-Dunheld Cathedral.

Like so many others, time has dealt severely with the effigied tomb of Bishop Robert Cardeny (fig. 38), in the nave of Dunkeld Cathedral ; the sandstone of which it is composed, readered friable by long exposure to the weather, is mouldered and broken ; the featureless angels bear shields which no longer display the bearings of the prelate whose memory the momument was meant to perpetuate ; while the bishop himself bears only the merest fragment of his once elaborate erosier. The mitre has been an imitation of a richly jewelled one, and the dalmatic, showing between the cope and the alb, shows traces of a fringed vertical elge. The inseription, now illegible, when in a better state real :-"1Iie jacet Dns Robertus de Cardony Epis Dunkeldensis qui . . -
. . ad incarnationem Dni succcexx."
Bishop Cardeny laid the fommation-stone of the nave of Dunkeld Cathedral on the 27th April 1406 ; he is said to have constructed "the second arehesvulgariter le blindstorijs-meaning evidently the triforimm, and to have glazed all the windows of the choir except one, which appears to have been completed by his successor, Donald Maemachtane." Shortly before his death he built and dedicated a chapel to St Ninian, where his monunent was origimally placed, but removed to the eathedral subsequent to 1464 .

Of the eight shields of various sizes, only three now bear any traces ot the arms (fig. 39) : that on the centre of the arch shows, quarterly, first a fesse chequé, and secoud a bend between what seems four crosslets ; the third and


Fig. 38. Tomb of Bishop Rohert Cardeny, in Imakeh Catheiral.
fourth quarters are quite gone. The small shield on the dexter side of the monument, beneath the arch label, bears a small portion of, probably, a chevron engrailed, and, less definitely, a star, with an illegible fragment of a crest. The small corresponding shield on the sinister side bears a mitre over a shield charged with a double chevron engrailed. The arms on the base are quite gone.

There is a fragment of the effigy of another prelate lying in the floor of the choir, consisting merely of the trunk. It is assumed to have been the efligy of Bishop Sinclair, who held office from 1312 till his death in June 1337. On account of his valour and patriotiom he was styled by Bruce as "his own lishonl," but on the death of that monareh he forsook his allegiance to the dynasty. In 1332 he assisted at the coronation of Baliol, and in the following year sulscribed the instrument by which the Scottish Parliament surrendered to the English monarch the national independence. He built the choir of the cathedral, and a monument for himself.


Fig. 39. Shiells of Arms on the Momment of Bishop Cardeny.
Sir John Forrester (the first).
Two family monuments of the Forresters are in the chancel of Corstorphine church, near Edinhburgh.

The property of Corstorphine was aequired from Gilehrist More, brother of Willian More of Abercorn, in Angust 1356, by Adam Forrester, a wealthy merchant of Edinlurgh, of which he was provost in 1373. He was Sheriff of Lothian in 1382, and stool high in the estimation of King Rohert 11I. Sometime abont 13.6 he is known to have erected a charel dedicated to St John, adjoining to, and probally connected with, the parish church.

The first Sir John Forrester was brought up at court, and succeeded his father as depute chamherlain of the southern division of the kingdom. He obtained a charter to the lands of Corstorphine from Sir William More of Alrercom, then the superior, on the 22nd March 1392, probably on the oceasion
of his marriage. After 1408 he acted as depute chamberlain of the whole kinglom till 1425 ; in 1416 he was named one of the commissioners to treat with England for the redemption of James I., so long held in captivity in England; in 1421 he was made Lord Privy Seal under the regency of Murdoch, Duke of Albany ; and in I42t was one of the hostages given for the King's ransom. On the King's return to Scotland, a new office was created for him, under the desisnation of Magister Hospitii, and in the following year he was made Lord High Chamberlain. We atso tind his name among those of twenty-one jurymen at the trial of Walter Stewart, eldest son of the Duke of Albany, which was presided over by the King at Stirling on the 24th May 1424.

In 1424 and 1429 , by means of endowments hy himself and his mother, the widow of Alam Forrester, the bnildings at Corstorphine were erected into a collegiate ehmreh, and the establishment was confirmed by papal anthority in 1440 , in which year he tied, ant was buried in the choir of the church.

It is stated in one place that he was married twice, and at another, thrice. His wives were, Margaret (?), Tean Saintelair, dnughter of the first Earl of Orkney, and Marian Stewart, llaughter of Sir Walter Stewart of Garlies, and relict of Sir John Stewart of Jedworth. The tomb is surmounted ly the Forrester arms : on the front, the five coats show first, third, and fifth, Forrester ; second, Forrester impaling Saintelair ; and fourth, Forrester impaling a bend engrailed over the Stewart fesse. The Forrester bearings also appear on the breast of the knight.

The whole monument is of freestone.

## Sir John Forrester (the second).

The effigies of Sir John Forrester and his wife Marion Stewart, Lady Dalswinton, occupy a portion of the same wall containing the momument of his father, the first Sir John. Itis sasine in the estate of Corstorphine is thated 15th September 1436, and he succeeded his father in I441. He seems to have been better fitted for the battlefieh than the cabinet, as he does not appear to have held any eivil appointment, and attained to some distinction in military affairs, more particularly from the part which he took with the Eurls of Douglas in the struggles with the Chancellors Criehton and Livingston. During these, along with William, Earl of Douglas, he led the troops which besieged and demolished Crichton's eastle of Barnton, in Mid-Lothiam, in 1446. The ('hancellor' Crichton and his vassats, in the same year, retaliatel by overrumning the lands of Corstorphine, and levelling Forrester's honse with the gromm. He diet on the 15 th Soptember 1454.

The toml is surmounted by the Forrester arms and a fragment of the erest ; the same arms, borme by a cherub, aplear at the terminations of the label over the moulded recess: on the front of the tomb the three shields show on the
first and third, Forrester ; and the second, Forrester impaling a bend engrailed.

The figures are carved in white marble, and the parts remaining are in a much better state of preservation than the companion tomb, owing, no doubt, to the material ; the execution is also superior, and the armonr is of a more delicate form. As in the case of so many other monnments of the kind, these are said to have been mutilated by a party of Cromwell's "saints" when they occupied Corstorphine after the battle of Dunbar, the Sir John Forrester of that time having shown his hostility by resisting the English.
[The three Forrester monuments in Corstorphine church have been figured from drawings by W. P. Burton, in comnection with a paper on the subject by David Laing in the Proceedings, vol. xi. p. 353, plates xii.-xiv.]

## Sir Kenneth Mackenzie.-Priory Churcb, Beauly.

Beauly Priory owes its foundation to Joln Bisset, the proprietor of the district, in 1230, and received many alditions by snccessive Lords Lovat. It has, as usual, for many years remained a roofless ruin, and is now used as a burying-place, principally by leading families of the Frasers, Chisholms, and Mackenzies of Gairloch. It contains the effigy and tomb (fig. 40) of Sir Kenneth Mackenzie of Kintail, sometimes known as Kenneth-a-Lhlair, seventh Baron of Kintail. He was knighted by James IV., and was the first of his family buried at Beauly, all his predecessors having been, it is said, buriet at Iona, although no trace of the tombs of the prior lairds are found among the descriptions of that island. He married a daughter of Lord Lovat, and seems to have been powerfnl enough to hold his own against, and at the same time tilke from, his warlike neighbours, such as Ingh Rose of Kilravock, the Macdonalls of the Isles, and the Clan Chattan.

The inseription on the tomb, which is now quite illegible, is given as having real :-"Ilic jacet Kenitus MI Kinyth dus de Kintail q obiit vii die Februarii a. d. m.cccclexxi." It is stated, however, that he died in February 1492, and in September 1491 he is named as a witness-Kinzocht Mckenyecht of Kintaill. The arms on the tomb are quite illegible, but the deer's head at the termination of the moulding may have some connection with his bearings, a portion of which consisted of a hart's liead cahossed, attired with ten tynes.

The construction of the tomb is very similar to that of the Bishop at Fortrose, from which it may have been copied (compare fig. 41 with fig. 23), but very inferior in design and exeention. The mail on the neek passes diagonally downwards towards the right shoulder under the chin. It is of common freestone, and, like several others, still exposed to the weather.

## Effigy of a Stewart.-Elgin Cathedral,

This monument (fig. 42), in the south transept wall of Egin Cathedral, is


Fig. 40. Tomb with Elligy of Sir Kenneth Mackenki, , th the l'timy ('lumh, beanly VOL. XXIX.
usually assignel to Alexander Stewart, the second son of James II., who created him Duke of Albany, inheriting from his father the earldom of March, besides


Fig. 41. Elevation of the Tomb of Sir Kemneth Mackenzie, at Beanly.
being Lord of Anuamble and of the Isle of Man. The figure is in the costume


Fig. 42. Tomb with Elligy of a Stewart Alexanden, Duke of Alhame on Ekgis Cathehal,
of the fifteenth century, which is also the period of the architectural ornament surrounding it.

The historical account of Alexander Stewart, Duke of Alhany, represents him as a bold, determined, nnscrupulous, and ambitious man; ready to sacrifice the independence of bis country, and willing to wrest the crown from his brother, James 1II., by the most dishonourable means. After intriguing for these purposes in France and England, although dealt leniently with by his brother, he entered Scotland from England with an armed force, assisted by the Douglas, and was defeated by a body of the King's troops. Douglas was taken prisoner, but Albany eseaped ly the fleetness of his horse, in 1484, and fled to England, from whence he passed over to France, where he was aceidentally slain in a toumament a few years later.

The inscription on the edge of the tomb, unfortunately, is quite illegible. The fact that he died in France raises a doubt as to whether the monument was erected to his memory, although such a custom was not without precedent ; and this doubt is strengthened by the fragments of heraldry on the tomb. These do not enrespond with the bearings of this Stewart, as given by Nisbet, who says :-"King James II. of Scotland created Alexander, his second son, Duke ol Albany, Earl of March, Lord of Annandale, and of the Isle of Man ; upon which account he carrich the arms of those diguities, quarterly, first, the arms of Scotland ; second, gules a lion rampant argent within a bordure of the last, charged with eight roses of the first, for the earldom of March; third, gules three legs of a mau armed, proper, conjoined at the centre (\&c.), for Man ; and fourth, or, a saltire and chieff, sules, for the lordship of Amnandale." With regard to the shield on the dexter side of the tomb, the first lalf bears a fesse with what appears like two roses in chief and an antirgue crown beneath, impaling a fesse with two antigue crowns in chief, the lower part being mostly gone. The latter corresponds so far with the arms of the old lords and earls of Garioch, who carried a lesse chequé between three antique crowns. This bearing was carried yuarterly, first and fourth, with second and third a bemd hetween six cross crosslets fitched for the Earldom of Mar, ly Alexander Stewart, a matural son of Alexander Stewart of Badenoch, the Earl of Puchan, fourth son of Robert II., who married Isabel Douglas, Countess and heiress of Mar, being in her right Earl of Mar and Lord Garioch, who died in 1436 . With regard to the sinister shieht, the three buckles appearing in chief were borne by sume Stewarts on account of their maternal descent.

When Alexander Stewart, Duke of Albany, was compelled to acknowledre lis treasons before the parliament held in Edinburgh in 1482, and laid down his office of Lientenant-fiovernor of the realm, he probably retained his other dignities as well as that of the Wardenship of the Marches ; cousequently one would expect the arms of some of these on the tomb.

The eflicy measures 5 feet 9 inches, and is of freestone.

## Lairds of Callender.-Falkirk C'hurch.

Regarding four etfigies (iigs. $43-46$ ), in the parish church of Falkirk, the following molern inseription is placed beside them, which probally contains all that is known of them :-" These effigies, believed to be memorials of the earlicst feudal lords of Callender, originally lay at the South Transe ${ }^{\text {t }}$ of the chureh in 1810 when the church was rebuilt; that transept being taken down, these figures remained exposed to the weather, and to injury from the feet of passengers, until April 1852, when they were placed on this monument by William Forles, who, as Proprictor of the Estates of Callender, feds himself called on to protect from further injury these Memorials of the Eormer Barons." They were placed in the vestibule of the church, but further alterations in 1892-93 necessitated their removal again, to be replaced in a crypt, under better light.

The figures are in full relief, and probably date from the late fiftenth century; the knights measure 6 feet 3 inches and 6 feet 4 , and there is the merest suggestion of a shield on the breast of the first.

## Thomas Gordon of Ruthien--Ruthyen Church.

A short distance from Rothiemay station on the line of railway letween Keith and Aberleen, the ruin of Rutheen kirk contains the effigy of Thomas Gorion (fig. 47), loeally known as Tam o' Ruthven, within a rude semicireular arch. Tradition asserts that he was slain in a fight with the Abbot of Grange about 1460 ; and on the northern shoulder of the Lesser Balloch, on the mareh dividing Aberdeen and Banffishe, a cairn is alleged to mark the sjot where the conflict took place.

This ligure, like so many others, lay a long time on the ground, uncared for ; it is remarkable as being the only eftigy which I have met with in Scotland possessing mamelicres-one a cireular and at one time ornamented dise, and the other a small shield. It corresponds tolerably nearly with two of the effigies in Elgin Cathedral. The girdle has been of the usual ornamented kind; there are no vestiges of inscription or armorial bearings; and it is of common lícestone, measuring 6 feet 3 inches over all.

## Sir Simon Carruthers.- Mouswald Church.

This efligy (fig. 48), very much destroyed, lies outside the parish church of Monswald, near Dumfries. He was formerly accompamied ly his lady, and herlast remains are said to have loen utilised by the housewives of the locality, who found the stone useful for polishing their doorsteps.


Figs. 43 aud 44. Elligies of a Lord and Laty of Callender at Falkirk.


Figs. 45 ant 46. Elfigies of a Lord and Lady of Callender, at Falkirk.


Figs. 15 ant 40. Efthes of Thoma Gordon of Ruthven, in Ruthven Church. ant Sir Simon Carruthers, at Mouswald Churel.

## William de la Hiy.-Elgin Cathedral.

The now almost quite illerible inscription on this tomb (fig. 49) reals, " Hic jacet Wills de la Hay quondam dominns de Lochloy qui obiit viii die mensis decembris amo Domini sececxxt." His fimily are stated to have held the house, park, and larony of Inshoch for upwands of four humbed years.

The effigy has upon the breast three shields-the patemal hearings of the family of Ilay; and although at present appearing as a detached monument, appears as if it hat at one time been recessed.

## Dochlas of Dalkettif-Dalkeitit Chtreh.

In the ruined and ronfless aisle of Dalkeith old chureh, the former burialplace of the ducal house of Bucclench, are the two ettigies (fig. 50 ), easily identified by their arms as a lord and lady of the Donglas family. They are executed in a common reddish sandstone, much dilapidated and broken, and the parts clumsily placed together. The male figure is interesting as being one of the few Scottish eftigies in civiI costume ; the bare had is encircled by a flat, enriched band ; the neck of the dress has been embroidered with ormament; a chain with oval links passes over the shoulders; and the arms, with a loose covering, have long pendent sleeves. The lady's dress consists of an upper and under robe, with a collar (once ornamented) falling from the shoulders over the bosom; she wears a erepin, which, with the style of architectural details so far remaining, suggests the second half of the fifteenth century.

The arms on the hase, surmounted by jewelled coronets, show first the two Douglas stars in chief with the rest obliterated, and second the same impaling the Scottish lion ; these are repeated on the other sille, and also on the end of the tomb on lozenges covering part of the double cu-hions on which the heads rest, the impaled arms being attached to the efficy of the lady.

The base is almost entirely buried in the soil, which has been dng away in order to expose the front and lack, and the ends are rutely patelied up with odid slabs of stone. The entire length of the effigies is 6 feet 8 inches, inchuding the cushions at the heads and the animals at the fect.

## Alfxander giordon, Firat Earl of Hustly.-Elgin ('ATHEDRAL。

The bist Earl of Huntly is known in history is sir Alexander Setom, the surname having been chauged to Gordon by his on amt surcessor. The was ereaterl Earl of lluntly in 1499, and was horied in St Mary's aisle of Elgin Cathedral, the burial-place of the theal house of Gordon, in 1470. Inmediately after, and in conserpuence of being promotel to the high oullice of Lientenant-fieneral of Scothind by James I., he entered upon the task of putting down the rebellion of Crawford and Ross. For this purpose he raised

Fig. 49. Tomb with Effigy of William de la Hay, in Elgin Cathedral

a large force in the northern counties, with which he encomntered and inflicted a crushing defeat on the ferocious Earl of Crawford, "the Tiger," as be was called, on a level moor behind the town of Brechin in 1452. In this engagement the Tiger's brother and about sixty lords and gentlemen were slain on Crawford's side, while on the other the Lientenant-General mourned for the deaths of his two hrothers, Sir William and Sir Henry Seton. Alout the time when he was thus engaged, the Earl of Moray devastated the estates in Stratlbogie of the Earl of Huntly, who in retaliation, after his victory at Brechin, fell upon the fertile county of Moray, and razed that half of the city of Elgin which belonged to his enemy. About a year after his defeat, the Tiger having made peace with Huntly and others, with a few of his miserable followers, barefooted and wretchedly clall, threw themselves on their knees lefore the King during one of his journeys in the North, when he was pardoned and restored to his former dignities.

The remains of the ettigy (fig. 51) represent the Earl in a plain dress with hanging sleeves, a narrow waist-girdle knotted at the centre, and a poniard at his right side : the feet have rested upon two animals. The inscription, which seems to have been at one time retouched, reads :-" hic jacet nobilis et potens dis Alexander Gordon primns comes de Huntlie diss (on the front, and continued on the lack) de gordone et hazelwood qui obiit apud huntlic 15 Julii 1470." He has been ly some writers dewignated Lord Gordon, and carried for his arns, first and fourth Seton, second and third Gordon, still keeping the surname of Seton. His son George, laving assumed the surname of Gordon, placed the arms of that name on the first ruarter and Seton on the third. The arms on the front of the tomb correspond exactly with those on the seal of Alexander, third Earl of Huntly, who followed his King to Flodlen, and are, first three boars' heads for Gordon, second three lions' heads erased and langued for Badenoch, third three crescents within a tressure for Seton, and fourth three cincuefoils for Fraser, the supporters being two deer-hounds.
The momument is quite detached from the wall ; and from the circumstances that the arms are not placed in the centre, and the shield of a form suggestive of a later period than 1470 , it may be inferred that the body of the tomb at least is a restoration. The only peculiarity of the dress, the long perforated sleeves, does not correspond, so far as I have been able to find, with any other example; in a shorter form, and with only one perforation, they appear on a fignre of Lawrence Colston, who died in 1550, in Rolleston church, Staffordshire, and another English figure, of Thomas Noke, yeoman of the Crown, who died in 1567.


Fig. E1. Tonsb with Effigy of Alexancler Gordon, First Earl of IIuntly, in Elgin Catheiral.
it is stated that "in the aisle of the Red Friars Monastery . . . . a magnificent tomb contains under a canopy two statues the size of life (figs. 52 and 53) : one is supposed to be Sir Patrick Houston of that Ilk, who died in 1440; the other Sir Patrick's wife, Agnes Campbell, who died in 1456," the inscription on the tomb being then illegible. The description must have applied to a date long anterior to the publication of that book, as the old parish chureh was replaced by the present one not many years later, previous to which the figures were allowed for a great many years to lie unprotected in the open air, playthings for the villare children. They now lie beside each other, without any canopy or lase, in a recess constructed for them in the present church, with the modern inseription "John of Honston, Lord of that Ilk . . . . and Agnes Camp, His Spanse, who died Anno 145G." An old inscription connected with the family, also at Houston church, refers to Ama Hamilton and Patrick Houston, of the sixteenth century, which evidently does not apply to these figures.

The two effigies, which have been slightly re-cut in parts, very closely resemble those at Renfrew, the ladies being almost identical. Among the English effigies, that of Sir Thomas Cawne, in Igtham church, in a general way corresponds to the Honston knight, a chief difference consisting in the Scottish figure having the hanls pressed together on the breast, while the English one has his right hand on the breast and his left on the hilt of his sword.

The shield on the breast has traces of the Houston arms, very much defaced -a cherron chequé between three martlets.

## Glebert Mexzies.-Maryculter C'hurch.

The remote and solitary churchyard of Maryculter possessed, till recent years, the effigies of Gilbert Menzies of Pitfoddels and his wife, Marjury Liddel, who lived in the fifteenth century (figs, 54 and 55). The broken fragments of the arch wherein they were originally placed are now a mass of rubbish, the figures having leen removel to the church of St Nicholas in Aberdeen, where they lie on the sills of adjacent windows.

The knight's heal rests upon a massive tilting-helmet, and the style of armour belongs to the beginning of the sixteenth century. 11 is figure measures 5 feet 10 inches, and the lady abont 2 inches less.

## Innes of Innesmarkie.-Elgin Cathedral.

On the same wall in Elgin C'athedral, to the left of the monument attributed to Alexander Stewart, Duke of Albany, is the supposed tomb of Robert lunes of Innermarkie, or Innesmarkie, who died in 1452 (fig. 56).

There are reasons for concluding that this monument is composed of parts not originally comnectel with each other; the ettigy is very much too small for the recess in which it is phaced, and the top of the hase at the back, close


Figs. 52 and 53. Ettigies of Nir John Houston and hiv whe Agnus 'amphell, in Honston Chureh.

to the wall, is splayel like the front, where the inseription has been. With regard to the two shichas, the one on the dexter side seems to have been quaterel, showing on the fourth quarter a fesse cherué, which also appears on the sinister slield. Acrorling to Nisteet, the Imes of" "Immesmakie" hearings are three stars of five points within a borlure indented, Innes of that Ilk thrce stars of six points waved, and Immes of Blaitom, a cadet, a fesse between three slats.

James Inmes of that Ilk was armonr-lsarer to King James III., from whom If. received a grant of lands in Elginshire.

The effigy meastres 5 feet $9 \frac{1}{2}$ inches, and evitently belongs to the second half of the fifteenth centmry.

## Lorl Parthwick. - Borthwick Parish Cthurch.

The fimily of Torthwick came, it is statel, from Hungary, and its first repre--entatise entered Scotland in the train of the Saxom Princess Margaret, in the reign of Matcolm Cimmore. They tirst whtained lands in Aberdeenshice, and proceeling sonth, became fussessed of extensive territories in the comnties of 1) umfries, Selkink, Fonlmwh, and Irambington, hosides residences in sereral of the towns in Sootlanl, Borthwick's Close in Etlinburgh being an instance.

The fivst of the family appearing in history with the title of Lord Borthwick was William, whose youthenl heir was created a knight by James I. at the sume time that his fwin sons received that honour, and were baptized in 1430. He uhtained a charter miler the yreat seal, authorising him to build a castle up in the Jands of Lochwarret, which, umder the name of Borthwick Castle, alterwards becane the chief seat of the family. As Sir William Burthwick he sist on the assize of the Duke of Lemmox and Murdoch Duke of Allany and his sun in 1421, and marriet a danghter of the house of Dourtas, dying prior to 144 s .

According to Nishet, however, the firet Lord Borthwick was not dignified with that title tili the begimning of the reign of James II, the chacter being dated Jamary 8, 1458 , and we fimd what is probably the same Willian Lord Borthwick grantines a chartur to his second ron on the 27th. June 1495 . It is probally this Lomil William whose elting, with that of his laty, lies in Borthwick parinh church, although the custume is a little later than the lastmentioned date.

The finures are (fig. 57 ) sedptured in white marble, now much darkened by time, and the arched recess in which they are placed is at restoration, with - heght portions of the old work cleanel. The tigure of the lady is not in as ctood comelition as that of her husband. Some of the details of the armowr and hense are shown in lig. 59.

Fig. 57. Efligies of Lord Borthwick and his Lady, in Borthwick Chureh.

John ' 'ullison.-St Nicholas' Church, Aberdeen.

Among the group, of efligies in the church of St Nicholas in Aberdeen are


Fig. 5s. Elevation of the Monument of Lord Borthwick in Borthwick Parish Church. those of John Collison, who was prowost in 1521, and his wife, Margaret setom (figs. 60 and 61). The provost measures 5 feet 10 inches, and his wife


(ater



Q inches , he laving an inch and a balf of this whed to low frede. The costumes por hent no features of interest.

## Abexander Itrine of brum, - Sitholas', Aberdees.

The ettigies of Alexamber Irvine of Drum (tig. 62) and his wift Eliatheth de Keith lie in what is known as Drom's :asle in St Nicholas' ('hureh in Aberdeen. The lary is similar to the wife of Menzies of Pitfordels in the same church; the exerution is more mechanial than artiotio ; and the contmme is eatrly sixteenth century.

A sir William Invine is mentioned as being sectetary aml armon-lrearot to the Bruce, from whom, on acount of his fildelity, le received the hands of Drum,

> Gude Sir Alwatnter frving, The much renownit laind it 1hum.
wat in command of the Lowland forees, and met his death, after distinguishing himself, at the battle of Harlaw in 1411. This Sir Alexauder wats suceceleal by his brother, also mamed Alexander, who wats one of the commissioners sent to treat for the ransom of James I., and to bring him home from England ; and it is possible that this is his effigy, although the costame is a little later.

The effigy is in grood condition ; the hair is very regular, the lorows closely knit in wrinkles, a tuft of beard on the chin, and a ring on the middle fingrer of the left hand. Like the others in the same charels, it is of common stone, and measures 6 feet 7 inches over illl.

## Lord Seton.-setun ('harel.

The ohl churel) elose to Scton ('astle contains the etligies of at lord and Iady of seton, which, with their architectural setting, have as yet escaped the operations of the restorer (lig. ( $\% 3$ ). The constraction of the tomb ditlers slinhtly from others, having a recess under the figures, which may have at one time containet arms, \&e.; and in liont of this, the base monlding of the wall is knpt well out so as fo leave a space in front of the tomb. As now filacel, the two tignes elose to each other oceupy about two inches more thath the dephl of the recess, aml the wall belimi does not reen to have been thickencl ; and a rude etching hy Charles Kirkjatrick Sharpe attached to Naithand of Lethington's Mistury if the Hons of Sigtorn, 1829, shows the figures, one above and the other below: The church contains two or three empty miches. Originally a parish church, it is now the private poprerty of Lord Wemyss, and used as a fimily lomying-place.

Among the Setoms huried in the charch were, Alexanler, who in time of Robert II. "had levit to gule age honomable" ; and Kitherine "Simelare," wiolow of the linst Lord Seton, who "bisgrit ane yle on the south syid of the paroche kirk ol Seytom, of fine astler; pendit and thenkit it wyth stane;

Fig. 62. Effigy of Alexander Irvine of Drum, St Nicholas' Church, Aberdeen.

wyth ane sepulture thairin quhair sche lyis ; and fundit ane priest to serve thair perpetuallie." The husband of this lady "was in the tyme of King Robert the Thryd," and was laid at rest "in the Cordelere freiris in Hadingtoun ; quhamte, weklie he fundit sex laid of colis, to le tane of his coilpot of Trenent, and fourtye schillingis of ammell, to lie tane of the Barnis."

The chnreh was henefited by other succeeding Setons, but I have heen mable to illentify the monment. It evidently belongs to the early sixteenth century, and is of the same type as two of those in the church of St Nicholas in Alrerdeen. The figures are of a close-grainelf freestome, with a highly finished surface, which is peeling olf, and the knight measures 5 feet IU inches to the tors. The effigy of the lady being flatter, is in front alnost concealed by the knight, and is very similar to those of the Borthwick and Pitfordels ladies.

## VII.

ON IIUMAN AND ANIMAL REMAINS FOLND IN CAVES AT OBAN, ARGYLLshire. By Professon Sir WHLLIAM TURAER, D.C.L., F.R.s.. F.S.A. Scort.

Within my recollection four caves have been opened into in the clill which overhangs that part of the town of Ohan which is built on the ancient raised sea lseach. Evidence of human oceupation at some previuus distant period was obtainel, and human and animal hones, with objects worked ly man, were discovered. As specimens from each of these caves lave been sent to me I propose to give an account of my pxamination of the remains. It is well to give to each cave a dexcriptive name.

The Muckuy Cary.-This eave was exposed in $1 \times 69$ ly workmen in the employ of Mr John Mackay, who were quarrying for huilding purnmes the north-west face of the elitl, situated at the noth end of Oban Bay, near Burn Bank House, at the comer where Nusery Roal now enters Strathaven Terrace. I visited the cave in the antumn of that year, when Mr Mackay printed out to me that the cave comsisted of au mitrance passage 4 feet ligh and 9 feet long, and of a chamher 11 feet ligh and alout the same in depth. The passage sloped from the entrance down to the floor of the chamber, which was thas on a lower plane than the month. The month was closed ly an embankment of earth, 8 to 9 fect thick, in which beech trees were growing; none of which had attained much size. It had probably slipped down from the cliff above.

A chink wider below, but which higher up was not larger than would admit the blade of a knife, was in the roof of the eave. The walls were in places covered by a white calcareous deposit from one to two inches thick. The floor of the cave, which was formed of the rock, was covered lyy about 3 feet of earth, in which bones and other objects were fomm. Some of the oljects were at the surface of the layer of earth, others were in its substance, but no definite stratifieation was reconnised.

In 1871 I gave a short account of the cave and exhilited its contents at the meeting of the British Association in Elinburgh. ${ }^{1}$ A number of flint nodules and Hakes, with two worked implements, were fund, which


Figs. 1, 2. Scrapur and Sctaper-shaped Knife of Flint.
I recently submitted to Dr Joseph Anderson, who has kindly given me the following note on their characters.
"Scraper of flint (fig. 1), $2 \frac{1}{8}$ inches in length by 1 inch in lueadth across the flat face, and $\frac{1}{4}$ inch in thickness, increasing slightly towarls the butt end, which shows part of the hulb of percussion on its flat face. The rommed nose of the scraper is carefully bevelted, and shows marks of use, and probably of re tonching to bring up the blunted edge.
${ }^{1}$ Ruport of the Edinburgh Mueting, 1871, Transactions of Sirtions, p. 160. The contents of this cave are referred to in an excellent paper, "On a Cave at Bornens, Kirkendhrightshire," by Messrs Corrie, Bruce Clarke, and Hunt, Pruc: Soc. Antiq. S.cot., vol. x. f. 470, 1874.
＂Seraper－formed knife of flint（fig．2），about I meh square，the rounded eutting edge carefully dressed to unusual sharpness，and the butt end showing the bulb of ferecussion on the flat face．
＂Triangular flake of flint， 2 inches in length by $\frac{3}{4}$ inch in greatest lrealth near the butt end，somewhat coneave on the flat side and with a corresponding convexity in the direction of the length of the ridged sile．Wuth edges show very distinct traces of use as a side－scral⿻コ一．
＂Thirteen tlakes and chips of varions sizes，none，however，exceeding 2 inches in length，or showing secondary working．＂

Limpet shells were also present ；also fragments of blackened and cal－ cined bones，which were too small to permit of identification．Bones or teeth of the following mammals have been recognised ：roe and red deer， dog，fox，otter，ox，pinemarten，goat，hare，water vole．The long bones of the larer mammals wore hroken and the marrow cavity exposed．Many of the fragments had pointed ends and sharp margins，but they did not show rublerl or smooth edges or surfaces，such as they would have acquired if they had heen in use as tools．Some of the bones were soratehel and atraded on the surface，as if they had been snawed．Prohably the bones had been broken to extract the marow，but none of the hman bones had been so treated．A few bones of himds were also present．

Two human skeletons were obtainel．They were forwarded to me by steamer，which，unfortumately，was wreckel on the voyage to Glastow． As the box was submerged in the salt water for some time before it was recovered，the skulls were so softened and injured that I was unathe to obtain a proper restoration of the crania．Many of the other bones of the skeletons were atso broken．

The skulls were those of an adult mam and a child．In the child＇s skull the milk molars，thongh much worn，were in place，and the upper and lower first permanent molars had erupted；the age was probally ahout cight．The skull presented，in the thickness and smonthess of the hones of the vault，and in the eomprative simplicity of the sutures， the characters of a child of alout that age．The frontal suture had not ossitied；some small Wormian bones were in the lambdoidal suture， and an epipteric bone was present in each piterion．The dimensions，so far as the skull almitted of measurement，are given in the following

Table. It will be sem that the ecphalic index was 77.8 , su that the skull was mesaticephatic.

## Oban Caves.

| Mactrthur Cave. Mack:y Cave | Listillery Cave. |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| A. B. | C. | $\ldots$ | $\ldots$ | $\ldots$ |$\ldots$.


| Tinllection, | A. Aifult. | B. Alult. | C. Ainlt. | Child. | Athult. | Adult. | Ailult. | $\ldots$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\text { S. } \mathrm{x}$ | II. | M. | F ( 1 . | , | H. | M . | F. |  |
| Glatello-nccipital length. | 183 | 205 | - | 171 |  |  |  |  |
| Pasi-hrermatic height, | 1:99 | ... |  | ... |  | . |  |  |
| Sirticel Iuder: | 76 |  |  |  |  |  |  |  |
| Minimmen frontal diameter, | 99 | 102 | , | 97 |  |  |  |  |
| Stephanic diatreter, . | 111 | 121 |  | 115 |  |  | . |  |
| Asterimie diameter. . |  | 115 | .. | 103 |  |  |  |  |
| (ireatest princto-siquamous breadth. | 1:3sap. | 144 | ... | 133 | $\cdots$ |  |  |  |
| Ciphutic Inter, . |  | 711: | . | \% 78 |  | - |  |  |
| Horizontal citcumference. | 520 | 564 | - | 490 |  |  |  |  |
| Frontal longitudinal are. | 127 | 140 | .. 1 | 242 |  |  |  |  |
| Parietal .. .. | 133 | 135 | ... 1 | - |  |  |  |  |
| Oreipital .. .. | 112 |  |  | $\ldots$ | . |  |  |  |
| Tiotal - . ${ }^{\text {a }}$ | 342 |  |  |  | $\ldots$ |  | ... |  |
| Vertical transwerse are. |  | 316 | ... | $2 \times 5$ |  |  |  |  |
| Lewgth of foramen magnum, | 34 | ... |  | 34 |  |  |  |  |
| Basi-nasal lenerth, . . | 103 | $\ldots$ |  | . | , |  |  |  |
| Basi-alvedar length, | 97 | $\ldots$ | . | . | .. |  |  |  |
| (inuthir Iutw, - | $04 \%$ |  | . | . |  | \% |  |  |
| Intermalar brealth, |  | 123 | $\cdots$ |  | . |  |  |  |
| Nasio-montal lemgh, | 114 | . | $\ldots$ |  |  |  |  |  |
| Nasio-al vectar lenyth, | 67 | $\ldots$ | . |  |  |  |  |  |
| Nitsal height, | 48 | ... |  |  |  |  |  |  |
| Nasal wilth, . | 23 |  |  |  | 23 |  | $\cdots$ |  |
| Nesell Indert, | 4,9 |  | , |  | ... |  |  | - |
| Orbital wilth, . | 40 | 4* |  |  | $\ldots$ |  |  |  |
| Orbital height, . | 33 | 31 |  |  | $\ldots$ |  |  |  |
| 10-bituel Inelers, | 85 | OSS |  |  |  |  |  |  |
| 1'alatu-havillary length, | 53 | ... |  |  | 53 |  |  |  |
| Palato maxillary breatth, | 60 |  |  |  | 59 |  |  |  |
| P'tulde-mustillary Inder, . | 113. ${ }^{\text {\% }}$ |  |  |  | 111:3 |  |  |  |
| Symplysial height, | 30 | 35 | :31) |  | 29 | 27 | i1) | 30 |
| - Coronold .. |  | 66 |  |  | 65 | 61 | 61 |  |
|  | 60 |  | 60 |  | 67 | 67 | .. | 52 |
|  | 85 | 91 | 80 |  | 04 | 96 |  | 83 |
| \% Inter-gonial width, . | 91 | 96 | 42 |  | 107 | 101 |  | $\ldots$ |
| ( Brealth of ascending ${ }^{\text {ramus, }}$. | 35 | 44 | 32 |  | 10 | 40 |  | $4 *$ |

The adult skull was much broken, and the bones had softened during the immersion in salt water, so that many parts of the vault had crumbled away, and could not be restored to permit of the length, lreadth and height being taken. The maseuline elaraeter of the skull was determined by the prominence of the left supraorbital ridge in the part of the frontal bone which had leen preserved, by the projection of the inion and oceipital and temporal curved lines, and by the size of the lower jaw. The man had apparently been in the prime of life, as the tecth were ouly partially worn on the surface of the crown and there was no deeay. The prate was highly arehed.

With the exception of the right tibia, all the long bones of the limbs were imperfect. Sutticient of the left tilia had been preserved to show that it resembled in form the right bone. They were both examples of patyknemia, i.e., the shaft laterally thattened and with a narrow posteriur surface. In the right tibia, the measurements being taken in the plame of the nutrient foramen, the index of platyknemia was 63.6 , in the left 65.6 , figures which elosely approximate to the mean index of the tilia from neolithic interments in France. In the right tibia the antero-pusterior eurve of the external condylar artieular surface was slightly convex. Retroversion of the head of the tihia, such as has leen seen in neolithic skeletons in France and Belgium, was not observel. The articular surface for the astragalus was prolonged for a slowt distance on to the fromt of the lower end of the tibia. Doth the right and the left astragalus had a smooth, apparently articular area, for the front of the lower end of the tilia, on the upper surface between the seaphoidal and usual tibial anticular surfaces, such as has heen deserihed ly Professors Arthur Thomson and Havelock Charles in races who assume a squatting attitude when at rest. ${ }^{1}$

The right frmur had lost the hand, and the left the condyloid extremity. The shafts in buth were preserved and showed a very interesting monlitication in shape. In my Report on the skeletons colleeted ly II. M.s. "Challenger," published in 1886, 1 ealled attention ${ }^{2}$ to a peculiar flattening of the uprer third of the anterior surface of the

[^29]
## HUMAN AND ANHMAL REMAINS FOUND IN CAYES AT OBAN. 41\%

shaft in five Mari thish bones, in femora from Oahur, whe of the Sitndwich Islands, and in some Lapp and Esquimatx skeletons, and I stated that an infra-trochanteric ribge, which projected outwards, extented downwards from lelow the outer side of the great trochanter. 1 also refermel to these femora from the ohan cave as possessing similat chatacters, and stated that the external infra-troelmanterio riblen was distinct from, and in front of the gluteal rilgo which leads from the great trochanter to the linea aspera. The antero-pusterior flateming withns the hone transversely, and obliterates the outor surfice of the shaft in the upuer third or fourth, so that the lome loses its prismatic form in this remion. The extemal infm-trochanteric ridge gives a defined onter bomber immediately in front of the gluteal rilcer, and the inner lomder is also more prominent than in an ordinary femur. Since the publication of my Report several Mari femora have heen added to the wallection in the Cuiversity Musemm in which closedy ingotical chararturs "an lie seen. In T 893 my frimul, Professor J. II. Scoutt of the Iniversity of Otatn, quve an almirable acontint ${ }^{1}$ of the skeleton of the New Zoaland Maoris and the Morionis of the Chatham Islamds, and recosnised this charator as eommon to the fumora in both sets of skeletons: In the same year 1) Rimbolf Martin of Zurich published adescription of the skeletons of the people of Tiema tel Fumen, ${ }^{\circ}$ in which he distimgnished the same flattening of the shaft of the thigh bone.

The momoir which has, howerer, the greatest interest in annection with the shaje of the femur in the cave dwellers was jublished in 1891 by 1hr Manmurior of laris.: Ite deseribes in it femosat from the neolithie burials at C'reg-en-lise, Niment-le-Moudonin, and other dolmens, and a number of ancient femora from the (inamy lslands, which showed the antero-posterior flatening in a very marked form, and to this comdition he has given the namp platymery (flat femmr). Il. hats also proposet a methond of obtaining a mumerical expres-ion

[^30]of the extent which this flattening has reached. Ne takes the anteroposterior diameter of the shaft where it is the least, i.e., $3,4,5$, or 6 cm., as the case may be, from the small trochanter, and then he measure the transerse diameter at the same plane. If the transverse diameter lee regarded as equal 100 , the relation of the antero-posterior to it may be obtained by the following formula :-
$$
\frac{\text { ant.-pust. di. } \times 100}{\text { trans rerse di. }}
$$

The promet is the intex of platymery.
The mean index of modern Parisians has heen fomml by Manouvrier to lie hetween 80 km$] 100$, whilst the neolithic frmorat of NanteuilleHombuin were f558, those of Crey-en-linie were as low as $56 \cdot 4$, whilst some of the ancient Canary lifanders were from 5s* to $64^{\circ} 9$. In the specimens from the Mackay cave at Olan, the shaft of the right femmer hal an anteroposterior diameter 20 mm .; a transverse diameter 34 mm .; Whilst in the left hone the antero-pnsterior diameter was 22 mm . and the transverse was 39 mm ., which gave a platymeric inlex to the right thigh lone 58.8 and to the left 56.4 . These figures are sutficient to show that the platymeria was very strongly markel. Professor J. II. sentt gives 64.3 as the mear index in fifty Mari femora whieh he has measured, and the range of variation is from 81.3 to 54.8 . Ir Rudolf Martin states that the mean intex of phatymery in the people of Tiema del Fuego was 669 . In luth the fimora from the Olan eave, the linea atpera was well markel in the middle thind of the shaft of the lune.

There can, I think, lie little doulit that the flattening of the shaft of the femur in its upper part must have some relation to the attachment of the muscles in this region and to the traction which, in connetion with their use, they wouh exercise on the hone in its phastic and growing state. At une time 1 was disposed to associate it ${ }^{1}$ with the spuatting attitule, a pusition which, as is well known, many savages assume when resting, and to the tension of the gluteus maximus in that position.
1 "On Variahility in Iluman Structure," Journ. Anat. and Phys., vol. xxi. p. 48s, 1887.

Further observations on the shape of the femur in some other races who habitually squat when at rest have, however, satisfied me that is platymeric femur is not necessarily associatel with the squatting attitulc. Dr Manourrier attributes this contiguration to the development of the fibres of the vasti and erureus muscles attached to this part of the bone, which are bronght into especial activity in walking over rough ground, in ascending heights and in hunting. The association of platyknemia, is form of tibia also due to museular aetion, with phatymery, to which Ir Manouvrier has called attention, is corroborated by this skeleton.

Owing to both femora leing incomplete, I can only obtain measurements to give an approximate estimate of the length of the lone ( $1,43.5$ ) The right tibia meastred to the tip of the malleolus 368 mm . and to the astragalar articular surface 357 mm .

The right humerns was almost complete, and from the head to the lowest part of the trochlea was 303 mm . long. The deltod and other muscular rilges were strong, aud indicated a person of good muscular development.

Cias: Works Cete-Many years aro, in quarying away the diff in proximity to the gas works, for the purpose of providing storage for coals, a cave was exposed which is said to have containel human skeletons. which apparently were not kept. In the summer of 1877 more of the rock was removed for the purpose of enlarging the stomge, when ahlitional remains were found. In passing through olban in the autumn of that year I saw the cave and arranged to have sent to me such oljeets as had been preserved. ${ }^{1}$ I was tohl that enormons number: of shells had been exposed during the excavation. The hox which 1 received contained shells of the limpet, cockle, and oyster, a flint chip and fragments of primitive pottery. Ir . Inderson has kindly noted the charaeters of the pottery.
"Pottery.-One fragment of the lip of a large vessel, shaped like a cincrary urn without an external overhanging rim, and showing no

[^31]ornamentation. The fragment measures only $2 \frac{1}{2}$ inclies in the chord of the are of the lip, which is modelled with an interior hevel extending for $\frac{3}{4}$ inch under the brim and made apparently by the thumb. Extending the are of the chord shows a diameter of 8 to 9 inches for the month of the vessel, and this would give probally a height of from 10 to 12 inches. The clay is of the usual coarsely made praste, much mixed with hroken stones, and shows a thickness of inch immediately under the bevel. Two other fragments which join on to this one give fully 2 inches in dejth of the side of the vessel and show that it had very little vertical curvature and must have heen almost flower-pot shaped.
"Another fragment, abont 2 inches stuare ant not nearly so dark in culour, is of a somewhat tiner paste, and may have belonged to a different vessel of the same character.
"They both resemble in all their characteristics the cinerary urns of the late neolithic period and of the Bronze Age, of which there are so many examples in the Museum."

Animal remains, consisting of teeth of pig, goat, ox, and red deer, were recognisel, also the spur of a cock. A few hones of the deer and ox were also present; those of the limbs had been broken and the marrow avities exposed.

Nu portion of a human skull had been preserved, but fragments of some of the long bones of the limbs were sent to me. Ol,vionsly from their size they formed parts of a man's skeleton. They were, however, so firmmentary that no light was thrown on the character of the skeleton. The shafts of the thigh bones were the least injured, but they could not be resturel sutficiently to enable me to determine to what extent there lad been anteroposterior flattening of the upper bart of the shaft : though from what had heen preserved it did not seem as if any marked phatymery hat existed. The shafts of the tibia cond not be restored.

Distillery C'ace.-In Augnst 1890, whilst workmen in the employ of Mr J. Walter Higgin were removing the rock for the purpose of obtaining a site frr a new warehouse in enmection with the Ohan Distillery a cave in the face of the rock lehind the distillery was diselosed.
ann indebted to Mr Higrin for the following particulars. In remoring some soil and dibris from under the face of the clif many cart loads of shells were exposed and taken away. They are believed to have been rither on the floor of the cave, when it was more extensive than it now is, or at the entrance. The cave as it now exists was not exposed until after the excavation aml rock blasting wore completed; when Mr liggin's attention was called to a mmber of shells clinging, as it seomed, to the face of the rock, and which he direeted to be removerl. The worknen procected to clear the shells away, when the cave wats bisclosed. Shortly afterwards he was told that some bones had heen found, some at the bottom and end of the cave, others in the shell-bed which the workmen had east ont. It was too late, however, to reconnise if thore had been any stratification in the earth and bels of shells, wr what had been the exact position of the majority of the bones, some of which, however, still remained at the bottom of the deep end of the cave. The cave was situated about 10 feet alove the present sea level. Its mouth was 9 feet wide and 10 feet high, and faced to the N.N.II.; its depth was 12 feet; at the back the height was 4 feet; and the witth about the same. Mr Miggin instructed the remains foumd in the cave to le collected and forwarded to the society of Antifuaries, ly whom they hase been sent to me for examination.

Tho hoxes contained a number of shells eonsisting of oyster, common
 several shells of the limpet presented a peeuliar appearance. The ${ }^{\text {a }} \mathrm{p}^{\text {ex }}$ and at large part of the bexly of the shell had been removed, leating only the ring-like hase. It is ditlicult to say if this condition of the shells dates from the occupancy of the eave, or has bun occasioned by subsequent disintegration. If the former, possilly the rines hat been strung tegnether loy way of omament.

Flints and lone implements were also premed, the characters of which are tescribed by I)r Anderson in the accompanying noto.
 the natmally romeded surface of the nombtre on ome sille amb the split surface showinet the bulb of preression on the other, lut no seondary working.
"Small flake of thint of triangulax section, $1 \frac{1}{8}$ inch in length and nearly $\frac{1}{4}$ of an inch in its greatest thickness, hut with no secondary working.


Fig. 3. Tool of Bone.


Fig 4. Berer of Bune. (1.)
"Three small, thin and irregularly shaped chips of tlint, varying from $\frac{1}{2}$ an inch to $\frac{3}{4}$ of an inch in diameter, the edges unworked.
"Bone.-A long, narrow, spatulate-ended tool of deer-horn (fig. 3), 6 in hes in length, harely ${ }_{2}^{\prime}$ an inch in breatth throwghout, and scarcely

IIUMAN AND ANIMAL HEMAINS FOUND IN C'AVES AT OBAN. 4?1
more than $\frac{3}{16}$ of an inch in greatest thickness, the ends rounded oft and worn by attrition, as if in rubbing against some rough substance, the milllle part smoothed and somewhat polished on the one surface showing the dense exterior table of the horn, while the other surface shows the cancellated structure of the interior. It closely resembles a modelling tool such as is used for modelling in suft clay, and that this was a possible nse is shown by the fact that fragments of two clay vessels were found in the neighlouring cave lochint the gas works.
"Borer of bone (fig. 4), $2 \frac{1}{2}$ inches in length, ant nearly $\frac{1}{2}$ an inch in greatest diameter at the butt end, tapering to quite a sharp point, polished and marked on the surface near the point with slight striations resulting from use. Such a tool may have heen employed to bore holes in hides, pither for the purpose of sewing the skins together, or for fastenings of any sort, ly means of sinews passed through the holes."

Guly a small number of animal bones liad been forwardel from this rave. Amongst them was a fragment of the lower jaw of a young seal (Plora vitulina), the lower jaw with teeth of a young ruminant animal. the truth of a dig, hones of small birds, and vertebre of fish.

The luman remains from the I bistillery cave gave evidence by the presence of aight lower jaws of no fewer than eight persons. There of these, julging from the dentian, were adults, two of whom were probally men and one a woman. In a fourth all the permanent teeth were present in the lower jaw except the wisdom, which hal not rruptecl, and the age was prohably about twenty-four. In three others the tirst permanent molars had crupted, hat the milk molars had not lreen shet. In the eighth specimen, which consisted of little more than the symplaysial region, only the milk sockets were suen. In the alult jaws the crowns of the teeth were flattenel ly use, but not decayed; in ons, however, the sockets of the first anil second molars were partially absorbed, and the twoth had been shed possibly from theay. Nonsmrements of the there largest jaws are given in the Table (parp 413).

The presence of several skeletons in the cave, some of which were immature, was also shown by the limb bones and vertebra which reached me. Notwithstanding that the skeletons were very imperfect anl the majurity of the bones broken, 1 reengnised four left frmora at different
stages of growth, in which the epiphyses were monited: the smallest of these was a child apparently between one and two years of age, and to whom the youngest lower jaw had doubtless belonged. The tibiæ and other long bones, the clavicles, innominate bones, scapule, and vertebrip hal also immature representatives.

Unfortunately the skulls had all heen so much broken that only fragments reached me, and these were so imperfert that I could not restore a single cranium ; but the frontal and larger part of the left larietal of a child from eight to ten years of age had been presersel. In none of the adults had the frontal bone been recovered, so that I can say nothing of the arch of the forehearl, or of the amount of propection of the glabella. It is obvious from the remains that some of the lones had belonged to young skulls, others to adults.

As regarls the long bones one adult left tibia was sutticiently perfect in the upher third to enable me to reemaise the characters of the hearl and of the shaft immediately lelow it. The head was 81 mm . in transverse diameter across the articular areas, whilst the antero-posterior diameter in the midlle of the head was 51 mm . The head was not retroverted, neither was the external articular surface convex antero-posteriwrly in any special degree. The index of platyknemia in the plane of the nutrient foramen was 70.2 . In an immature tilia which, without the epiplyses, was 274 mm . long, the index of platylnemia was 68 . Only one adult femur laad the shaft sutliciently entire to enable me to determine the shape of the upper thinl. Compared with the corresponding left bone from the Mackay eave neither the antero-posterior flattening nor the external infra-trochanteric ridge was so strongly marked. The antero-postrior diameter was 21 mm . and the transverse 30 mm . : the index of phatymery was 70 . Four imperfect adult humeri had wellmarked musenlar ridges. The hones of the left forearm of an adult were entire. Their length was as follows: radius to tip of stylois process, 223 mm ; ulna to $\mathrm{tip}_{\mathrm{p}}$ of styloil, 251 mm . : another left radius was 231 mm . long.

A luft os calcis hat a strong peroneal tubercle on its outer surface, and a deep concavity with very prominent sustentaculum on the inner curface. The suprior artienlar surface for the astratalus was divided

## IIUMAN AND ANIMAL REMAINS FUUNO $\because$ IAVES AT OBAN. 423

into three quite distinct areas by intermediate mon-articular bone. In wach of two astragali, a smooth, apprently articular, area was present on the upper surface behind the scaphoid convexity, similar to that referred to in the corresponding bones from the Mackay eave, as associated with the acute flexure which is assumed by the ankle-joint in the squatting posture. The lower ends of the corresponding tihiar had not lieen preserved.

The MarArthur Cove. In February 1895 I received from the Society of Antiquaries three hoxes, which contained human amd other bones and shells collected from the eave at Oban, which Ir Andersun has rlescribed in the present volume of the Prompotings of the Simiot!, 1. 211.

1 entrusted the animal remains for identitication to my assistant, Mr Tames Simpsom, who reports as follows:-" (1) In the upper layer of hack earth were bones or teoth of the red dear and of a species of ox; also of the pig, dor, and laderer (Melest tarms). Some lrones of hirds, fish, claws of crabs, and shells of patella, solen, and whelk were recognisel. (2) In the shell bed underneath the hack earth, in addition to lones of batger, red deer, and ox, a part of the jaw of a roe deer (l'. capmotus:) was recognised ; also bones of small birds and of fish, claws of crals, and shells of patella, pectin, and solen. (3) In the deeper shell bed and pockets under the gravel helow No, \& were portions of two frontal bones of an ox, probably Bus lomifions, antlers, and bones of reel deer, one of which had been a large stag, the burr being 80 mm . (albout 3 inches) in diameter, hones of roe deer, the humerus of an otter (Lutice rulyarix), the humerus of a cat, the lower jaw of a young pigs, the upher jaw of a badger ; also bones of small hirds, jaw and verthbore, of tish, crahs' claws, and shells of molluses. Some of the honss were blackenel and calcined from the action of fire."

The human bones in box No. 1 were ohtained, either on the surface of, or in the lhack earth and dibris which covered the flow of the cave. They consisted of two adult skulls, unfurtumately mot 'fuite perfect. The one most damaged, $I$ of this deseription, was foum on the surface of the hack earth immediately below the air shaft which
communieated with the external atmosphere. The other skull, B , was at the bottom of the black earth, where it rested on the shell bed. Three lower jaws, which, judging from the dentition, were adult, were found in proximity to the skulls. Numerous separate vertebre, a sternum, and several ribs were also in the box. Thee axis vertebre were distinguished. A number of limb bones, most of which were in fragments, had been obtained: portions of two seapule, four clavicles, six humeri, six ulnæ, three radii, several metaearpals and phalanges, a fragment of an ilinm, portions of three femora, one tihia, three fibulæ, a patella, four calcanea, two astragali, and some of the smaller tarsal bones were present.

Box No. 2 contained human remains obtained in the shell bed below the layer of black earth. They consisted of eight vertebre, a first rib, part of a scapula, some metacarpals, left os calcis, right astragalus, the upper end of a right and the lower end of a left femur.
lhex No. 3 contained "bones from the shell bets and pockets in and under a layer of gravel, situated below No. 2." The luman remains consisted of two dorsal vertelre, a patella, left astragalus, fifth metatarsal and two metacarpal bones. In an envelope marked " 口иper section, S.E. corner," was an alult axis vertełra.

Tho contents of the boxes gave ample evilence of the remains of three loman skeletons, but from the presence of four axis vertelree it is clear that at least four persons had been entombed in the ease. That three of the individuals were adnits is certain from the dentition in the lower jaws, and by the bones of the limis being fully ossitied. One of the axis vertebre was murh smaller than the other three, although so much lirok'm that its external measurements conld not be taken : the "ring" was only 19 mm . in antero-posterior by 22 mm . in transvelse diameter, ats compared with 24 and 26 mm . in one of the adult hones. Possibly it was the second rertebra of a child, but no other bumes of a chikl were recognised.

That one of the alults was a man is proved by the size and massiveness of the skull B with its lower jaw, and by the size and muscular markings on some of the bones of the limhs. The skull $A$ was distinctly smaller than $B$, and its museular ridges were not so strong,
so that it had more feminine characters, but it was younger than I, and was possibly also a male. The third lower jaw C, with which no skull was associated, was possibly a female. In packing the specimens in the boxes the bones of each skeleton had been mixed with their neighhours.

The skull B was espeeially interesting, as the most perfect specimen which I have seen in this series of eaves. The man had probably been in the later stage of adult life, for the sutures of the cranial vault were to a large extent olliterated. The glabella and supraorbital ridges,


Fis. 5. Powhe of Skull B.'
athomgh not nemply sh projecting as in the Veamberthal and Spy crania, were yot sufticiently strong to have given a detinito phywiognomy the the junction of the forehead ant face. The alveolar border of the uper jaw was broken oft in front, and the degree of prognathism could not be ascertained, but from what is left of the upper jaw I do not think that it could have been marked. Two teeth were lost in the lower jaw, but the sockets were entire: the remaining teeth, though without decay,

[^32]were in part worn by use, though not to the extent one might have anticipatal from the age of the skull, as inferred from the condition of the sutures. It is possible that in these ancient cave dwellers, as is not unfrequent in existing savage races, the sutures ossify earlier in life than in civilisel man. The lower jaw was massive, with a strong chin, and imlicated the possession of good power of mastication.


Fis. it, Facial View of li.

Owing to the base of this skull having heen laken away I cannt give its height, lout the measurements of its length, hrealth, and ciremoference show it to be a skull of large dimensions, is may lue seen from the Table. In an umpullished pesearch on the cramial characters of the peophe of sentlant, on whinh 1 am now amaged, only
four out of eighty-four male skulls reached 200 mm . in glabello-oceipital length, and the longest of three was 204 mm ., whilst the mean of the series was $1 \times 6.2 \mathrm{~mm}$., lut this Oban skull measured $205 \mathrm{~mm} .{ }^{1}$ In its hroulth, however, of 144 mm . it was alrout the mean of the male scottish skull, whieh I have found to he in cighty-three adults 14.6 mm . The horizontal circumference was amongst the largest that I have measured, though many rania surpass it in the vertical transverse are. Owing to the nuehal and basilar parts of the occipital bone havisg been destroyed, I could not take the full internal capacity, lut the eavity of the cranium, althongh imperfect, held 1715 culnic centimetres of water, which is greatly in excess of the average capacity of the skull in scotsmen; for the mean of fifty mate erania which 1 have measured was 1492.8 c.e., and the range of variation Was from 1760 to 1240 ce. The brain which it had contained had bern therefore much above the average magnitude of that of the mondern seol. In the relation of length and breadth the index, $70^{-2}$, placed it distinetly in the dolichocephatic group. In its general form, as seen in the noma verticalis, the eranium was an elongated oval; cryptozygous, with vertical side walls; not bulging in the parieto-squamous region, for the widest part of the cranimm was at the parietal eminences which is not the rule in a man's skull; a slight elevation was seen in the sagittal
${ }^{1}$ Examples of skulls having a length of 200 mm . and upwards have been recorded by several observers in the men of both neolithic and palielithic times. Of the twenty-livo ancient British male ctania fiom the long barrows deseribed by Dr Thurnam (Mimoirs Authropolngical Suc., London, vol. i. Table 1), nine exceeded 200 mm . in length. The Neanderthal skull was 200 mm . The Spy cranium No. 1 was 200 mm ., whilst No. 2 was estimated to be 198 mm . In two skeletons fonmd in 1843 in a kitchen midding at Staegrnaes, Bro, swoten, and described by sven Nilsson (Actis du Congre's des zuturalistes Scaudimetrs, Stuckholm, 1844), one skull was 200 mm ., the other 196 mm . A skull found at Olmo, near Florence, 15 metres deep in the blue lacustrine marl, anl described ly Coechi (Ucm. della Sor de Sic. Vit., Milau, 1867), was 201 mm . long. Two of the cranitt from Les Eyzies deseribed hy broea (sur les ossements des Ey:iss, Paris, 1868) hat each ats anteroposterior maximum 202 nm ., whilst a thirl was 191 mm . The Borris skull from the bed of the Nore, Ireland (T. II. Iuxley, Irehistoric Remens of Ceththess, 1866), was 204 mm . long. The skull reeently discovered at Galley Ilill, Kent, and axeribed to paleolithic man (E. T. Newton in Quartcrly Juuract Gevley. Soc., Angust 1895), was 205 mm . in maximum length and 203 in the phryo-occipital diameter.
region and the slope from it to the parietal eminences was distinct; the parieto-oceipital region sloped gradually backwards from the obelion to the occipital point. The forehead, though sloping backwards above the glabella and supraorbital ridges, was not low as in the Neanderthal and spy erania. The nasion was depressed ; the nasal hones were short and mollerately projecting. In the norma oceipitalis the outline


Fig, 7 . Vertex View of 1B.
of the skull, owing to the slope of the roof downwarks to the parietal eminences and the side walls being vertical, was pentagonal. The broken palate prevented me from seeing its general form : hut it possessed a hroad mesial ridge in its posterior half.

The skull A was more fragile in the cranial region than B, but the face was better preserved. Although the sexual characters were not so
strongly marked in it as in 13, I am inclined to think that it was that of a man. The sutures of the vanlt were unossified and the glabella ant supraorlital ridges were comparatively fecble. The teeth were not decayed either in the upper or lower jaw, hat they were more flattened from use than in B. This skull was smaller than B) and broader in relation to the length. Owing to the right parietu-siuamons region being imperfect, the breadth given in the Tathe is approximative, and so also is the length-breulth index, 754 . In their general fom A and B


Fig. 8. Putite of skull A.
were not unlike, and might well have been members of the sume family. The upper jaw was orthognathic. The length and lreadth of the nose was on the boundary between the leptorhine and mesorhine groups. In A the orlhit was not so wide in relation to the height as in B , and the palate was well formed and mesuranic in its proportions. The basi-bregmatic diameter of the skull was almost the same as the greatest transverse diameter, and the length-height index, 76, places it in the hypsicephalic group. In scotlish crania generally the breadth exeects
the height. The lower jaw, although less massive than in B , had a well-iletined chin, and a keel projected forwand at the lower half of the symphysis. This skull was not depressell at the nasion, the nasal hones: did not project so much as in B. Owing to the vault of the cranium sloping ontwards to the parietal eminences more graulually than in lb the pentagonal form was not so marked in the norma oecipitalis. The palate was symmetrical and there was no mesial ridge.

The only $l^{\text {art }}$ of the skull $\mathbb{C}$ which had been preserved was the lower jatw, the measurements of which are given in the Table. The sockets of the tecth were intact, although only the right wistom tooth was in place and the surface of its crown was flattened from use. The jaw was well formed and with a distinct chin.

The two seapule were so much injured that their dimensions could not be taken, but one had obvionsly belonged to a strongly muscular man, and certain of the long bones had corresponding characters.

None of the six humeri was perfect ; one pair was more slender than the others and had feminine characters. Three ulnæ were well preserved, and their maximm lensths were 260,277 , and 280 mm . One of these, a left lone, was much abraled on the front and imer side as if it had been gnawel by the teeth of an animal. Another, a riggt ulna, harl sustainel a consiletable time before death an oblique fracture in the lower fourth of the shaft; the booken ents had united anl were surcounded by a thickened growth of bone. The radii were all imperfect. The vertebre were much lorken and many were lost. The innominate bone was a frayment. A left frmur bossessel the shaft and comlylar articular end ; two others had imperfect shafts. The hest preserved was probably that of a woman from its slemlemess, smoothness, and short length. The antern posterior diameter in the upper thind (f) the shaft was 2.2 m. , the transwerse 28 , the inlex 786 ; no special flattening was therefore present and the external infra-trochanteric ridge was faintly markel. The linea aspera in this hone was feelbe. In the right bone of probably the same woman the antero-posterior diameter of the shaft was 21 mm , and the transverse 29 mm ., the imbex 724 ; in this femur a slight amount of flattening was olservel. In a thirl femur, evidently from its size that of a man. the antero-

## HCMAN ANH ANHMAL HEMAINS FOUNU IN CAVES AT HBAN. 4:31

10sterior diameter was 23 mm . and the transverse 33 , index 697 ; the phatymeric form was more recognisalle and the linea aspera was murl stronger. A portion of only one tibia hat heen preserved am! it lelonged apparently to the female skeloton; the antero-pusterior diameter of the shaft at the nutrient foramen was 31 mm ., the transVorse 21 mm ., index 697 , showing a moderate degree of platyknemia.

Concluring Remark.-From the fact that four caves containing human skeletons associated with implements and animal remains have been found, within a distance of half a mile, in the cliff which fronts the bay at Olan, one may safely conclude that the primitive inhabitants of that district made use of the natural recesses in the roek bounding the ancient sea beach. As the implements which have been fonm in these caves are formed of stone, bone and hom, and are unaccompanied by any trace of metal, it is obvious that the occupaney of the caves must date lock to the premetallic period in the north-west of Seotland-a conclusion which is confirmed lyy the character of the pottery found in the (as Works Cave. A precise date cannot, of course, be given ; but if the primitive people of the scottish Highlands had attained a knowledge of the use of metals contemporaneous with, or even some time after, their manufacture into implements by the natives of Southern Britain, the people, whose remains we have been examing, would necessarily date back to a period antecedent to the invasion of Britain hy Julins C'psar, at which time both bronze and iron had "vidently been long in use.

In considering the implements and weapons manufactured and (mbphoyed by man living in a savage or barbarons state, we must take into consideration both the nature of the materials fitted for their mannfacture provided by the comtry in which he lives, and the opportunities which he mat have of obtaining materials of a better quality from other countries and more civilised races. As regards the people of the llighlands in the period now referrad to, even if we suppose that motals hat come into use in other parts of Northern and Western Furope, the opportunities of obtaining them, on aecount of difficulties of aceess, hud doultless been so small as to interfere with fla ir introduction and
employment. The people, therefore, would necessarily be limitefl in their choice to such materials as they had around them. In the absence of minerals from which metals could be extracted, and in the consequent want of any opportunity of acquiring by practice the methods of treating ores, hone, horn and stone supplied the most appropriate substances. Oxen and deer, as their remains show, were without doult sufficiently numerous to provide them both with food, and the raw material out of which tools could be mad, (see figs. 3 and 4, and the illustrations to Dr Anderson's description of the Mac.Arthur Catve). Stone also was in abundance, but no stone implements, except three lammer stones made of sandstone, quartzite and a prophyritic stone, lescribed in Dr Anderson's account, and a few made from flint, were foum in any of these caves. The best specimens of manufactured flints were obtained in 1869 in the Mackay Cave (figs. 1 and 2). There can, I think, be little doulst that flints. were the tools used in the manufacture of the hom harpons found in the Mac. Arthur Cave (figs. $11,12,13$ of Dr Anderson's paper). As flint is ly no means common in Seotland I asked my colleague at that time, now Sir Arehibald Geikic, to tell me the nearest locality from which it could have been procured. He kimlly wrote to say that a few years previonsly he had found a bed of clalk flints, 20 feet thick, underlying the great hasaltic cliffs of Carsaig, on the south shore of the Island of Mull. As the clifls are about 20 miles only from Oban, there can, I think, be little doubt that the supply of flint for the manufacture of stone implements had been derived from this lueality. If one may judge of the size of the flint nodules in this led from a few speeimens which were found in the Mackay Cave, the implements which it was possible to make from them could not, as figs. 1 and 2 show, be of large size.

The animal remains associated with the human skeletons belong to existing species. ${ }^{1}$ From the large quantities of shells removed in excavating the Gasworks and Distillery Caves, sea molluses must have formed an important article of food, and were perhaps also used as hait; and the empty shells, although to some extent within the
${ }^{1}$ Bos longifrons, remains of which were found in the MacArthur cave, is regarded as represented at the present time by the small sootch and Welsh cattle.

Gives, had been thrown into heaps or "kitchen mindings" at their moutlis.

Fish had alsu formed an important anticle of diot, and the harpons from the Mace Irthur Cave were the ingenionsly construeted weapons with which they were caught. The bones of the larger mammals hat been broken to extract the marrow, and to be made into bone pins and rubbers, of which so many examples were got from the Mae dithur Cave, as to indicate the employment of these primitive tous for the preparation of skins as artides of clothing. There can be no douldt from the barbed harpons and the animal remains that the men late been expert hunters and fishermen.

We may form some conception of the physical characters of the cave-dwellers from the remans of their skeletons, imperfect though they unfortumately are. The adult skulls $A$ and 1 from the Mac. Irthur ( ave prove them to have leen people with well-developed cramia, dolichocephatie in form and proportions. Although sknll I' possessed projecting ghaliella and suphatorbital ritures, yet these were not so prominent as to have given the beetling ryebrows, which must have been so marked a feature in the men of spy and the Semuder Valley : whilst in A their projection was slight ; neither had they prossessed the low areh of the frontal bone and forehead which is so striking a Whacter in the spy and Neanderthal crania. The jaws were not prognathie. The teeth, althomh patially worn down on the surface of the crowns, were not so tlattened as one sees in the skulls of some satviges. Ohe is therefore disposed to infer that the foor of the c.se-dwellers was cooked before lome eaten; an inference which is strengblamed by evidence of the artion of fire in the blackened, calcineal hones in the Markay ant Mace Irthur Caves.

The great capracity of the wall $B$, which, in its uninjured state, hat doubtless been capable of containing not less than 1730 cecm. of water, paees it on a level with sume of the most dapacious skulls of morlern Nootsmen which t have measured. Notwithstanding the primitive conditions in whiels these men lived, a potentiality of cerebman and mental development is indicated much leyond what is possible in the aboriginal Iustra lims or the Bush race, in whom the cranial capacity is very much lower.

It is indeed remarkable that of the human skulls of undoubted antiquity, which have been sufficiently preserved to enable the cramial eapacity to be taken, so large a proportion should have been almost equal to, and in many specimens even greater than the $1500 \mathrm{c} . \mathrm{cm}$., which is the mean of mumerous measurements of skulls of modem European men. Dr Thmmam records, in his Memoir on Ancient British and Gaulish Skulls, ${ }^{1}$ the capacities of eighteen crania, apparently those of men, from English long larrows, in which the mean was 1622 c.cm. ( 99 cubic inches), anl the range was from $1474 \cdot 6 \mathrm{c.cm}$. ( $90 \mathrm{c} . \mathrm{i}$.) to 1835 c.em. ( 112 c. i.). In eighteen Bronze-age skulls from the round harrows, which are of later date than the long barrow crania, he states the mean capacity to be 1605 ccm . ( 98 c. i.), and the range was from 1442 c.em. ( 88 c. i.) to $1786 \mathrm{c.em} .(109 \mathrm{c} . \mathrm{i}$.$) . The serics$ of erania olitained lyy Mr samuel Laing at Keiss, Caithness, along with stone implements, which were so carefully studied by the late Mr Huxley, ${ }^{2}$ do not appear to have hat their cranial cavities measured by that anatomist, but a female skull from the same burying-place, which was given to me by Sir Arthur Mitehell, has a capacity of 1458 c.em., i.e., 89 c. i. $^{3}$ Six male skulls from the Caverne de l'Ilomme Mort in the Lozere, associated with animals of the present epoch, and belonging to the polished stone periot, had, according to Broca, a mean capacity of 1606 c.em. Several aulult male crania from other localities in France, which are regarded as belonging to the polished stone epoch, had an average eapacity of $1568 \mathrm{c} . \mathrm{cm}$. , and the average of twenty-five men's skulls from the Grottos de Baye was 1534 e.em. ${ }^{4}$

Examples of skulls, possessing a capacity above the average of moilem Europeans, have also been met with amongst the few specimens of crania belonging to Quaternary man, which have been preserved. The ilolichocephalic skull of an ohl man, apparently cotemporaneous with the mammoth, from the ruck shelter of Cro-Magnon near Lew
${ }^{1}$ Mrmuirs, Authropological Siricty of London, vol. i., Table 1, 1865.
${ }^{2}$ Prehistoric Remains of Caithucss, London, 1866.
${ }^{3}$ From my measurements of the crania of twenty-three Scotswomen, I have obtained an average capracity of the present female population of $1325.5 \mathrm{c} . \mathrm{cm}$. and only three of these were ahove $1450 \mathrm{c} . \mathrm{cm}$.

+ Topinari, Elcments d'Anthmpologir gencrale, P. 611, Patis, 1885.


## IIMMN AND ANIMAL REMAINS FOUND IN CAVES AI UDAN. 4:35

Eyzies, has, according to Broca, ${ }^{1}$ a capacity of 1590 e.cm. The dolichocephalie skull of a man about thirty, associated with the diluvial loam at Hussowitz near Priinn, is sail by Alex. Makowsky ${ }^{2}$ to have a calpacity of $1648 \mathrm{c} . \mathrm{cm}$. Although he camot say positively that it was cotemporaneous with remains of the mammoth, teeth of the fossil wild horse were found along with it, and he believes ${ }^{3}$ it to he undoubtedly a very old skull. Professor Testut has described a dolichocephatic man's skull found, alony with flint flakes and implements of reindeer's bones and horns, at Reymonden in the $\mathbf{I}$ ordogne, as possessing a eapacity estimated by lroca's method of $1730 \mathrm{c} . \mathrm{cm}$. From the interments of these ancient prople having been so carefully undertaken that their *kulls had been preserved during many centuries, it is not unlikely that they had been the chiefs of their respective tribes, and that the larere "apacity had been associated with superior mental attainments.

The data for determining the stature of the Oban cave-dwellers are, owing to the imperfect condition of the long bones of the thigh and leg, unfortunately very imperfect. No thigh lone was eutire. The right femur without its heal, from the Mackay Cave, measured from the top of the great trochanter to the most depending part of the inner condyle $4 \geq 6 \mathrm{~mm}$., and to the plane of the two condyles 420 mm . ; in the left femur the head had been sufficiently preserved to enable one to see that it projecter 20 mm . above the upper border of the great trochanter. If, in the right femmr, the head had had a similar amount of projection, that bone would have measuren 410 mm . when placed in the position of a man standing erect, which is slightly below the average length of the thigh bone in modern Europeans. If we were to adopt the somewhat rough method of estimating the stature of an inlividual as double the length of the femur + tibia, with 35 mm . added as equivalent to the soft prarts, the stature of the man in the Mackay Cave would have heen, femur $440+$ tibia $357=797 \times 2=1594$ $\mathrm{mm} .+35 \mathrm{~mm}$. for soft parts $=1629 \mathrm{~mm}$. or 5 feet $\downarrow$ inches. If, again, we were to cmploy the methol recommended by M. Manouvrier in his

[^33]important memoir on the determination of the stature, ${ }^{1}$ and emplay co-efticients based on the data given in his first Table, the estimated stature would have been 1654 mm . or 5 feet 5 inches. By both methods of computation the stature is distinctly below the average height of the lresent male inhabitants of Great Britain.

As has been stated in the description of the skeleten foumd in the Maekay Cave, the thigh bones were strongly platymeric and the tibia was platyknemic. In a skeleton from the Distillery Cave these characters were much less strongly marked, and in bones from the Mac.Arthur Give they were also moderate. The Mackay Cave skeleton was the only one which in degree corresponded with the form of the femur and tibia of the French neolithic interments. The presence of aulditional tihio-astragalar articular surfaces anteriorly leads one to conclude that the siuatting attitude had heen the hathitnal pusture when resting.

From a certain commonity of character in all the four caves and their contents, more especially in the touls and implements found in them, one is led to the inference that the people who had oceupied them indonged to the same epoch and were of the same race. Although looth the pottery and the implements were rude and simple in material and shape, yot, from the absence of all remains of extinct animals, their inlabitants camot be referred to palieolithe times, hot are much later in diate. It would seem appropriate to class them alongside of the men -whose remains are associated with the dolmens in France and with the lone larrows in England-for the alults agree in possessing dolichocephatic crania, a moderately low stature and not menfequently 1hatyknemic tilhiæ.

There can, 1 think, be no doubt that the caves were used as dwellingplaces. The remains of animals goorl for food, the long lones splintered for the extraction of the marrow, the quantity of shells of edilide molluses, both in the caves and in some cases in heaps near the cave month, prove that the prople had congregated in these recesses, and from the presence of both adults and children, it is probable that a family had been associated with each cave. The implements testify to the preparation of skins ${ }^{1}$ Wementros ile le Suciete e" Anthropologic dir Peris, 189.2.
for clothing. The blackened bones show that fires had been lit within the caves for conking purposes, and there is every reason to think that they had been made use of as shelters for the night. The fact that each cave contained homan remains, and that bones of no fower than fiftecon skeletons were collected within them, shows that they had also become places of entombent. There is a want of specific infurmation of the cextet position of the luman bones in the earth and dubnis on the floors of the caves, except in the Macdythur Cave, in which the skull 1 , with wher hones, was situated on the surface of the black earth, and the skull 1 was foum where the black earth rested on the mpper shell lued. As the earth had probably, to some extent, found its way into that cave through the air-shaft in the roof, these two skeletons clearly belonis to the latest periorl of human oceupation. In the course of times, the mouths of the eaves hat become closed in hy an accumulation of eanth, so that their existence only hecame known to us during the cuarying "prations comnected with the growth of "han during the past thirty years. The closure hat heen without donld housht alnont by a considemble fitll of superincumbent rock, and of lones carth from the top of the clitl, which had blocked up the month and had led to the conwalment and preservation of the eaves and their contonts.

One might hazard the suppesition that, after tho caves had reatent to be ocenpied as dwellings and before they were chasel in, the peophe had utilised them as places of interment, but this is mot, I think, a royy wedible hypothesis. I more likely explanation may bo sought for in the: intertribal feuds, which doubtless then, as in times not wery remote in the West IIghlands, loed to the massacre by : howtile elan of mombers of another chan, sumprised and phapes suffocated hy smoke, it may hawe brem at might when resting peacefully in thoir eave dwellings. Pos -illy steps hat then heen taken to clase up the mitrance.

In passing mulor review tha (than eaves ent their oecupants, we have 8. kep in minl that a considerable chate in the prlative level of lame

 when britain tiret acruived human inhohitants. The caves, without dondt, were originally bollowed out hy the saca, when the wates
washed the clift in which they are sitnated, and before the present raised beach was formed.

The existence of a layer of gravel some feet in thickness in the MacArthur Cave, composed of clean-washed, small-sized pebbles, testifies to the action of the waves. Dashed about by the movement of the water the pebbles would act as agents, which assisted in wearing away the rock and hollowing out the recess. At that time the cave could not have been inhabited, and its human occupants could not, I consider, have taken possession of it until the land was sufficiently elevated above high-water mark, and the cave was placed above the influence of the tide. The presence of bones in both the earth and in the shell bed on the surface of the gravel, and to a less degree in the imperfect shell bed subjacent to it, naturally, however, raises the question if there had not been two distinct periods of human occupation separated by a considerable interval, in which the waves had sufficient access to the cave to admit of a thick layer of gravel being deposited within it, and to lead to its being deserted by the furst set of inhabitants.

Dr Anderson, who had the advantage of a personal inspection of the eave at the time when the excavation was going on, has carefully disenssed this question in his descriptive memoir (p. 228). He states, with judicial fairness, the arguments based on the form of the cave and the arrangement of the gravel and shell beds, which may be advanced both against and in favour of two distinct periods of occupation, with an intermediate wave-washed interval. In my opinion, those facts and arguments which favour a single occupation after the sea had retired, and when the new sea-beach had either begun fo form or been completed, lave the greatest weight, and his explanation of the manner in which the bones became mingled with the shell beds seems to low satisfactory. There can be no doubt that the remains found in the eaves have no claim to be associated with palæolithic times, but are neolithic both in age and character.

## VIII.

NOTES ON A SILVER-SOUNTED CHARM-STONE OF ROCK-CRYSTAL FROM INTERLESY, WITH NOTICES OF OTHER SCOTTISH BALLS OF ROCK-CRYSTAL ANI OF SUPERSTITIONS CONNECTED THEREWith. By GEO. F. BLACK, Assistant-Keereh: of the Meseum.

1. Thronch the kindness of Mr Alexander J. S. Brook, F.s.A. Siont, 1 an enabled to exhihit a tine specimen of a mounted ball of rockcrystal (fig. 1), which is stated to have been used as a charm. The hall is $1_{4}^{3}$ inch in diameter, and is momnted in a setting of four silver bands. Attached to either plate, mniting the ends of the bands, is a staple or loop of silver, from each of which depends a circular ring of the same metal. In the centre of each hand is a small hemispherical setting of light blue paste, of a turquoise colour.

This ball was originally the property of the Gordons of Carall, and is stated to have heen in their possession for six hundred years. It now bolongs to Col. Eyles Cordon of Inverleny, Callanler. Nothing is known of its history heyond the tradition that it was nsel, like the erystal Lalls already deseribed in the Proreedings, ${ }^{2}$ for the cure of cattle diseases and other ailments. The silver mounting, aceording to Mr Brook, is probably of late seventeenth century date.

This ball is the finest monnted specimen which has come under my notice, and it is much to be regretted that mothing more definite can be salid mither of its history or use.
11. The Rer. Dugald C'ambell, in his account of the united parish of Kilmore and Killride, states that at lmuolly Castle there are two crystal balls about the size of pigeons' egres, and he adils that, "Tradition says a Lord of Lorn, who joined the Crusalers, brought these stones from the Holy Land. They were for centuries supposel to possess great healing virtues, particularly in curing diseases of cattle, whon it is said they were dipped in water whiel the eattle received to drink. It is not a

[^34]eentury since they were sent for hy pxpress a distance of 40 miles, to stay the ravages of an eppidemic." ${ }^{1}$


Fiz. 1. Gistal Batl, monnted in shlere, as a Cham. (Full siza)
Ahout fifty or more years sentier, ane of these halls is mentioned ly ${ }^{1}$ N. un Stutisticat Alcount (1845), Argyllshime, vol, vii. 1. 5, 5.

Ramsay of Ochtertyre in his chapter on Highland superstitions. His account of the hall and its virtues is as follows : ${ }^{-}$
"The Leugh-ie.e, a sacred stone-is another engine of sulerstition derived from the Druids, which is used by the Highlanders, as well as by some uther brunches of the Celte. The Highland ones are generally larger than a hen's egg, and of much the same shape. Some of them are of a substance like crystal, and others of a sort of half-tramsparent pehble. There are few old familics of any consilemation that have not one of them in their possession. Various are the virtues ascribel to them-some being accounted efficarious in curing diseases whilst others are supposed to secure people against dangers. And therelore, not many years ago, it was customary to lustrate persons who were about to 4n on a military expedition with water into which the henefh had been dippell. ${ }^{2}$
"Mr M-Dougal of Dunolly, a gentleman of Lirn, is in jussession of one of the most cetebrated of these stones. According to tradition, it once belonged tis Mllmgal, Lord Lurn, a great family forfoitol ly King Robert Broce, of which Mr M.lougal is reputed the representative. Its fame for coring the diseaves of cattle is still very high with the common people of Arsyllshire; and long agen, the first people of that country sent for it on entrawdinary ucca-ions, and gave their chligation to restore it muler a severe penaly. It lias a llaw, concerning which they have a foulish tradition. It had been lent, say they, to someboly at a clistance, with a strict charge to put it in a clean phace, instean! of which it was put into a sack of wool. This ollemided it so much that it gave a lond crack and llew home. Ridiculus as this may seem, the same lecomotive powers are atecribed liy the flighlanders to other limethe, as well as to Ne Fillm's bell." ${ }^{3}$

The discovery of the erystal balls ahmer mentioned has suggested the fosiralifity of enumerating and luiefly describing all the sonttish halls:
${ }^{1}$ Scotland enel Scotsmen in the Eighternth C'entury, from the: Ochtertyre IIs., vol. ii. 1 1 . 453, 454. Mr John Mumro, of Oban, informs me that one of the Dunolly halls is nlohular, and the other oblong or egg-shapeal.

Smith, in his Galic Antiqutirs, Elimhurgh, 1780 (1. 62), says:-" A few of these erystal lalls are still to be seen in the Highlamb, where they lave not yet lost all their credit. Some of their owners have still the weakness to believe, or the dis. ingenuity to pretemd, that these trinkets can do almost every thing lint naine the dead. If a dietemper rages among inen or beasts it is no uncommon thing to sum 50 miles for this ghass physician to cure them."

* The following instances from blay, of relics possessing an inherent locomotive power, are mentioned by Lord Thgnomonth: The skull of a man named Mackartor [ M : Arthm] is shown on a stone in a cave heneath the hearland of the same name [Al'Athur's Ilead, wear I'roaig]. All attempts to remove the skull have failed, "It has heen cast into the sea, and carriel away, lint has always resumed its
of rock-crystal that are at present known. Further particulars of these and other charms of rock-erystal will he found in the Proceentinge, vol. xxviii. pp. 434-44.
III. The Clarli-Diary, or stone of Ardvoirlich, mounted in a setting of four silver bands, with a ring at the top for suspension.
IV. The Clach-na-Bratach, or Stone of the Standard, the property of the Robertsons of Struan (Clan Domnachaidh). This is an unmounted 1all, $1 \frac{7}{8}$ inch in diameter. Mr Rolertson Matheson, of Dunfermline, Hunorary Secretary of the Clan Domnachaidh society, informs me that it is lelieved by some that the hall "always grew dim or damp before the death of a chief of Clan Domnachaidh."
V. The Clarl Bhuai (Bhnairth), ${ }^{1}$ or Powerful Stone, formerly in the pessession of the Camplells of Glenlyon. It is mounted in silver, and is lescribed as about $1 \frac{1}{2}$ inch in diameter: The present resting-place of this ball is unfortunately not known.
VI. The sixth ball is in the Fingask Collection, at present on loan in the Museum of science and Art. It is momed in silver in the usual manner. Unfortunately it has no history.

YIl. A mall ball, $1_{8}^{3}$ inch in diameter, ummounted, is in the Scottish National Museum. It is statell to lave been found in a grave in Fife.

V1II. In the Appendix to the paper on "Charms and Amulets," already weferred to, mention is made of two balls of rock-crystal in the Museum of the Royal Irish Academy, one of which, $2 \frac{1}{8}$ inches in diameter, is "reputed to have lelonged to the Regalia of Scotland." 2 The second
station, . . . Several coffins [i.c., stone cists] have been found in this island. . . . One of these, which was closed, the prople could not be presailed upon to open; and they were persuaded that a stone removed from the grave wonld return to its 10sition" (sketches of the Coasts and Istomes of Scotlan", 1836, vol. ii. 11. 333, 334). The Bells of St Fillan aud of St Eunan, if removel from their resting-places, returned of their own aceord, ringing all the way (Old Stat. Ace., vol. xvii. p. 378 ; Scotland in Early Christian Times, 1st ser, p. 196).
${ }^{1}$ Bualkh. "This word literally means a victory, hence the extraordinary powers or virtues of amulets, \&e. Jewels are called clocha bradh, i.e., stones possessing virtue, Irobably from the ancient belief that the gems were eflicacious for the discovering and connteracting of poisons and spells,"-Footnote to "The Pursuit of Diamuid and Graime," Trans. Ossianic Society of Dublin, vol. iii. 1. 119.
"Proc. Soc. Ant, S'cot., vol, xxvii. 1. 524,
ball, $1_{2}^{\frac{1}{2}}$ inch in diameter, was stated to have been found at Uppereourt, Kilkenuy. Through the kintness of D. W. Stewart, Esq., a Fellow of this Society, I am enabled to correct this paragraph, and to give some additional particulars. Mr' Stewart, during a recent visit to Dublin, had his attention drawn to the crystal balls in the Mnseum there, and on making inquiries concerning them, learned that an error was made when the Catalogue of the Royal Irish Academy was compiled, and that the smaller of the two balls is the one from scotland. Nhe Stewart further learned that the ball was formerly in the possession of the Camplells of Craignish, and that it was sold to the Royal Irish Academy about forty years ago. In the hond of manrent of the year 1610 , printed in the paper, describing a charm-bead from Craignish, in the last volume of the Promerinus, ${ }^{1}$ mention is made of "ane precions stane," in the possession of Ronald Campbell of Barrichihyan, but pertaining to Angus Camplech of Innerlyver, "quhilk stane the said Ronnald hes oblessit him and his airis quhatsumener to mak furtheomani to the said Ingus and his airis, And to that effect sall anis delyner the said stane in the handis of the sail Angus, And the said Angus sall rellelyuer thaireftir the said staine againe in and to the eustodie and keping perpetuallie of the said Ronald and his airis berand his surname and armis ; Aud thairfoir the sath Rannald oblissis him and his airis foirsadis to present and delyuer at all tymes at requist the said stane when the saidis Angus and his foirsaidis sall have to do thairwith, the samen beand reportit bak agane eftir thair turne be done." It was further provided for, that if the stone were not fortheoming, Ronahd and his heirs obliged themselves to pay to the satd Angus the sum of " ane hundrethe merkis money as pryce and value of the said stane." In the paper on the charm from Craignish it was sur mised that the bead there described was the precions stone referred to in the bond, lout it is just as likely to be the erystal ball under consideration.
1... In the possession of Mrs Gibson, Bankhead House, Forfar, is a laill of crystal $1 \frac{1}{2}$ inch in diameter. It has no history.
X. The Keppoch Charm-stone is " an oval of rock-crystal about the size of a small egge, fixed in a bird's claw of silver, with a silver chain attacherl." This charm is now beliesed to be in Australia.

[^35]The classical aceomints of erystal, as, for instance, that of Pliny, deal mainly with its use as a material for the manufacture of articles of luxury, such as basins, goblets, cups, ice. The only medicinal property credited to erystal ly Pliny is its use as a cautery for the human borly when acted upon ly the rays of the sun. ${ }^{1}$ It is only when we reach medieval times that we herin to fime mavellous aceounts of the magical and curative properties of this stonc. Of these accounts the fullest, and prolally the most quaint, is that of bartholomew (ilanvil. It is as follows :2-
"Crystall is a brighte stone and clere, with watry colour. Men trowe that it in of snowe or $y$ se made harde in slace of many yeres. Therfore the Cirekes yave a name therto. It is gendred in Asia and in Cipres, and nanely in the northe mountaynes, where the some is mooste fernent in somer. And they make this dure longe, that is called Cristal. This stone set in the some taketh fyre, in somoche if irge towe be put therto, it settieh the tuwe on fyre. Wis tise is ordeyned to drynke, and werketh none other thynge but what ende thynge may do. Ilue usque Isidorus li. xvi. ca. xiii. Dioscorides ateketh of Cristall \& saythe, that it is harded and torned in to stone not onely hy vertue and strengthe of colle, but more by erthely vertue. And the coloms therof is lyke to ise. The verthe therof helpeth ayenste thirste and hanymse hete. And if it be beten to powder and dronken with hony, it fyllith linestes and tetes full of mylke, if the mylke fayleth before liyeause of colile. Aloo if it lee dronken it helpeth ayenst Collica passio, © ayenst the passion of enyll guttes, if the wombe be not harle. This stone is clere, and so lettres and other thynge that ben put therin, ben seen clerely ynongh. That ('ristall materially is made of water, Gregoric sayth super primm Ezechielis: water (sayth he) is of itselfe fletynge, lut ly strengthe of colde it is tomed \& male stedfaste cristall : and so in Eccles, it is writen. The northen wynde hlewe and made cristal frese, \&c. And herof Aristotle telleth the canse in li. Netheorornm:
${ }^{1}$ - Inverio medicos gh.w sunt wenda enrporum, nom aliter utilins id fieri putare,
 Among the ancients crystal was believel to he a species of ice, hence it name крйata入入os, from кpúos - icy-colt, frost. Herodotns alse, in descriling the rigours of the winter in seythia, nses the word "crystal" in the sense of iee (lilt, ir. cal', 28).
= Ik P'rouristalibus lirrum, lib. xvi. cap. 31. The author of this treatise, Bartholomew de Glanvil, was an Englislman and a Francisean friar. His work was compiled about 1360 , and is a enuplete store-honse of what passel for scientifie know. ledge in lis time. Writtem originally in Latin, the work lerame popular in England in the translation by John of Trevisa in 1398. The work is hased on the Spreculum Naturate of Vineent de Beauvais (Vicentius Bellovacensis), Who diell ahont 1284.


There he sayth, that stony thynges of substannce of ooze, in'u water in matter, as Ricarlu- Rufus saythe: Stone ooze is of water: but for it hathe more ul drinesse of erthe thanne thynges that melte, therfore they benne not froze onely with coldnesse of water, lut also by drymesse of erthe, that is myngled therwith, whan the watri partse of the erthe and glaty hath mastry on the water, and the forsayde colde hathe the victory and mastrie. And son saynut Gregory his reasone is true, that siyth that crystalle may be gendrel of water."

Crystallomancy, or divination by means of a erystal ball, was in grat repute in Elizabethan times, and is practised more or less at the present day. In divining with the crystal the operator first muttered a formula of conjuration over the hall and thon phaced it in the hands of a chaste. yonth or virsin, when the spirit summoned shortly afterwarls appearal, or the desired answor was seen on the surface. Anlorey devotus a chapiter of his Misellenis to the sulyeet of divination ly mems of at bery wr crystal, and gives a figure of a "C"nsecratel Berill" monnted on a stand. "This Berill," he says, " is a perfect sphere, the Diameter of it I guess to be something more than an Incle: It is set in a Fing or Cirels of Silver resombling the Mestian of a (ilule : The stom of it is ahout Ten Inches high, all gilt. At the form quarters of it are the Dimes of
 Cross l'atee." ${ }^{1}$ This beryl was comsulted for the eure of diseases: alnl the operator, aftor repeating the conjuration, "dit see, either the Ficeeipt in Writing, or else the Merd,"

The following formula for conjuring with a crystal ball is printed by Homplas from a mantuseript in the boritish Mnsemm. The mammeipt. lee states, appears to have been written in the reign of ofreen Filizaluth or James the F"irst (of lingland) :-

 wilt.
"First, take a chrystall stone, wr at glase, the greater the better, so that it hef fayre and "feane, without any raftes, cracke, or holes broken within; and thou most have a thonge of harte-skinn, to wappe thy stone jn, so that thy stone may be well seene in the mikdest of the bindingt ; and ever, when thot dost wrappe the atone about with the thonge, say thus: In nomin setuctor
trinitut/a I dietutis Func yenmum recomdu. Then holde the crystall stone, which is so dight in thy right lhande, against the sum, which must be done in the heate of the sum at noone, when the sun is in the lighest and hottest, and sve call him in such likeness as thou wilt by the conjuration tollowinge, and he will come and shew thee whatsoever thou wilt in all countryes, of all things, whatsoever thon wilt ack him ; and thon shalt command him to hring his followers with him, and he will bringe one Mathayas with him, and another also will come with him.

## "SEQUITCR CONJURATLO.

"Conjur vos Centony Ceton, messitone messiton, myssycon vel myceteron, quii halitatis in Bosco, ego vos conjuro et precipio vobis cum sociis vestris ut sitis parati olediendo mihi, et ad ommia precepta mea adimplendo. Conjuro te Ascaryel Alylon vel Boat, per patrem et filimn et spinitum sanctum, qui est Alpha et Omega, principium et finis, per tremembum diem Judicii, et per virtutem Dei venii, et fer ommia nomina ejus effalilia et ineffabilia. Quatemus tu Askaryell in istem gemmetn cristelinam sine mora citissime venias, in pronnia persona tua et in pulchra hominis forma et sertum in tuo capite et mihi visibiliter teipsum demonstres, et omnibus cireumstantibus cito appreas et socios tuos teeum adducas ut te et illos optissime ridere possimns, per desiderium menm et meas conjurationes et per ommia qua tili jussero. Et si hoc non feceris in virtute et per vertutem Dei, et per potestatem magnam quam Deus habet super te, ego condemmo te Ascaryel in infernum et ignem inextinguibilem usque ad ultimum Diem judicii : fiat, fiat.
"Nisi hic citius appareas, et ad ommia interrogata veraciter respondeas, et statim et sine mora cum te vocavero ad instantian meam venias omnibns horis.
"Conjuro te Askariell, per Deum patrem omnipotentem et per Jesum Christum ejus [filinm], et per Sanctum Spiritum, trinitatem personam, per virtutem substantiar ejux, per providentiam sanctam qua Deus in monte sua halouit, antea qua mundum fecit, et per bonitatem quae ommia feeit per sapientiam per qua culus suscepit, et terram deorum fundavit, per culum terram et maria et ommia phae in eis sunt per profunditatem abyssi, per quatuor elementa, et per virtutem 'fuam in elementorum confusione immissit, et per opera misericonlie et pre prestatem Dei quie lucem creavit, et diem et noctem ordinavit, $\mathrm{p}^{\mathrm{rer}}$ angelos et arelrangelos, per thronos, dominationes, 1 rotestates, principatus, et virtutes, cherubyn et seraphyn, et per eorum officia, et per corum conjurationes, et eos qui prasunt aliis, et per eos qui sub ipsis positi sunt, per firmamentum culi, et per omnia quae sub limamento et in firmamento sunt, fer ommes cellos, et omnes virtutes eorum celorum, et per ommia quee creavit Dens, ad laudem et honorem nominis suie majestatis, conjuro te Ascaryell, per duodecim patriarchos, per duodecim prophetas, et per cormum predictiones, per

Juodecim apostolos, Domini nostri Jesu Christi, per sanctam Mariam, matrem Domini nostri Jesu Christi, semper rirginem, pur quatuor Evangelistas Jesu Christi et per sanctum Evangelium Christi, per virtutem viginti quatuor semiorum incessanter canentium et dicentium, sanctus sanctus sanctus DeusSahaoth, et per eorum victoriam et sedes, per mare vitremm, quod est ante con-pectu divine majestatis, gradiens et potentiale, per quatuor ammalia, ante thronum divine majestatis, gradientia, oculos ante et retro habentia, et per ignem ante ejus thronum circumstantem ; per quatuor colestia aurea candelabra, per sedem magistratis, per thronum Dei, per altera auremm qurd est ante conspectum Dei, per lulguria, tonitras, et roces, quod egrediuntur de throno, per merita omnium confessorum, et per reliquias omnium sanctorum, et jer omnes sanctos et sanctas viryines in eulo, et per omnes sanctos quie Detum semper laudent et adorent. Quatemis th Ascaryell statim et sine mora venias, et in istum speculum citissime intres, in propria persona tua, et in pulchra forma humana, et sertum in tua capite, et visibiliter mihi, et omnibus circumstantibus citissime appareas, et socios tuos tuum adducens ut te et illos aptissime videre possimus, per desiderium meum, et per mens conjurationes et per omnia quie tibi jussero ; at si hoc nou feceris in virtute et per virtutem Dei, et per potestatem cuam Deus habet super te, ego condemno te Askariell in infernum, et in ignem inextinguibilem usidue ad diem Judicii, nisi citius hic appareas, et ad omnia interrogata mea veraciter respondeas, et statim et sine mora cum te vocavero, ad meam instantiam venias omnibus horis.
"A dhue conjuro te Askuriell, per emm qui est Alpha et Omega, et per ista sancta nomina Dei quie sunt hic, Ebel, Ahiel, Anathel, Amay, Hagyos, O Theos, Dens omnium putentias, Hiecteta, Grammaton, Oneytheon, Almaron. Stimulamaton, Elioram, Elsephares, Existon, Histerion, Adonay, Rusus, Leabacon, C'yron, Jehovah, Elibra, Eloym, Saton, Leccom, Messias, Leyfte, Letiston, Almarias, Archima, Rabur, Onela, Elbric, Elos, Egepate, Regum, Abraca, Lota, Legata, Amazim, ('hristus, Saday, Candor, Decor, Candos, Elfel, Nazarenus, Helenon, Abecor, ye, ya, El, Elion, Suay, ymas, Anabona, Emanuel, Quatenus, tu Askariell, sine mora et statim tenias, et ut supra.
"Adhuc conjuro te Askariell, per alia saneta nomina Dei secreta, पhae sunt hic, Erisiel, Deus, Apres, Eloy, Ursti, gloriosus, bonus, on, unigenitas, via, vita, manus, homo, sapienta, virtus, principium et finis, fons et origo, paracletus, mediator, agnus, ovis, vitulis, Aries, verbum, splendor, Sul, gloria, lux, et Imago, panis, llos, vitis, mons, pons, Janua, petra, lapisque Angularis, pastor, prophetas, sacerdos, athanatos, Kyros, Theos, banton, craton, ysus, igerion, Anapheneton, allinago, Ebrutone, talsea, Sameth, Agla, Hhesus Christus, Tetragrammaton, Sabaoth, Quatenus tu Askariell, et ut suıra.
"Conjuro te Askariell, per bonitaten domini nostri Jesu Cluristi, et per incarnationem nativitatem, et circumeisionem cjus, et per lapti-ma cjus, et per

زejunium ejus, et per humilitatenn, 'rua pedes discipulorum ejus lavit, per crucem et passionem ejns, et per omnes ejus panas que in ara crucis sustinuit pro redemptione humani generis totius, per coronam spineam quam in capite sulw pontarit, et per clavos quibus manus et peles ejus confixi fuerunt, et per lanceam quae latus ejus aperuit, et per aquam et sanguinem, cui de latere ejun fluxerunt, per precationem sudatam, cuam patrem sum invocavit, et per animam ejus cuam in manus patris ejus commendavit, et per virtutem yna velamen templi divisum fuit, Sol obscuratus fuit, et tenelree factre fuerunt super universam tervam, et sepulehra aperta sunt, et multa corpora sanctorum fui dormiermut surrexerunt; per haee, et ommia alia predicta, conjuro et A kariell, et preecipio tili, Quatenus statim et sine mora venios, et in istan Henmam christallinam citissime intres, in propria persona tua, et in pulchra forma humana, et sertum in tuo eapite, et mihi sisibiliter et omnibus his circumstantibus cito appareas, et socios tuos tecum adducens, ut te et illos aptissime videre possimus, et sine timore, terrore, vel nocumento, mei corpris vel anima vel cujuscunulue creatura Dei, et ad ommia interrogata mea veraciter respondeas sine fratude vel mendacio, vel dissimulatione ynacuncue, $1^{\text {mu }}$ Iesiderium meum, et meas conjurationes, et per umnia quat tili jussero ; et si hoc non feecris in virtute et per victum Dei, et pler potextatem quam habet super te, condemmo te Askaryell in infernum, et in ignem inextinguililem, usipue ad ultimum diem Julicii, fiat, fiat, fiat, Amen.
" Nixi citus hie aplareas, et al ommia interrogata mea veraciter respondeas, et statim et sine mora cum te vocavero ad instantiam mean et per praceppata nea venias omnibus horis.
"And yf he come not ut the third call condenne him suying thels.-
"Ego condemno et condemnato te Askariell in ignem eternum, et inextinguibilem, in rirtute et per virtutem Dei vivi, et per potestatem 'fuam halret super te Dens, in lacus igoix, et sulphuris, et in proma eterna sustinens haloet, et omnia alia maledicta donee prasens aprareas mihi, et totam voluntatem meam adimpleas.
"And yf he come not the first day, call him the serond; and if not the second, call him the third, until he come ; then bind him to $y$ oh, ut in aliis experimentis, \&c." ${ }^{1}$
${ }^{1}$ Ionglas, Trina Britantine, 1\%, 17, 18. Another though differently worded and lese copious ineantation (in English) for conjuring spirits into a crystal ball is printel ly Heginahl Srot (Discoucric of IHitherufft. Nicholson's ed.. In. 360-362).

## 1 N.

NOTE ON THE DISCOYERY OF AN ENCISED SYMBOL-BEARING SLAB AT EASTERTON OF Roseisle, ELGiNshire. By the Rev. JaMEs MORRISON. Cor. Mem, S.A. Sutot.

In the spring of 1894 , Mr Ditwson, the firmer of Eitsterton, in the parish of Ihflus, in proparing one of his fiches for turnips, thened up a number of hmman bones and skulls. Most of the bones when tonched ammbled into dust. Some of the skulls, howner, were get more or less entire. On examination, it was founl that a great many lodies had lren laid side hy side in shallow trenches.

Some months ago the plough struck an earth-fast stonc some 50 yards westward from the plaee where the skeletons were found. On trying to remove it, a cist-like constrnetion (tis. 1) wats found, the west side being formed hy one large slab, which was subsequently discovered to have incised on it some of the characteristic fighres of the senptured stimes of scotland.

On Tuestay, 7 th May 1895 , alonge with Me Cassie of Mopeman Free ('hureh, I went to Easterton, had a long interviow with Mr Inwson, and got full infomation as to the form and structure of the cist-information eonfirmed hy Mr Gassie, who had seen it very snon after its discovery, and before the figurel slal was moved. A rough sketeh-plan was taken by us (fig. 2), which is forwared with the notes we took. The hone-remains, which Mr Inason states were found at two points near the south-east and north-east corners of the cist, look more like home-lnst mixel with sand. Mr Dawson is to seml a specimen for examination. The chareoal fouml near the midale of the cist is also mixed with same, and some of it will also lee sent. Noar the north-west and south-east corners of the cist there were a number of white, rolled, berach stones, and with them some darker ones, from 4 to 6 inches long, romul, and about $1 \frac{1}{2}$ inel in diameter, and one oval-shaped. Some of these are flattened on the ends like hammer-stones, lut if they have been so uset, it has not heen on any rough substanee, as the ends are smonth. The whole of the hottom of the cist was roughly paved with stonos of varied shathes and (101. S.xix.
sizes. The flat stones at the sides were thickish slabs of sandstone, on which were built similar slabs, all of them unshapen, and the height was about 3 feet. There was only one upright stone about 4 feet high. The sculptured stone (figs. 3 and 4), set on edge, with the mirror, seeptre, \&e., faeing the interior, formed the west side. Although the cist had been first opened in December 1894 by Rev. Mr M'Ewen, F.S.A. Scot., and Mr


Fig. 1. View of Cist at Easterton of Ruseisle, looking North-West.
Dawson, these symbols on the face of the stome then exposed, as forming one side of the cist, remained umoticed till March following, when they were observed by Mr Dawson, and it was only on 25 th April thereafter that it was discoverel by Rev. Mr Niven of burgheal, who then risited the place along with Mr Dawson, that the other sille of the stone had tigures on it also, vic, a large bird (apparently a solan goose), and beneath it a fish. Both are singularly graceful. The cutting is deeper and more sharply defined than that of the mirror, seeptre, de., on the
opposite side. But what is still more singular, if the mirror side wats first wrought, the stone had been turned upside down when the other side was wrought, for the bird and the fish are placed reversely to the symbols on the other side; and when they are turned the right way up, those on the other side are upside down. The dimensions of the stone


Fis 2. (irommblan of Cist at Easterton of Ruscishe. suate it marly, AA. Oval and round stones. XX. Bone tust. OO. 'liarcoal.
are 3 feet 9 inches in lensth, 1 foot $R$ inches in breadth, and $7: \frac{1}{2}$ inches thick. It is just such a slab as might he got any day on the grently sloping sandstone rocks which overlap each other on the bewh to the east of burgheal, like slates on the roof of a house, and which are umber
high-water mark. On one side the sculptured stone is wasted and furrowed at the bottom, evidently by the action of the tides.

The cist has been tilled up. There was no covering or lid on it. The


Figs. 3 and 4. Sculpturel Slab, forming side of Cist at Easterton of Roseisle, obverse and reverse. ( $\frac{1}{1}$. .)
field on which it was found slopes down to a marshy swamp, a portion of the depression which extends from Lossiemouth westward through the Loch of Spynie, throngh I rainie, Duffus, and Alves, to near the mouth of the Findhom.

It is a pity that this interesting monument is to be practically buried. The proprietor of the land has gifted it to Mr Young of Siurghead, F.s... Scot., who is th place it in the harbour-ottice there, alongside of pieces of two of the Burghead Bulls, which are also kept in the same oftice.
[With reference to the latter part of Rev. Mr Morrison's paper, the secretary stated that application hal been made, on behalf of the Society, by I Ir James Macdonald, Vice-President, to the proprietor of Roseisle, for a gift of this important monument to the National Museum, but without success. The nociety is indebted to Rev. Mr Cassio and Mr Wittut, Arehitect, Elgin, for the ground-plan of the eist, and to Messers Inmrose and sons, for the loan of the blocks of the views of the cist and stone, made from photographs taken specially by Mr II. W. Voung of Burghead, F.s.... Scot., which appeared in the Reliquar!! 'mel Illustreted Arrhemotogist for July 1895 , in illustration of a paper by Mr Young, anomeing the discovery.]


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[^0]:    ${ }^{1}$ I venture to give this colophon in full, so far as 1 have succeeded in reading it, as mistakes have crept into the only published transeriptions of it which I have suen.

[^1]:    ${ }^{1}$ The Bork of IIymens of the Ancient Church if Ircland, aditel from the original menuscript in the Librarly of Trinity C'nllege, Theblin, with translation aut motes, by James Henthoru Todd; Dublin, Fasc. i. 1855, Fasc. ii. 1869. Dr Twde (Advert. 1. 2) was aware of the existence of a second copy of the Book of llymons, then in the Librany of 'St Isidore's at Rome. It is now preserved in the Franciscan llonse, Merchants' Quay, Dublin, aml I have occasionally referred to it as the "Francisean Copy." A new and complete edition of the Liber Hymnorum is now being prepared by Professors Bernard and Atkinson.

[^2]:    ${ }^{1}$ We have here, it will he seen, a confirmation of the hypothesis that the page unler review, and therefore also the Giblical portion of the MS. as we have it, was written, not ly St Molling, but by ascribe who lived a rentury after Molling's death. It is unlikely that the fame of Cummain should have led to the recitation of his

[^3]:    ${ }^{\prime}$ But see helow 11. 45.

[^4]:    ${ }^{1}$ Possibly, However, in private. [Mr Wraren regards this as the more probal)]. view. "I am inclined to think," he writes in the Academy, Jan. 26th, 1895, p. 83. " that we have here a collection of formmlie . . . intended for private use by a sick person as a sort of compound lorict or charm." He thus connects our fragment with the Oflice of the Visitation of the sick. Against this vicw 1 have given what appear to me decisive reasons in the Academy of Feb. 2 nd , p .10 F , viz. : that it is written at the end of St Johen's Gospel, the Vivilutio following St Matthew, and beines written by a different scribe. I nay now ahl one or two worls. It seems prohable, as has jnst been pointed out, that the Otlice was intemled for daity use. This is searcely eonsistent with its being said only by the sick. And we lind in its varions parts nothing specially appropriate to sickness. The hymn "Noli Pat", was : lori'a against fire and lightning. Why was protection against these more newded by a sick man than by oue who was in goond health ?]

[^5]:    1 "Thus it is our duty to sing after diuner :" to which he appends the note. " It (i.c. the story) does not appear to have much comnection with the duty of saying grace after dimer, which, nevertheless, seems to be intended as its moral, from the words 'sie' '\&u." Tomk of Hymas, ii. [1. 162.

[^6]:    ${ }^{1}$ According to the Preface to the Altus, St Columba received from Pope Gregory the (ireat "the Hymns of the Week, that is [a look with] hymns for each nitht of the week" (Reeves' Vit. Col., p. 318 s\%.), which is not without its bearing on the question of the time of flay at which our oflew was nsetl.

[^7]:    ${ }^{1}$ I quote from" The Ancient Life of St Nolyng, being translation of an whi Mannseript preserved at Marsh's Library, Dublin, with Notes and Traditions ly l'. O'T.," Dublin, James. Duffy and Sous, $\mathrm{p}, 19 \mathrm{~m}$. A description of the so-ealled "Jhook of kilkenoy, "of which this Life forms a part, may be found in a paper by the late bishof Recves, in the l'rocecdings of thr lingul Irish Academy, second series, vol. i.-loliti Literature and Antiquities, P. 339, "On a MS. volume of saints-chiefly Jrishnow in Primate Marsli's Lihrary, Duhlin, commonly called the Codex Kilkenniensis." Nic also his Lifi of" St C"humbrt, p. xxv. sq., where it is dated "thirteenth century.
    ${ }^{2}$ It onght, however, to be statel that no mention appears to be made of this puem in the story as given in the Book of Leiuster, 295 b s\% (Gillert, Natimat Manu-
    

[^8]:    ${ }^{1}$ Todl seems to have been nearer the true explanation of the phenomena of Ultan's Hymm anl others of the same class than he was himself aware. He remaks (p, 55, note 2), "The indulgence grantel to the repetition of the Hymn of St Patrick was nltimately coneeded to the last three verses of it," and then he asks, "Was it on this principle that the llymn to St Brigill eontained only the verses leginning with the last three letters of the alphabet?" If for "contained" he had written "was represented by" the question might have been answered in the affirmative.
    ${ }^{2}$ For the correctuess of which some evidence would have been welcome. The only instance given by 1r Told is a hymn which contains five stanzas. No instance, so far as I have observed, is met with in the Bangor Antiphonary or (with the exception of that now before us) in the look of Hymns.

[^9]:    ${ }^{1}$ This applies also to Psalms. See the tract Dc Arreis (Rev. Celt. Oct. 1894), cap. 13, where the words "In manns usine veritatis" are doubtless a description of the single verse Ps. xxx. 6 (A,V. xxxi, 5).

[^10]:    ${ }^{1}$ A fact which was prointed out to me by the Hon. John Abereromliy.

[^11]:    ${ }^{1}$ Anlemmani I'ite S. Columbac, Oxford 1894, 1. 144.

[^12]:    ${ }^{1}$ In 1488 , aceording to the Iivister of the Crreat S'eul, the coal or coal-hench of the King in Ardyngaith, near Linlithgow, was leased.
    ${ }^{2}$ It is evident that the spelling of Cariden has been formed from Nennins' luden, where the initial $f$ las been changel to $I u$, and lastly into $c$ : in the twelfth century, previons to Nennins' time, it must have been Cairgmithe. It is eurious to ohserve that for seven centmies in this parish there have heen, site by side, two placenames derisel from the same root word,-the one Eryngaith, imbeded in the eharter history of the lamd of the parish itself; while the natme of the parish has existed all that time in an olscure form, from the incorrect pronnnciation.
    ${ }^{3}$ Ardgaith in Aberdeenshire, contracted into Ardgay and Ardgie ; also in Ross-

[^13]:    ${ }^{1}$ A water-colour drawing and several pencil sketches were exhihited to the meeting, so as to give a general idea of the pusition of the rock and character of the markings. They were kindly matle by a lady artist, Mrs Woodcock, Suuthort, who for a time resided in the neighbourhood.

[^14]:    vol. Xxix.

[^15]:    ${ }^{1}$ Gordon in 1726, and Sir Klenry Dryden who planned this structure in 1871, call it Castle Chonil.

[^16]:    
    ${ }^{2}$ I'rue. Suc. Aut. S'ol., vol. vi., App. p. 28.
    ${ }^{3}$ Ibuil., 11) 24, 30.

[^17]:    ${ }^{1}$ Aggews and Abulius Prophetrs, the mir corrected, the other newely addred, anul both at large declured. . . . Imprinted at Lonton by William Sercs, $\mathbf{1 5 6 2}$.

[^18]:    ${ }^{1}$ The photographs will show this better than any description I can give.

[^19]:     1.cu's translation, 1876, P. 38, amI plates vi., vii., viii., and xiv.
    a Refliquie Aquitauirar, p. 100.

    * Materience pour l'Histoime dr l'Hamme, vol. xiv. p. 96.
    ${ }^{4}$ Mutcriuk, vol. xv. 1. 10, ph. ii. See also vol. xviii. p. 360 and p. 527 , and rol. xxi. p. 60 and p. 93.
    "Malson's Denske Ohlsuger, Stenalueren. 11. xl. ; Montelius, Autiquites Sucioiscs, vol. i. 1. 14.

[^20]:    ${ }^{1}$ Page 837, note.
    ${ }^{2}$ Ind Stetistical Acconnt of Simpland, vol. i. p. 316.
    : This name is spelt in a ratiety of ways.
    ${ }^{4}$ Page 343.

[^21]:    ${ }^{1}$ Rivenortm ('onjuratio, $\mathbf{1 6 0 1 .}$

[^22]:    1 Metur: spjota and Frokire : sioba are half-rhyntes, or shot-henting.
    " An old proverb: Kold cru keane rid.

[^23]:    ${ }^{1}$ Hildebrand, Industrial Aits of Sechetinarier, p. 22, fig. 10.

[^24]:    ${ }^{1}$ Mimalshletr, 18i2, p. 118.

[^25]:    ${ }^{1}$ This gronp of remains at Cauldside forms a gool ilhustration of the point I have chdeavoured to prove. Originally, there is no reason to donbt, all the three circular sites were "airns. We have no testimony proving the date at which the site, now called Stone Circle, on the south, was cleared of its heap, of stones; but the small ring of stones on the N. was, up to furty years ago, a caim, a dike chse at hand having alsorbed its stones ; while it is quite clear that, should the same fate befall the great caim in the centre, we should then lave three stone circles.

[^26]:    ${ }^{1}$ This diagram is drawn to a scale of 69 feet to the inch ; hut the stones are purposely shown on double that scale. The circle was measured by Mr T'. R. Bruee and myself in radii with the holed stone as centre.

[^27]:    ${ }^{1}$ To Mr J. W. Thomson, lately schoohnaster there, I am indebted for much information regarling the antiynities and place-names of Roxburghshire.
    2. Melitrory Antiquities uf the limarns in North Eritnin, plate xaii.
    

[^28]:    ${ }^{1}$ The Surintons of that Itk:
    ${ }^{2}$ Precectings of Itemfrie's and (fallovaly Antiquarian Society.
    ${ }^{3}$ Tytler. History of S'cotlend.
    ${ }^{4}$ Harper's Rumblis in Gullowey.
    " Hutcheson's Memoricels of Abbey of Dundrcanren.

[^29]:    1 Journut of Anat. and l'hls., July 1889. Jan. 1890, Oct. 1893, April 1s94.
    ${ }^{2}$ Piport of Cheallengir Erpudition, part xlvii. 1, 97.

[^30]:    - Tromatrions of Noun Zenlened Institut, 1s93, vol. xxvi.
    * Archur fiur Anthropulopie, 15!3, vol. xxii. $1,150$.
     Irrhisturiques, Paris, 1891. Also E'ude site lis I'turnethus mormhutugiques the cirfus dat Fimer, Paris, Is93.

[^31]:    ${ }^{1}$ In the eliff below the Free Chureh a care existed at that time, which was said to be similar to the one exposel near the gas works. A fissure was present in the roof. I dif not learn whether temains had been found in it.

[^32]:    ${ }^{1}$ For the excellent photographs of the erania from which the figures are repro. Aneerl, I am indelited to Mr W. E, Carnegic Dickson,

[^33]:    ${ }^{1}$ Meinuires sur les ussments des Eyzies, p. -23 , Paris, 1868 ,
    ${ }^{2}$ Verluend. Vuturforsch. Vercins in Brünh, Bd, xxvi., Brunn, 1888.
    *Bulletin de la Sor. d". Anthimpologic de Lyon, t. viii. 1889, Lyon, 1889.

[^34]:    ${ }^{1}$ Irocect. Soc, Ant. Scot., vol. xxvii. pp. 434 et sor\%.

[^35]:    ${ }^{1}$ Proc, Suc. Aut. Seot., vol. xxviii. p. 231,

