

DUMFRIESSHIRE AND GALLOWAY
NATURAL HISTORY & ANTIQUARIAN
SOCIETY.

FOUNDED 20th NOVEMBER, 1862.

TRANSACTIONS
AND
JOURNAL OF PROCEEDINGS
1925-26.

THIRD SERIES, VOLUME XIII.

EDITOR:
G. W. SHIRLEY.

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EDITORIAL NOTE

Members working on local Natural History and Archæological Subjects should communicate with the Honorary Secretary. Papers may be submitted at any time. Preference is always given to original work on local subjects.

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It must be understood that as each contributor has seen a proof of his paper, the Editor does not hold himself responsible for the accuracy of scientific, personal, or place names, or for the dates that are given.

Thanks are due to the Controller of H.M. Stationery Office for permission to reproduce the plan of Auchencas from H.M. Ancient Monuments Commission's Report.

G. W. S.

PROCEEDINGS AND TRANSACTIONS
OF THE
Dumfriesshire and Galloway
Natural History & Antiquarian Society.

SESSION 1925-26.

9th October, 1925.

Annual Meeting.

Chairman—H. S. GLADSTONE, M.A., V.P.Z.S., F.R.S.E.,
F.S.A.Scot., President.

The Secretary and Treasurer submitted their reports, which were approved.

Mr James Davidson moved the recommendation of the Council that the Office-Bearers and Council (see p. 3) be re-appointed *en bloc*, and that the vacancy caused by the resignation of Captain J. D. Ballantyne be filled by the appointment of Mr Robert Maxwell, solicitor, Dumfries, and this was adopted.

The President then read his

Presidential Remarks.

[Commenting on the work of the Society, the President said that he could not help thinking that the value of our published *Transactions* was "considerably enhanced by the fact that they deal exclusively with affairs of local interest, but in such a way that they are of utility to, and are worthy of the attention of, the general public." He congratulated Mr J. M. Corrie upon his appointment as Archæologist to the Scottish Commission on Ancient and Historical Monuments. He then dealt with the occurrence for the first time in Scotland

of the Black-Headed Wagtail (*Motacilla flava feldegg*, Michal), which was seen on 14th June by Mr Walter Stewart, of Airdrie, and his son, a short distance up Spango Water. He also referred to the occurrence of a Green Woodpecker seen near Kinharvie, and of a White Bernacle Goose shot at Bowhouse merse, Caerlaverock, on 3rd January, albino or albinistic geese being extremely rare.]

The Roman Wall.

By Mrs HESKETH HODGSON.

[Mrs Hodgson dealt mainly with the problems of the great Wall, illustrating her exposition by a series of fine lantern slides.]

6th November, 1925.

Chairman—Dr. T. R. BURNETT.

The Vernacular of Mid-Nithsdale.

By W. A. SCOTT.

[This individual and characteristic paper has not received the benefit of the author's revision. Shortly after it was written—on 23rd November, 1925—and while his vigorous personality and rare command of the Scots tongue were fresh in our memories, he met with a fatal bicycle accident in the course of his postal duties. Mr W. A. Scott was a self-taught man, yet his mastery of English, his love of and knowledge of the district, and of botany and other sciences are demonstrated not only in this issue but in his excellent guide-book, "*Bonnie Mid-Nithsdale*," and his contributions signed "W. A. S.," to the *Dumfries Courier and Herald*.—ED.]

Of late there has been a great revival of interest in the vernacular of Scotland. People are becoming aware of the value of the heritage they are letting slip away from them. This revival as yet has come from a wrong direction to have much influence on the speech of the people. It has come from men of culture who make a study of our language as they

make a study of archæology or any other science. They tell us about the sources from which many of our words have come, but when they talk to us about the vernacular, as they call it, they talk to us in English. Perhaps they think in English—speak English and write Scotch—sometimes. In fact education has got them, and all of us more or less, into the habit of English. We are all sheep-like in habits of speech and in other things. Like sheep on a hill, where there are no restraining fences, we follow one another along well-defined pads.

Vernacular clubs may do much to preserve the Doric conversationally; in business life and interest the predominant language must prevail. I do not blame anyone for this decay of the Scots vernacular. Mechanical transport has lessened distances and given us all a wider range. We have now a larger outlook and increased interest in the world, and a greater intercourse with people than in bygone years. We meet with so many people from so many parts that when we talk we must, to be understood, speak in the popular tongue. I do not mind this, but I do mind when I meet Scotsmen who cannot read the poems of Robert Burns correctly, and many who cannot understand the language without a glossary. " 'Tis true, 'tis pity, pity 'tis 'tis true."

I saw lately in the *Evening Times* that out of a company of six Scotsmen, five did not know the word "baudrons"—a cat. If the Glasgow Vernacular Club can help this—God-speed to it.

When Prince Henry visited Glasgow this summer and was presented with the freedom of the city, the Prince in his speech made what the newspapers called an excursion into the vernacular. That should help to make it fashionable. Referring to the size of the city as founded by St. Mungo, the Prince said Glasgow had *birsed yont*. In Nithsdale a bristle is a birse. Souters use a birse on their souter ends. If you come up Scaur you may meet a herd with a week's birse on his chin, and if you want to set up his birse ask him—"Whae's yer barber?"

As it stands, "birse yont" is wrong and "breist yont"

is correct. Had the Prince said so he would have quoted a saying of the Duke of Queensberry, who when twitted about building Drumlanrig Castle near the edge of his property replied—"Never mind, we'll breist yont."

As might be expected, it is in quiet country districts, like Scaur Water, where the vernacular lingers longest. There the children go to school to learn English. Scotch they learn at their mither's knee or at their faither's fit on the hillside. Many of the words in use have not been learned from books—the herds have never seen some of their own words in print. Some of their words are old and permanent as the names of the places and the hills in the glen. Generations of men come and go, families remove from the Glen and new people come, bringing new words with them. These seldom take root or spread—they remain for a time as household words, but rarely become permanent. During the three years I have lived in the glen I have added several words to my vocabulary—words I had not heard before. Since I began, like James Shaw of Tynron, to make a note of the words commonly used, I have been impressed with the number of words of one syllable. Like James Hogg, the "Ettrick Shepherd," herds have no use for lang-nebit words, and do not use words like "idiosyncrasy" twice in a nicht.

A word about spelling. Some people are very particular about spelling—I am not. They object to the spelling of "to" as "tae," which they say is too suggestive of your big tae. If you make suggestiveness a rule for rejecting the spelling of a word, what is the Aberdonian to do when he wants to write "fat"—"what"—and is met with the suggestion of a weightier fat. Words seldom stand alone, the pith of a sentence may be in one word, but the sense is in the whole. The words which go before or come after affect the meaning more than the spelling does.

If you come up Scaur some day, and arrive tired and hungry at a herd's house, and you are invited tae draw in tae the fire, and after being seated the wife sets out the tea and the herd looks over the table at you and says, "fa' tae, pit oot yer han' an' mak' your tea," you will not wait to consider

correctness of spelling or exactness of phrasing or pronunciation—you will juist begin.

In a weekly paper lately I noticed the word “ to-dae ”; “ to-do ” or “ tae-dae ” are possibilities, but “ to-dae ” is a tongue twister.

The frequent spelling of “ mon ” for “ man ” is an English atrocity. I never heard a Scotsman say “ mon.” It is always “ man,” and a full “ a ” at that. “ Mun ” occurs sometimes in a hurry. “ I say, mun, can ye tell me the road to Polskeoch?”

In this paper I have endeavoured to spell the words according to their sound, and will risk the suggestiveness of them.

I cannot in this paper go into the origin or derivation of words. Many of our words no doubt come from the English or Anglo-Saxon. Others are from the Celtic, some from French and German sources. When we adopt a word into the Scotch vernacular we do it in the fullest sense—we make it one of our own. We give it a new sound, and if the dress is too long we kilt the skirts of it. We adapt it to our country life. I would not say that when a word bears some resemblance to a French or Icelandic word that we have derived it from that source. Rather, it seems to me, these words show the kinship of the human family, of different people trying to express the same idea by sound.

Some years ago, when the new service uniform first came into vogue, the men who coin new words out of old went away to India or Arabia to find a word to describe the colour, and they found “ khaki,” earth colour. Dear me, there was one waiting for them at home in the old rhyme :—

Dae ye mind langsyne
When geese were swine,
And turkeys chowed tabacy,
And a' the wee dogs
Put on their clogs
Tae gang tae the midden tae cackie?

“ Sunder,” “ asunder,” and “ sunderance ” are quite good words, but not *handy* for the tongue, so we speak of “ takin' a thing sinnery ” when we take it to pieces, and

going to Tynron we keep to the right at the "sinnerance o' the road."

When this subject was suggested to me I jumped at it, like a troot at a flee; but, like a troot with a hook, I found I had caught more than I could swallow. I began consulting the dictionary every now and then, but I soon gave it up. I love books, but I do not like to work with books. I like to be imbued with the spirit of a book, but to express myself without them. Claut, says the dictionary, is a kind of a rake, and derivation doubtful. Kind of, kin' o', is a nice kindly, hamely word; as an exact scientific term, or for a dictionary, it is useless—and "a kind of a rake" is a wretched definition. If it is correct then a kaim (comb) is a kind of a rake for riddin' the hair, a slae is a kind of a haw, and a haw is a kind of a cherry, all belonging to one order, but different. And a man is a kind, a higher kind, of a monkey, and Darwin was kind of right. So rake and claut belong to the same family, but you would not take a rake to muck the byre or a claut to ted hay. As to the derivation, go back to nature and you find a dog using its claws to bury a bone, and there you are. When your leg's yeuky you gie't a claw—you scratch it. When a cat uses its claws it scratches. And when a bairn scarts oot the porridge pot it scrapes it clean inside. When do claws become nails? Words, like fouk and things, come into being and they go on and on and multiply and branch off. Some words, like the human race, fall from their first estate and become vulgar—some vile.

Land belongs to the country—you have some fine land round about Dumfries. In Glasgow it becomes a stair land-ing. "I ken him fine—he leeves on oor lan'." In the country "close" means the farm square. In Thornhill it is the space between the houses and the siver ("sire" or "gutter" all mean the same). In towns it means a common entry for houses or lands. "O aye, I ken her, she leeves in oor close." "Causey," in Thornhill, means paved. Some closes are caused wi' cobbles. In town, where the streets are all paved, you can keep the croon o' the cassey.

Recently I read in one of "John o' London's" books a

reference to the spelling of compound words. "Alright" was the word referred to. "Alright," said the writer, is a bad form of "all right"—a making of one word out of two and weakening both. Now it seems to me that we shorten "all right" but do not weaken it when we say "a'richt." Our shortened or compound words are as a rule much finer—more musical—than their English equivalents. "Won't," "don't," and "can't" are harsh and clumsy compared with our familiar "winna," "dinna," and "canna," while "mauna" (must not) has no representative word in English. "Q'way" (come away) almost "q'ay," is a fine example of shortening without spoiling sense or sound. "Kinny," "kin'o'," kind of, and "kinny weys," kind of ways, are unique. I asked a boy lately come "into the Water," "Hoo dae ye like to bide here?" The answer was in one word, "Kinny." Again I asked, "Can ye drive the car yet?" "Kinny weys," kind of ways. "Gey," very; and "geyley" and "geylies," very well or very much, are words in daily use. "Hoo are ye the day?" "Gey weel, thank ye. Hoo are 'e?" "I see the fouk doon the water are geyley (well) on wi' thir hervest." "Hoo's the fit ye hurt?" "Oh, it's geylies men'd."

"Milshey," a milk sieve, is the worst example of word shortening I know; fortunately it is seldom used in Nithsdale. It may be current in Lanarkshire. It deserves to be sent into limbo with that ugly modern abbreviation, "bike" for bicycle.

Many years ago the late James Shaw, of Tynron, contributed a humorous poem, "Wanted, a Dumfriesshire Dictionary," to the local papers. In it he makes a playful allusion to the names of people and words used in Thornhill. In some strange way he says they (the Thornhill folk) derive "Hirstanes" from "Hastings," and "Hotson" from "Hewison." This is not correct. In some strange way "Hirstanes" (sometimes the "H" was silent, "Irstanes") or, to give the old spelling, "Hairstanes," has been modernised into "Hastings." "Hotson" never came from "Hewison," but from "Howitson." "Mingies" is the old

and correct form of what is now " Menzies." In old times we had " M'Queever "—now it is " M'Ivor "—culture or politeness overleaping itself and landing in the sheuch. " Frizel " may be a vulgar form of " Fraser," only the Frizels are all dead and gone.

Ablow, under.

Abreed, taking a thing to pieces. Oor boy took his cycle abreed and could na pit it thegither again.

Addil, byre wash or midden sap, filthy liquid. I'll gie they cabbage a drap o' addil the nicht. Unfertilized eggs in a clutch are addled eggs.

Ahint, behind. Hurry up, we're gaun tae be clean ahint. A shepherd calls to his dog—" Come in ahint here."

Aiblins, perhaps. A well-known word, but not in frequent use now. As used by an older generation it had a certain tone of reverence, and might be better rendered " enabled," or expressed by " D.V." Aiblins, I'll be up on Friday.

Aneth, beneath. You'll fin' my auld buits aneth the bed.

Aneuch, enough. That 'ill dae weel aneuch. In speaking of quantity the " ch " is never sounded. The word then takes the form of " anew." Ye needna pare ony mair tatties, I hae anew.

Antrin, an odd one here and there. Are your potatoes diseased this year? O, I get an antrin ane.

Ark, girdle, a chest divided to hold meal and flour. " The midden's the mither o' the meal-ark " (old saying).

Asteer, moving about. You were early asteer this mornin'.

Athis, athisthe dyke, ayont the dyke.

Athort, athwart. Ye leave your things lyin' athort the hale hoose.

Aucht, own. Whae aughts it? Who owns it?

Ba', ball. The coppers thrown to the children gathered at a wedding and scrambled for is called a ba'.

Back, to address a letter you back it.

Baid, abode. We baid there a year—lang eneuch for sic a bit.

Baiky, wood bucket, scoop shaped, with lugs on each side, and carried against the breast, used for carrying in coals and out ashes. Heard in Sanquhar.

Bairdie, loach, small fresh water fish; rough-coated collie.

Bait, to feed a horse. Carriers had regular halting places on the road for baiting their horses.

Bake, large thick biscuit; a water bake.

Barley, breathing rest in game of Tig-tow. From French "*parler*."

Bauchles, worn-out boots, with the backs cut out so that the feet could be slipped into them without trouble; used by the herds for schloofing about the house. The word may thus be "backless."

Bauchle or *bochle* o' a body, a worn-out, useless sort of person.

Bauks, joists in byre or stable. Sometimes in a byre the hens roost there. There's twa fat hens up on the bauks.

Beet or *beit*, mend. Shaw gives this word. It is seldom heard now. Beet the fire—mend the fire. "Or noble Elgin beets the Heavenward flame." Perhaps the meaning here should be "abets," aids.

Beetle or *bitel*, wood mallet for champing potatoes. No doubt the word is from fancied resemblance to a beetle—big body and small head.

Begoud, began. Jamie was nae suner in than he begoud wi' his capers. I still hear the children in their little cur-fuffs pause and ask, "Whae begoud it?"

Be-grutten, face showing signs of tears. After her cast oot wi' Jock, Jenny cam' in wi' her face a' be-grutten.

Be-gunk, disappointment. I got a sair be-gunk efter trauchlin' owre the muir. I got nae yin at hame.

Beltanes, shearling tups. I have only heard the word once. A retired herd told me that when a boy he was sent over into Ken after some strayed shearlings. When he got to the house the old herd said to him, "Ye'll be come efter they Beltanes."

Ben, room end of a house. C'way ben and speak tae the maister.

Be na, pronounced as one word, "beeny," be not. If I be na in when ye come back ye'll get the key in the bole-hole.

Be na, sounds exactly like the first word, but means "by not" or "except." I hae nae seen Mrs L—— be na at the picnic since she was mairrit. I never was in Lunnon be na yince in my life.

Bence, the plant stool-bent. The hard stems are used by the herds to ripe the pipe.

Bendy, tea party, a country spree. One day a party of work-people had kindled a fire and made tea for their dinner piece. When I came on the scene one of the men said, "Isn't this a richt bendy?"

Benzel, blast, storm. Look at they beas' hoo they stan' wi' their backs tae the benzel.

Blirt, *bluiter*, *bluister*, burst out, sputter out. Blirt out the truth. He's sic a bluiter o' a speaker I canna make him oot. A bluister o' a day; a wet, windy day.

Blorky, a tea party. (Not common.)

Bogle, *craw-bogle*, scare-crow. Bogle man, bo'man, the scare of children.

Bole-hole, air-hole in wall of barn or stable; a square hole in the wa' near the fire, where the salt box is kept.

Boo' or *bool*, the bow for hanging pots over the fire.

Bood, must. I bood gang tae the fair—I was bound to go.

Boost, behoved. (I have seen the word in print but never heard it).

Boss, hollow. Boss as a drum.

Bottle o' strae, bunch of straw wrapped round with a band.

Bowrock, peats built into small heaps to dry.

Bowster, bolster.

Brace, mantelpiece.

Brange, go at a thing with a rush.

Branks, halter for a horse; also means the mumps.

Brat, a coarse apron.

Braw, handsome. More than that, "Abraw" is big, strong, well-built, and brave.

Brawnie, strong. A brawnie chiel.

Breek. The women land workers were the pioneers of the modern land workers' dress. They breeked their coats by tying them round the knee with their gairtens (garters).

Broch or *brough*, ring round the moon. "A far-away brough's a near-hand storm."

Broke, kitchen refuse for feeding pig.

Broose, race at a wedding.

Brosing, heated, perspiring. 'Tam cam' in a' brosing and sweating.

Bruckle, brittle.

Bucht, pen for sheep.

Budum, bottom.

Bu'k, bulk, pronounced "book." Man, I wadna gie ye the bu'k o' my thoom.

Bum, to hum a tune, to bounce or brag, to throw a stone, to go on the spree; the buttocks.

Bum-bee, the humble or bumble bee.

Bum'le, not an expert, making a bad job.

Bummer, of a large size.

Bumph, almost humph. Her claes were a' in a bump about her. A stupid fellow—A muckle bump.

Buncle. A man was pruning a rose bush trained against the wall of his cottage. A lot of stems were clustered too close together, and he said they had "got into a buncle."

But, without. I hae come away but my knife the day.

But and ben, a house with two ends, a room and kitchen.

Byous, by or 'nar', by ordinary. He was a byous nice man.

Byrn, stem of burnt heather. Shaw gives this word, and I still hear it among the herds. Far up Scaur I asked, "Do you get any firewood here?" "No a byrn tae kindle the fire."

Ca', call, name, drive, visit. What dae they ca' ye, laddie? Ca' the kye doon the loanin'. Ca' the yowes tae the knowes. Ca' a nail intae the wa' tae hing that picter on. That big dog o' yours nearly ca'd me owre. When you're up oor wey ca' in at Dalzean and we'll ca' the crack for a wee.

Ca' cannie, take it easy.

Caidgie, friendly. They were unco caidgie-weys about yin anither.

Cairry, clouds carried by the wind. The cairry's frae the north.

Canna, cannot.

Cannie, easy. A cannie job. Slow going, sure—He's a cannie chiel, Jamie.

Canty, cheery, happy. They were a rale canty pair.

Car, a rude cart without wheels for bringing in peats and hay.

Cast, cut peats; p.t., "coost." We coost peats doon there twae 'ear sin'.

Cast oot, fall out, quarrel. We coost oot about naething at a'.

Certy, an exclamation akin to "Faith!" My certy, let me catch ye at that trick an' I'll warm ye.

Chafts, cheeks, jaws. Jean had sair teeth, and had a lump o' flan'en (flannel) roun' her chafts.

Champers, potatoes mashed fine with beetle, a Hallowe'en dish.

Chap, strike, knock. Oor clock's wrang i' the chap. When ye gang tae the hoose chap at the door an' ask for the mistress.

Chappin-tanker, old Scotch measure holding about a quart.

Chaps, choose. When at school choosing sides for a game we said, "I chaps Jake," and so on.

Cheuch, tough. They 'tatae scones were a wee bit cheuch.

Chitterin', shivering. I was that cauld last nicht, my teeth were chitterin' in my heid.

Chucks, children's game played with white chuckie stanes.

Chugle, struggle. We had a gey chugle at first making the ends meet.

Clabber, mud, to cover with mud. Houses on the edge of the road get doors and windows clabbered with mud in wet weather from passing cars.

Clairoch, another form of clairy.

Clairy, mud. Come intae the hoose this meenit; see what a clairy ye're makin' o' yersel'.

Clarts, mud, also dirty wool, hiplocks from sheep.

Clash, noise, gossip, given to gossip. They ken a' the clash o' the country there, the auld wife's an awfu' clash.

Quantity—There was a clash o' hey (hay) got up yester-day. "Clish-clash," emphatic form of "clash."

Clatchin', sitting about the fire. I canna hae ye sittin' clatchin' aboot the fire like this—oot ye gang.

Claut, dic. def., a kind of rake. In common use, a turned down implement without teeth for mucking byres, &c.

Claver, foolish talk, and foolish talker; "clish-ma-claver," same as "clish-clash."

Cleps, jointed bool or bow for pots to suit one or two sizes.

Clinch, hop on one foot.

Clink, a rivet. Get the smith tae pit a clink in it. A blow—Gie't a clink wi' a hammer. Cash—The bargain's made, doon wi' the clink.

Clinker, praise for man, horse, or dog. He's a clinker.

Clinkers, ashes from smithy or furnace fires.

Clint. When a sheep gets fixed among rocks it clints, and is often difficult to get out.

Clipe, tell tale. In rick-building the one who passes on the hay or sheaves to the builder is a clipe.

Clocher, a bad cough.

Clod, throw. Bad boys clod stones at the hens.

Cloot, patch. "Pit a cloot abune a cloot, and that will keep the cauld oot." A blow—Stop that or I'll cloot yer lugs.

Clootie, the Deil.

Cloots, rags.

Cod, pillow; also to make fun of. Ye're making a cod o' me noo.

Coom, gum, small coal or dross for smithy fires, soot from pots and pans.

Coopins, small pieces, "smithereens." Tam let the jug fa' and it went into coopins.

Coothy, kindly, friendly. "I'm courtly wi' mony and coothy wi' some."

Cor'-secky, corn-sacky, a loose fitting working jacket. Heard in Scaur, but a Crawford word.

Cosey, comfortable. A cosey airm chair. A better word than "comfy."

Coupy, a coupled sheep, a sheep on its back. "Avil," East Country word; "Walton," North country term.

Craisie, sun-bonnet (the old-fashioned scoop-like kind).

Crap, boiled whey, a dish somewhat like sowens.

Creashy, greasy.

Creepie, small stool, a shudder. A weird tale or a lonesome place makes you feel creepie.

Crine, shrinking. That claith is crinin' wi' the wash.

Crotles, small pieces. Bring in some crotlie bits o' coal for the fire.

Croudie, brose made with oatmeal.

Cruive, a pig-sty.

Cubbie, familiar form of "Cuthbert." A nervous person—
You feared cubbie.

Cuddy, a donkey.

C'ue, *clue*. A c'ue o' yairn, a ball of wool.

Cuities, *cuits*, the ankles. "Cuiti-kins," endearing word for children.

Cuitle, to curry favour. I wadna cuitle doon tae him for anything.

Cum, sweat on ice when frost begins to yield.

Cutbear, red home-made dye. I had heard the name, but only discovered by accident from the dictionary that it was called after Dr. Cuthbert Gordon, who first made the dye on a commercial basis.

C'way, come away.

Daffin', fun, frolic.

"Till wi' laughin' and wi' daffin' oor heids wad giddy grow,
And we baith held thegither on the auld quarry knowe."

Dagon, a large wood candlestick set on the floor to light the house. This may be a one house or one family word.

I have only heard it near the head of Scaur.

Daidlay, a pinafore. Years ago all schoolgirls wore daidlays.

Daidle, potter about doing little. He juist daidles aboot daein' noch.

Dail, in school games the home position of the opposing sides. In Stinky-dails each side went to its own dail,

from which one ran out and was chased by one of the other side. If caught that one became a stinky, and stayed until relieved by one of his own side.

Dail, a board, a shelf. In some houses a series of shelves like a press without doors were called dails.

Daised, stupid. The man was daised wi' drink. Wood without any strength in it—The shank o' that axe was fair daised, nae winner it broke.

Dang, dic. def., a minced form of damn. May be sometimes, seldom so used in Nithsdale. Jock ran against me wi' sic a bang he nearly dang me owre.

Daud, a large piece. A daud o' scone and butter. A blow—
"Moral 'suasion's a' hung-bug;

There's nae persuasion like a daud i' the lug."

Dawkie, dull, thick, damp, not much wind. A dawkie day.

Deedle, dandle a child. Lilt or deedle, a tune without words. I have seen girls dancing to one deedling the tune.

Devert, more frequently "Dod-devert," an exclamation of astonishment. Dod-devert, I've come away tae fish without my heuks. (Possibly a pious expression gone astray).

Dicht, wipe with a cloth. "Dinna dicht till ye're dirty."

Ding, a nudge. Wauken him up, gie him a ding wi' yer elbow.

Ding doon, knock down. Stop that jumping aboot, ye're like tae ding doon the hoose.

Dingle-dousie, a wee stirring lassie.

Dinle, tingle, a knock on the elbow. Gars yer airm a dinle.

Dirdum, fuss, bother, temper. It's nae use gettin' in sic a dirdum aboot it.

Dodderie, feeble, not able for work. He dodders aboot.

Doited, senses numbed with age. Puir man, he's gane fair doited.

Donnert, stupid. I wrocht wi' they cross-word puzzles until I was donnert.

Dook, a bathe in the river.

Dorty, saucy. She's far owre dorthy for a herd's hoose.

Plants easy to grow are said not to be dorthy.

Douf, tired, weary.

Doup, bottom end of a candle.

Dousie. I had this word marked "lamp," and then learned what it was. In old days when burning the water was practised, a broom was cut and dried, the stems tied together and dipped into pitch to form a torch, which was lighted when the work began on the water.

Douse, kindly, loving, lovable.

Dover, forty winks.

Dreich, long, wearisome. Dreich-in-the-draw, slow to give.

Drugget scones, oatmeal potato scones.

Duist, same as "juist," just.

Dunt, a blow. "And auld Penpont, wha in the frunt
Aft bore the brunt o' battle's dunt."

Dwalm, a faint.

Dwining away. A pathetic word—consumption.

Faceable, feasible, presentable. Quite a faceable story.

Faigs, faith. A minced oath.

Fankled, tangled, a burble. A ball of yarn or twine sometimes gets into a fankle.

Fanks, sheep folds. A north country word not often used but quite well known in Nithsdale.

Farl, quarter of rolled circle of oatcake or scone.

Fash, trouble, bother. Gang on doon the road, nae yin will fash ye.

Fa' tae, begin. Herd's grace before meat.

Fau'red, favoured. Weel fau'red, good looking.

Feck, the greater part of anything. I see ye hae got the feck o' yer hay up.

Fecket, semmit, woollen undershirt.

Feckless, thriftless, persons without energy or forethought.

Fell, clever. He's a fell wee callan.

Fen, *feny*, capable of taking care of one's self. The weans are like young pairtricks, they fen for their sels as sune as they're oot o' the shell.

Fencing the table, communion address in churches. I like the practice but not the words. The phrase is dying out.

Fergie. *My fergie*. Exclamations of astonishment.

Ferlie, to wonder, something unusual. What are ye ferliein' at noo.

Ferniticle, freckle. " Ferniticle never sat on a dun skin."

Fettle, form. Are ye in guid fettle the nicht?

Fey, made mad by the gods.

Fiech, filth.

Fiel, soft, nice to the touch.

Fient. I am loath to associate this word with " fiend." I would give the meaning as " scarce," " hardly," or " not one."

Firdom, sometimes *Dirdom*, fuss. What's a' this firdom about?

Firy, sultry, thunder in the air.

Fladge, applied to a lazy, sluttish person who gives an un-gainly appearance of activity.

Flair, flatter. I dinna like fouk flairin' aboot me.

Fleech, entreat or cajole. " It's better tae fleech a fule than fecht him."

Fley, fear. I got an awfu' fley comin' hame in the dark last nicht.

Flichans, light flakes of anything. A flichan of soot clinging to the bars of a grate indicates the coming of a stranger. It's cauld noo, I see some flichans o' snaw in the air.

Flinners, splinters, broken all to bits.

Floorin', embroidery with the needle.

Flype, turn inside out, turning the leg of a stocking over the foot to get it on easier.

Flyte, scold.

Fob, pocket for watch in headband of trousers.

Footer, a slow, bungling work. Perhaps from " flutter," a lot of fuss for a small flight.

Forment, opposite, right in front. Druidhall sits richt forment ye as ye come up the road.

Forrit, forward. Farmers are weel forrit wi' their wark this back-en'. Gang forrit, step to the front.

Fots, spats or gaiters for children's legs.

Fow, hay fork, stable fork.

Fozzie, soft, spongy, rotten at the heart.

Frush, brittle, easy to crumble.

Fu', fou, drunk.

Full, proud. He has on a new suit the nicht, and he's gey full aboot it.

Fumble, grope about in the dark for anything with the fingers.
Fushionless, tasteless, without any strength.

Gab, mouth. Gift o' the gab, plenty to say.

Gair, green gairs, strips of green grass on a hill side where a trickle of water comes out.

Gairy, precipitous rocks. A word known but not often heard in Nithsdale.

Gar, make, do, compel. I'll gar ye dae what I bid you.

Garfa, laziness. Sair bothered wi' the garfa (garpha).

Gate, road. I have often heard the old people in Thornhill say "doon the gate" for "down the street." "Away hame tae yer ain gate en'" was often said to noisy weans on the street. Of a wilful person, "Gang yer ain gate."

Gaunt, yawn, sign of weariness. What are ye gaping and gauntin' at?

Gaupie, gilpie, a heedless lassie.

Gawkie, awkward.

Ged, a pike.

Geg, a favourite game with boys on dark nights. The object of the game was to get the geg into the dail without being taken. If "geg" was written "keg," then the game was playing at smugglers.

Gegs, painful cracks in hands or feet.

Gellock, a pinch or crowbar.

Gey, very. Gey weel, very well; gey sair, very sore.

Geyley or *geylies*, fairly, or very well. "'Hoo are ye the nicht?' 'Geyley.'" The fouk doon the water are *geylies* forrit wi' their turnips.

Gibbie, familiar form of Gilbert.

Gibbies, moths. I think "Gibbie" is an old name for a lantern. I have heard a turnip Hallowe'en lantern called a "Girning-Gibbie."

Gie, *gie't*, *gie's't*, give, give it, give us it.

Gin, if. Gin I had tae dae it owre again.

Gird, a hoop.

Girn, a snare, ill-natured. What are ye girnin' about?

Girnel, meal ark.

Glaff, fear, startle. What a glafl ye gied me.

Glaiket, thoughtless. She's a glaiket lassie yon.

Glam, grab at.

Glaunch, frown.

Glaur, dic. def., a Scotch form of "glair." "Glair," the clear part of an egg used for varnish. "Glaur" is "mud that sticks." Oor man cam hame glaur tae the een holes.

Gleet or *gluit*. Dampness followed by frost causes a gleet on the grass and a slippiness on the roads.

Gleetin', stiffening. Long ago when sun-bonnets and steys (corsets) were made at home, some threads of coarse cotton were drawn into casings to gleet them.

Gleg, quick, clever. I'm rale gleg i' the hearin' yet.

Gleyed, off the straight. Ye've gane gey gleyed wi' they furs (furrows).

Gliff, a swift glance. I juist got a gliff o' him gaun by.

Glowr, stare.

Goite, a child. A wee gabbin' goite.

Goller, roar like a bull.

Gorb, a bad boy. A "herry-gorb," one who herries bird nests.

Gorlans or *gorlins*, young birds in nest.

Gorroch, a mud hole.

Gouf, to hit a ball with the hand in the game of Han'-an'-hail.

Gouf, same as "coof," a stupid fellow.

Gouk, gowk, cuckoo, a fool.

Gowl, howl, a loud greet.

Goupen, both hands held together open. A goupén fu' o' nits.

Gouster, thrawn churlish person. Goustery weather—wet, windy.

Grannies, hairy caterpillars.

Grape, grope. It was that dark I had to grape along the wa' for the door. A kind of spade with four or five prongs for mucking a byre or stable, or houkin' tatties. When the prongs are turned down claut fashion, it is a "dreg" or "hack."

Grime, smut off pots and pans. Ye hae grimed your apron wi' the pot.

Griming o' snaw. I cannot but think this is wrong. Grime and snow are so contradictory. I know that "griming" is given as "sprinkling." This year I thought I got a clue. One morning a herd said to me, "There's a greyin' on they hills this mornin'." Greying, greyning, grining—a thin sprinkling of snow. Or could the word have come from "rime" or "rine," hoar frost, and at one time have been "kriming"? This would connect the word with frost and snow.

Grue, shudder, something that makes your flesh creep.

Guddle, catch trout with the hands.

Gue, bad taste. That butter has a gue wi't. James Shaw makes a slip with this word. He connects it with "gull." "It was that that give me the gull at him." The words are different. A person can gull me with a cock-and-bull story, but he has to do a mean trick to give me the gue (distaste) at him. French, *goût* (taste).

Guid-heavy-cairries tae! an exclamation of astonishment.

Guist, pleasant taste. An old woman who lived by herself in Moniaive took the Book herself every night. It was the custom then in the churches to read the line for the singing, and this Godly woman followed the practice. On being chided for this she answered, "I like to guist my gab twice wi't."

Gyte, daft, mad. Gane gyte.

Haar, mist hanging on the grass. That haar is lang o' liftin' this mornin'.

Hafty, smooth flat stone used in the game of hafties or beds. "Peever" is, I think, the word now in use.

Hag, chop or split wood.

Haik, rake, rove. Where 'e gaun haikin' tae the nicht?

Hail, goal in game of Han'-an'-hail played with hand-ball.

Hannah, milking pail with handle on one side. "Leglin," East Country word.

Hantle, a lot. A hantle o' fouk wad be gled o't. It wad suit ye a hantle better if ye cam hame suner at nicht.

Harn, perhaps from "hardened," a good skin on scones. A scone not fired enough is not harned.

Hash, a large quantity. I got a hash o' hey up yesterday.

Hass, opening of the throat. "' There's something stuck in my hass.' ' Hask it up then.' " The head of a pass—At the head of Mennock Pass there is a house called Hass Cottage. "Hause" occurs in Cumberland.

Hate, nothing (no-whit). "' Did ye get onything up at that hoose?' ' Not a hate.' " Deil hate, nothing at all.

Haur, a big lot. There was a queer haur o' bramles (brambles) at Chanlock this year, and a haur o' fouk efter them. Untidy person—She's a dirty haur. Haul or drag—I canna cairy mony sticks noo, but I can haur a wheen hame yet.

Hease, *hoise*, ease or hoist. To a person lying, hease or hoise yersel' up a bit.

Heigh, high. The heigh en' and the laigh en' o' the hill. In Scaur "heigh" is north, and "laigh" is south. The wun's away laigh the day.

Hilch, a halt from the hip in walking. He walks wi' a hilch. A lift—Gie't a hilch on tae my shootther.

Hirsel, ease. Hirsel yont a bit.

Hoast, a cough.

Horking, sit cowering over the fire. I canna hae ye sit horking about the fire a' day.

Hotch, fidget, sit uneasy. What are ye hotchin' aboot?

Hotchin', in big numbers. The hares are juist hotchin' in that meadow. This week I heard it in a peculiar form: The sea troots are fair hotchin' doon in that pool.

Hotter, a crowd of small things. The wean's face cam oot in a regular hotter. The mauks were in a hotter on that ewe.

Hottering, bubbling and boiling. The porridge were hotterin' on the fire.

Hou, hoe.

Houk, dig.

Hoy, a hail. Yonder's Glen, gie him a hoy. Hurry—Noo, hoy on as fast as ye can.

Hudder, crowd, rather a mixed crowd. We met Chanlock sheep at the bend, an' afore we could dae ocht they got mixed. I never saw sic a hudder.

Hudderie-dudderie, ragged, dirty, untidy. A hudderie-dudderie lot about Glen-Scobin.

Hunker, sit down on your own legs.

Hurkle-doon, crouched. We hurkled doon ahint the dyke till the shoor blew by.

Hurl, a ride in a cart. "Whurrel" with "w" left out.

Hurly, a wheelbarrow; a low bed on castors for children, pushed under the other bed by day, brought out at night.

Hyke, hulk. She's a big lazy hyke.

Ilka, each, every. "Ilka lassie has a laddie."

Ingle. Ingle stane, hearth stone.

Iz, us. Yer no' gaun wi' iz, you're not going with us.

Jag, prick with anything sharp, jaggy, full of thorns like briars and thistles.

Jauner, a man given to talk, to put off time talking. He's sic a jauner when he begins.

Jaup, splash.

Jaw, throw out water or slops.

Jebble, to spill a liquid in small drops.

Jib, a small drop. There's a wee jib in the greybeard yet.

Jibbin's, last drops of milk from a cow.

Jimp, small.

Jink, to skip to the side, dodge. We jinked in by the back door.

Jirgin' or *jirkin'*, squeaking boots.

Jook, same as "jink."

Jorgin', *Georgin'*, noise made by boots when full of water.

Jow, swing the bell.

Juist, just. Juist 'e noo, just now.

Jundy, jolt. I gied the thing a jundy wi' my airm and it fell and broke. I fell this morning and gied mysel' an awfu' jundy.

Ken, knowledge. I ken. What I don't know I dinna ken.

Kennin', a very small piece. "' Will you have a little more cheese?' ' Weel, juist a kennin'.' " You're gaun tae Chanlockheid; keep a kennin' to your left at the stell, and you'll get the pad.

Kent, a cudgel.

Kep, stop. O, man, kep they sheep, dinna let them through the slap.

Ket, dic. def., carrion, matted wool. I have heard it more frequently applied to peat. Ketty peat is fibrous peat—peat with a lot of strong roots running through it, making it difficult to cut. Touchy, cross—Weel, guidman, ye need na get sae ket about it.

Kist, box, trunk, chest. Tam's bringing up the lassie's kist the day.

Kite or *Kyte*, the belly. A weel-filled kyte.

Kittle, ticklish, difficult. The slater had a kittle job the day gettin' that can on wi' the wun'. Quick-tempered—He's kittle to flee intae a temper at the least thing. Dangerous—He's a kittle customer yon.

Kittly, easily tickled.

Given, a small bit. Probably a form of " skiven." Only heard once.

Knittin', an old name for tape.

Laager, clinging dampness on grass in the morning. That laager's lang in liftin' this mornin'.

Laigh, low. It's a nice hoose, but unco laigh in the ceilin'. South—The wun's away laigh the day.

Lamp, long step. He has the rale herd's lamp. I saw him gaun lampin' doon the road.

Lank, long and thin.

Lap, leapt. " Kate lap owre the mill dam, and owre the mill dam lap Kate."

Lapper'd milk, milk turned sour and thick.

Lap-stane, stone used by souters for hammering leather on.

Lappy, familiar form of " Dunlop."

Leash, an active sinewy man. I kenned him when he was young; he was a leash chiel.

Lefty, shy, blate, bashful. Not common.

Linkin', to go arm in arm.

Lippen, trust. A familiar word. Noo, can I lippen on you?

Loot, bend down, stoop. I looted doon tae tie my steeker.

My heid bodders me; it's warst whan I loot doon.

Losh. *Losh, keep me*. Exclamations of astonishment.

Lown, calm, still. It's lown the day, there's no' a pue (puff)
o' wun'.

Luggie, same as Hannah.

Lugs, ears, handles. To lift or drag. Gie's a lug up the
road wi' my kist.

Lum, chimney. John Lowrie's wee roun' lum reeks clearly.

Lun'ering, *lundering*, a thrashing, beating with a stick.

Lunkie-hole, a hole in a dyke to allow a sheep to pass through.

Luppin-shinen', sinew in hand or wrist, sprained and out of
place.

Lusk or *lisk*, the groin.

Maik, a penny.

Marrow, mate. "My winsome marrow." Equal—You'll
no' find its marrow in the glen. Neighbourly, lending a
helping hand—Chanlock, Glenmano, Polgowan, and Dal-
gonar marrow with each other in the handlings.

Mask, infuse tea.

Maukin', a hare.

Mauks, maggots on sheep.

Maunt, stutter in speech.

Meeting-house, name formerly given to dissenting places of
worship.

Megstie, *Mergie*, exclamation of wonder.

Mense, grace, modesty. Think black burnin' shame, hae ye
nae mense aboot ye. Set oot the cheese, it wull aye
mense the table.

Merkins, dead lambs. I had never heard the word until I
came into Scaur. One stormy day in April this year I
heard the word four times. It was a bitter cold, stormy
day—bitter snow showers. Then I heard one after
another say, "There will be a lot o' merkins the day."
A common word in Yarrow.

Milsie, milk sieve. Lanarkshire term.

Mint, attempt, try. A word I have not heard since boyhood.

I would not mint at sic a thing—I would not try it.

Mirk, dark. A black, mirk nicht.

Mochy, warm, moist. A queer mochy kind o' a day this.

Mools or *Mouls*, the ground, soil. It often has a kirkyard sound.

“When I'm laid among the mools.”

“O think na but my heart was sair

When I laid the mouls amang his hair.”

Moul'ie, cheese affected with mould. A mean person is said to be moul'ie.

Muck, dung. Muck the byre, clean the muck out of the byre.

Muckle, *meikle*, big, a shallow pail for working up butter in.

Muller, to crumble down, turn to dust.

Mullins. Bread or oatcake carried in the pocket crumbles into mullins, little bits.

Mushlum, mixed. Scones made part flour and part oatmeal are mushlum scones.

Mutch, a woman's house cap. A nicht mutch.

Nap, a short sleep, forty winks, to make fun of. You're taking your nap of me. Napping hammer. Napping stanes, breaking stones.

Nebbuck, cheese.

Ne' fu', neive-full, cut short.

Neives, fists.

Neth, under.

Neuk, nook, a small corner. “A neuk o' Auld Kirkbride.”

The neuk of a plaid.

Niffer, swap, exchange.

Nile, the naval.

Nocht, nothing.

Noddy, a small coach with entrance at back. I have only heard the word and been in the thing once in Sanquhar.

Notional, full of fancies, a bee in his bonnet. A notional kin' o' body.

Nympt, really “yimp,” short measure.

Ocht, anything. I dinna want ocht ye hae.

Ocht, ought, duty. They ocht tae fence that bit o' road.

Orra, odd. Orraman, oddman.

Oxter, arm-pit.

Packies, gloves with fingers all in one.

Pad, path.

Paik, dic. def., a beating. Shaw gives "a low character."

Often used to describe a beating at a game of bowls—

"Oor club got a paiking last nicht at Penpont." A schoolboy may say — "I got my paiks (licks) at the skule yesterday." A hen which dabs or pecks the others paiks them. A woman who does not get on well with her neighbours or servants is an auld paik. I have not heard it used to describe a low character.

Pally lambs, small ill-grown lambs.

Pap, a light tap with a hammer, walking or working slowly.

Keeping papping on.

Parrack, small covered shelter for ewe and lamb. A very small room in a house is a parrack o' a place.

Pech, *pechan*, breathing hard, panting. I ran till I could hardly pech. That brae tak's the pech oot o' yin. I declare I'm fair pechan wi' the heat.

Peerie, a boy's spinning top.

Pickle or *puckle*, a small quantity of anything. A wee pickle tea.

"Yin's nane, twae's some,

Three's a pickle, four's a pun."

Pig, crock-pig, a large earthenware jar for holding milk, &c.

Pig, earthenware, delf. Long in Thornhill, a hawker who sold delf was a pig-man. In Mid-Lothian they were called Muggers.

Pile, a grain, a small quantity. "Is your corn a' in?"

"Every pile o't."

Ping and *pung*, schoolboy words for stone throwing. Ping him wi' a stane. That was a pinger.

Pingin', complaining, peevish. I'm fair pingin' wi' the cauld. I could juist sit pingin' owre the fire.

Pirl and *birl* are much the same. But I am told there is a difference. You birl a coin when you spin it on a point of the rim. You pirl it when you make it run along the

floor on the rim. Yet you birl a wheel round when you test it, and on a cycle you go down the brae as hard as you can birl.

Pirn, a reel.

Pirnie, a night-cap.

Plook, a pimple.

Plot, bathe in hot water.

Plouter, mess or messing with water; a messy worker.

Pookin', moulting. Oor hens are no' layin' the noo, they are a' pookin'. A slight tug to call attention. Wooing—A' the lads are pookin' at her.

Pouse, rug the hair.

Pow, the front lock of a horse; with a man, either his head or his hair. " Blessings on your frosty pow." " They've little wit in their pow wha licht a candle at a low."

Pow-heads, tadpoles.

Preen, pin.

Pue, puff. It's very still, there's no' a pue o' wun'.

Puist, comfortable, fairly well of. Scaur water herds are puist fouk.

Purl and plain, loops in knitting stockings; rig and fur.

Radical basket, shopping basket with lids. From " Reticule."

Rake, gather. Rake the fire; gather the fire, so it will keep in for a while.

Ram-stam, reckless, going head on at a thing, like a ram going into a fight, eyes shut.

Rangle-tree, *randle-tree*, iron bar across chimney for hanging pots over the fire. From " Rowantree." Originally, no doubt, a big wooden sway reaching from floor to rafters, for hanging pots over fire on open hearth. " The cat ran up the rangle-tree wi' a lump o' reid raw liver in its mouth."

Rauchle, rough.

Rax, reach, stretch. " Rax me my staff and plaid." When cramped with sitting a man will rise to rax himself. After being in the house a' day I took a turn tae rax my legs.

Reachin', straining. Bouking and reachin' when the stomach is on the heave.

Ream, cream. Ream the milk, skim the milk.

Reek, smoke.

Reeves, faulds, fanks, sheep folds.

Reisted, dried. Hams are hung from the ceiling to reist.

Rid, a comb. Rid your heid, comb your hair.

Rile, unravel. Ye maun rile oot that stockin' tae the heel.

Rile, make angry.

Rime, hoar frost.

Rin, run.

Rinnens, King's evil, running sores.

Rins, selvedge cut from cloth. Tailor's rins.

Rook, leave with nothing, empty the pockets.

Rouke, hoar frost.

Sab, sob, greet.

Sad, sodden, firm.

Sair, sore.

Saugh, willow.

Sausters, dainty unsubstantial food. Nocht noo-a-days but tea and sausters.

Scairy. Shaw gives this word, but the introduction of "shadow" into his definition rather confuses one. I never understood the meaning until I lived among the hills. "Scairy" is the brightness, the glow of the sun or moon on the sky before they appear. At the handlings a herd will start from his house to gather while it is yet dark. One morning Shiel started early for Chanlockhead, and they told me there they just saw him against the scairy on the hicht when they came out. That is, they saw him against the brightness of the east. Again, I was asked when I got home on Saturday night, and I said the moon rose as I came past Chanlock. The reply was: "Ye hadna been far ahint me, for I saw the scairy o't when I got tae the door." Standing at Dalzean door one night this autumn, we saw the scairy of a motor coming up the glen—the play of the head lights on the hill long before it came in sight.

Scart, scratch, scrape. A wee lassie will say, "The cat scarted me," or, "Mother, can I scart oot (scrape out) the jeely pan?"

Scaud, scald.

Scawed, faded. That coat o' yours is a' scawed wi' the sun.

Schlate, *schlater*, slate and slater. The armadillo wood-louse was always called a *schlater*.

Schlent, slant. Tak' the hill on the *schlent* and you'll clim' easier.

Scoor, scour, wash blankets or wool. I'm thrang *scoorin'* clarts the day.

Scoory-looking, vagabond-like. A *scoory-looking* character.
Scoory day, wet stormy day.

Scouder, scorch. Cloth burned with hot iron is *scoudered*.
Potatoes stuck to the pot are *scoudered* or *girsled*.

Skraich, screech, yell.

Scrogs, dwarfed ill-grown wood; Chanlock *scrogs*.

Scrunt, plant or animal ill-grown. A *scrunt* o' a body. A mean *scrunt*.

Sech, sigh.

Seke (seek), seep, eke, ooze out like sweat, to search through.

Years ago I saw a barrel of treacle at a shop door in Thornhill, with the contents slowly oozing through the seams. The grocer said: "It's queer that treacle will seke through a barrel that 'ill haud in water."

Schauchle, gleyed, off the straight. Ye hae cut that claiht a' shauchled. A useless person—A *shauchle* o' a body.

Shave, slice. A shave o' loaf, a slice of bread.

Sheuch, a shallow ditch. Keep oot o' the *sheuch*.

Shile, grin. What are ye shiling at?

Shin, a rocky ridge jutting out from the hill.

Shinty, well-known game, also a row, a rumpus.

Shog, shove, shake.

Shogly or *shugly*, shaky. "Gied the infant world a *shog*."

Shoogy-shoo, see-saw, up and down swing.

"Trony, trony, trontibus,

Where did I get you?

I got ye ahint the nettle buss

Playing *shoogy-shoo*."

Shool, shovel. When playing at bools, to jerk forward with the arm when knuckling was to *shool*. "Heavey" is the Galloway word.

Shunners, cinders. Tak oot the shunners.

Sib, friendly. Owre sib wi' the de'il.

Sic, such.

Siccar, sure, safe, steady. A gey siccar chiel, Wullie.
Mak' siccar.

Sin, syne, since. Lang syne. I hae na seen Jamie sin the
clippin'. Wash up—Syne oot the basin.

Sing, *singe*, p.p. *sung*, burn with hot iron. A sheep's head
to make sheep's heid broth was taken to the smiddy to
be sung.

Sinnerance, sunderance, parting of the ways, where road
forks. The sinnerance o' the road.

Sinnery, asunder. Take a watch or clock sinnery.

Sipe, drain the water from. Sipe they potatoes. That
meada has siped weel the day efter the rain.

Sizzle, burn, the noise made by burning. Sizzled ham, ham
scorched in frying.

Skail, disperse, scatter, spill. I was there when the kirk
skailed. I was sent oot tae skail dung. The boy skailed
the sugar on the road.

Skech, pinch, purloin, something like "scrane." He's aye
lookin' aboot for onything he can skech.

Skelly, squint, to go off the straight. You made a big
skelly when ye landed at Chanlockfoot instead of Dal-
zean.

Skelp, a slap with the hand, a skelping wi' the tawse. In
summer the bairns skelp bare-fited tae the school.

Skite, glancing blow. A skite i' the side o' the heid.

Sklenner, a slide of stones on the hillside.

Sklidder, to slip as on ice. Skliddery, very slippery.

Skloof, shuffle the feet. Lift your feet, man, what are ye
skloof-skloofin' at?

Skriffen, thin skin over calves and lambs when born.

Skult, smack with schoolmaster's cane on palm of the hand.
You got a scud or skelp with the tawse. Skult with
cane.

Slairk, smear with anything sticky. Look, you're slairking
your pina' wi' the syrup. I declare, when road repairers
are aboot everything's slairkit wi' tar,

Slipe, sledge. To bring home peats from the moss on a sledge is to *slipe* them.

Slork, clumsy supping or eating.

Sluch, *slough*, pull the wool from a dead sheep.

Slug, *sluggie*, a jerkin or loose fitting working jacket.

“Cor’-secky,” Lanarkshire word.

Sluiter, mess with water. Washing in the kitchen makes a *sluiter* o’ the hoose. *Sluiter* o’ a day, wet day. Untidy person, a messy worker.

Slunge, lazy. A cross between a sponger and a lounge, with the worst qualities of both.

Smeek, smoke. In old times it was the custom at the end of the season to *smeek* the bees to get the honey.

Smuist, back-smoke. Smoke drifting down one vent from another causes disagreeable *smuist* in a room.

Snauchle, useless. A *snauchle* o’ a body.

Sneck, door latch. *Sneck* that door.

Snosh. Shaw gives this word as “comfortable.” I have never heard it be na as a slang term for impudence. Gie me nane o’ yer *snosh*.

Sos, word used in rick building, the same as “solt” or “sault.”

Sottering, boiling, the same as “hottering.”

Souricks, *sourocks*, *sorrel*.

Souter, shoemaker; in games, a total defeat, without the opponent scoring anything.

Souter-end, lingle-end, thread used by shoemakers.

Sowans, dish made from oat seeds steeped and the liquor drawn off and boiled.

Spails, chips from woodman’s axe.

Speet or *speek*, rods on which the wicks were hung for dipping in tallow candle making.

Spelk, splinter of wood, one that runs into hands or feet like a thorn.

Speil, climb.

Speir, ask. I’ll no’ loss far, I can aye *speir* my wey.

Sprauchle, sprawl, scramble. We *sprauchled* up the brae.

Spung, purse or spleuchan. I have heard old men call the fob watch pocket a *spung*.

Spunk, a match, life, energy, go. Man, hae ye nae spunk in ye.

Spurtle, pot stick.

Stance, passage from kitchen to room.

Stap, stop a hole. Stap something in that bole-hole tae keep the cauld oot. Cram—Stap they sacks as fu' as ye can.

Staucher, stumble. I stauchered whiles.

Steek, stitch, shut. Min' and steek that yett.

Steeker, a bootlace, a whang.

Steer, stir. There's an unco steer on the day.

Steg, stiff, a long step without much spring in it. I saw him gaun stegging doon the road. *Prick*—A steg of a thorn. A steg of a needle.

Steive, strong.

Stey, steep. "A stout heart tae a stey brae."

Stays, stays, supports, corsets.

Stoor, dic. def., dust in motion, dust anywhere. The mantel-piece is covered wi' stoor.

Stot, *stotter*, *stottery*, trip, stumble. My fit caught a stag and I gied a great stotter. He's getting kind o' stottery or tottery-weys on his feet.

Strang, urine kept for washing blankets and wool. Also used in home-dyeing with Cutbear dye. English word, "Lunt."

Strauchle, struggle. It's a sair strauchle'comin' up the glen when the snaw's on the road. I had a sair strauchle at the start tae make ends meet.

Stridle, legs stretched apart. Ride stridle-legs, a leg on each side of the horse.

Strunts, take the pet. He took the strunts and wadna come wi' us.

Study, anvil, rarely "stythie."

Suein', hands itching and smarting after being stung with nettles.

Syle, milk sieve.

Taberin', belabour, beating. I gied that dog a taberin' wi' my stick yesterday for traikin' away.

Tade, a toad.

Taigle, hinder. I was taigled in the toon when I was doon the day. I taigled (put off time) on the road for Tam tae come up. He's sic a jauner his tongue taigles his legs.

Tairger, a scold, a worker always in a hurry and raging as she goes. An awfu' tairger.

Tally, tallow. Tally-iron, old-fashioned iron for ironing mutches, so called from its shape like a tallow candle.

Tangs, roots, particularly of teeth when drawn.

Tappin', a crest. Cairnkinna has a tappin', a cairn on the top. Hens with a crest are tappined hens, though a tappit hen is very different.

Tap-sil-teerie, upside down.

Tate, small quantity. A wee tate mair sugar, if you please.

Taupie, senseless girl. A muckle taupie.

Tauted, matted. Kaim his tauted hair.

Taw, bool for knuckling with.

Teem, pour out.

Tent, watch, mind. Tent they sheep a meenit. Tak' tent, take heed.

Teuch, tough, same as "cheuch."

Thack, thatch.

Thee, thigh.

Thir, these. Tak' thir sheep tae the faulds.

Thrapple, the throat.

Thraw, twist. "' Mither, that wee hen's beginnin' tae crawl.' ' Thraw its neck, then.' "

Thraw-crook, wylie, crank for twisting ropes of hay or straw.

Thrawn, twisted, bad-tempered. He has aye an awfu' thrawn face on him.

Threep, argue. Wad ye threep doon my throat that black's white?

Thruch-stane, flat stone over grave.

Thruch-through. I never heard the phrase till this year.

When some young beasts were turned out for the season to fen for themselves, I asked, "Is it not too early?"

"Oh, no, they'll thruch-through (pull through)."

Tid, mood, humour. I can work best when the tid's on me.

Tig-tow, children's game, mild courtship. They're *tig-towin'* wi' ane anither.

Timmer, not musical. *Timmer-tuned* and *tempered* wi' the beetle.

Tined or *tint*, lost.

Tings, tangs, tongs, fire-irons.

Tir-a-vee, a squabble.

Tirl, bare, take the roof off a house, bare the rock in a quarry.

Toot, blow the horn. "Ae toot and ye're oot."

Toots, tut, to belittle anything. *Toots*, ye'll no dee wi't.

"Hoot-toots," to cast doubt on a story.

Tounin', tuffling with the wind.

Tounin'-on, going on in a breezie fashion. *Tounin'-on* frae morn till nicht.

Tousie, rough, untidy hair. *Tousie tyke*, a rough-coated dog.

Touslin', ruffling with hands. A rough sort of embrace with man and woman.

Tout, the pet, and a slight illness is a wee bit tout.

Traik, rake, rove. Where are ye gaun traiking tae the nicht?

Trans, a passage, an entry.

Tresses, trestle.

Troggin, goods for sale or exchange.

Troque, exchange, barter.

Trollope, untidy, a draigle.

Trone, play truant, skip the school.

Truck, trade. Away ye go, I want nae truck wi' ye.

Wad, black-lead pencil, wager, a pledge, a forfeit in parlour games. I heard it so used only a week ago. Pit in yer wad.

Waff, weak. Kirsty's gey waff on't the day. Glimpse—I juist got a waff o' him gaun roon' the corner.

Waffle, weak, not to be depended on. He's a waffle o' a body.

Wag-at-the-wa', old-fashioned German clock.

Wairsh, tasteless, porridge without salt, a kiss without love.

Wample, almost the same as "wimple," to wind out and in.

Wimple-wample through Cample. Tangle—Ye've got that yairn in a wample.

Wan', a slender rod. A saugh wan', a willow wand.

Wangle, wriggle. He's intae a scrape, but he'll wangle oot o't.

Wap, a row, a quarrel. I want nae wap about it.

Warsle, wrestle. We had a sair warsle to get through afore the rain cam'.

Water-waders, old name for tallow candles.

Wauchle, tired walk, waddle. Atween wun' and rain and glaur on the road, I could hardly wauchle hame.

Wecht, a sheep's skin without wool stretched on a hazel gird used for lifting grain in a barn.

Weenth, width. Tak' a weenth oot o' that skirt (impossible nowadays). He had the hale weenth o' the street tae turn in.

Whang, a cut of anything. A whang o' cheese.

Whangs, leather bootlaces.

Whumle, turn over. Gie that stane a whumle owre tae me.
Clockin' (broody) hens are whumled by having a tub put over them. A dish of whumle—nothing—from well-known story.

Whup-the-cat. Tailors who went out to work in their customers' houses whupped-the-cat.

Winter-dyke, a clothes screen with rugs over it set round the fire, a draught screen, a heavy quilt or spread placed on the bed in winter, an extra covering.

Wylie, throw-crook.

Wynted, milk gone sour.

Wyte, blame.

Yackert, tight laced, tightly bound up.

Yank, hurry, run hard. Noo, away ye gang doon, hard as ye can yank it. Excited bark of a dog.

Yap, hungry.

Yatters, gnawed bits left by rats or mice.

Yaul, speedy. He was a yaul fellow when he was young.

Yaup, cry of a chicken. What are they birds yaupin' at?
Hae ye fed them?

Yell, dry.

Yerk, like "yank," to run or walk fast.

Yetland-pot, cast-iron pot.

Yet-meal, oatmeal.

Yett, a gate. Min' an' steek the yett.

Yeukie, itchy.

Yimp, scimp, short measure.

Yirnin', stomach of lamb that has never sucked, dried and used for cheese making.

4th December, 1925.

Chairman—Dr W. SEMPLE.

Mr John Rutherford of Jardington.

The Chairman referred to the death of Mr John Rutherford of Jardington, who had been a member of the Society since 1876. He was a man of remarkably varied interests, embracing astronomy, meteorology, horology—he had constructed and engraved several ingenious clocks—anatomy, geology, and electricity. He constructed the first telephone in the district, anatomised the snail, and in a paper delivered to this Society in 1880 had revealed the true cause of salmon disease. His papers to the Society included the following :—

The Electric Battery and Induction Coil	5, i., 1877
The Telephone	2, xi., 1877
The Ingenuity of a Spider	3, iii., 1879
The Instinct of the Wasp	3, iii., 1879
Microscopic Notes	3, iii., 1879
Observations on the Salmon Disease	23, iv., 1880
	16, iii., 1906
A Wasp's Nest, and how she Built it	11, xi., 1881
Atmospheric Electricity	15, xii., 1882
Human Anatomy and Physiology	19, ii., 1886
The Anatomy of <i>Arion hortensis</i>	1, xi., 1889
An Equatorial Star-finder for Beginners	4, v., 1906
Notes on the late Transit of Mercury, &c. ...	7, ii., 1908

while his Meteorological and Phenological Observations appeared in our *Transactions* from 1901-1921.

Mr Rutherford was Secretary of the Society from October, 1882, to October, 1884. His record was a remark-

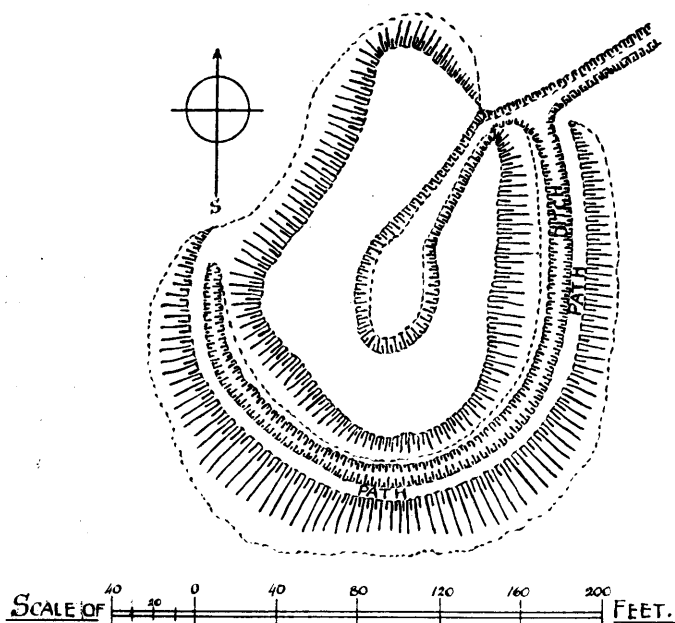
able one for a self-educated man, and he desired that the Society should record its appreciation of Mr Rutherford's work.

A Mote-Like Structure on Chapel Hill.

By MR R. C. REID.

The Inventory of Ancient Monuments for Dumfriesshire records a mote on Coats Hill, No. 395, at an elevation of some 600 feet. It lies directly across the valley facing old Auchencas Castle.

A little further up the valley on the crown of the same ridge and directly above a quarry on the east side of the Abington road, looking right across at Sir William Younger's residence of Auchen Castle, lies another structure that has many resemblances to a Mote. Its elevation must be about 800 feet, and it lies close to the apex of a triangular plantation which runs up from the main road to the crown of the ridge. If it has ever been a Mote, there can never have been a base court. The summit, which measures 180 feet north by south and 120 east by west, slopes downward towards the north-east. In the centre of the summit there has been



a very considerable hollow, which has in modern times been drained towards the north-east, where an entrance may once have been. This hollow still shows every sign of dampness, and there is probably a spring in this unlikely place.

The earthwork is a natural outcrop of rock, protruding like a knob from the crown of the ridge, artificially adapted. Round its base runs a trench, which disappears in the face of the rock for a short interval on the west side, and which is not very evident on the north side. On the east and south sides it is 14 feet wide.

The fact that its summit does not appear to have been levelled has led the Commissioners of Ancient Monuments to describe the structure as a Fort, a description fortified by its name—Camp Knowe (Inventory No. 393). For the method of entry see the Inventory where the structure is not figured. I am indebted to Mr James Flett for the plan which illustrates this note. On the plan a path is indicated; this is a track worn by sheep along the crown of the mound made from the throw out from the trench.

29th January, 1926.

Chairman—Mr JAMES FLETT.

Burnswark Reconsidered.

By R. G. COLLINGWOOD, M.A., F.S.A. Scot., F.S.A.

The hill of Burnswark is both topographically and archæologically one of the most conspicuous features of Dumfriesshire and of all the lands round Solway. Its table-topped profile dominates the landscape for many miles on either side of the Border, and the arguments which have claimed for it the distinction of a British hill-fort besieged by Roman armies, and the even greater distinction of the site of Brunanburh, place it high among the historical and romantic spots of southern Scotland. We are here concerned only with its

Roman aspect; and every such consideration must begin from the late Mr James Barbour's admirable and, in many respects, conclusive excavations in 1898. For this reason Mr Barbour's plan is here reproduced, and the reader is recommended to make use of his excavation report in *Dumfriesshire Transactions* or *Proc. Soc. Ant. Scot.*

A brief description of the site will make what follows more intelligible. The hill is steep all round, here and there rocky; its top is a plateau, all above the 900 foot contour, a quarter of a mile long by about 200 yards broad, rising into two slight eminences at the ends and having a slight saddle between them. The axis of the hill lies E.N.E. and W.S.W.; here, for convenience, we shall speak of its E. and W. ends and its N. and S. sides. The whole plateau is occupied by a hill-fort of Early Iron Age type; and on the north and south slopes lie two obviously Roman camps. The South Camp, 13 acres in extent, has three gateways defended by huge conical traverses in its north side, and one, with a traverse of the ordinary oval shape, in each of the others. The North Camp, eight acres in extent, has six gates, two in each side and one in each end. The Roman road from Birrens up Annandale passes the western end of the hill; and round the slope, between the 700 and 800 foot contour lines, there have been thought to exist traces of a Roman circumvallation furnished with redoubts.

Excavation has confirmed the Roman character of the camps, and has proved that they date from an early period—probably the first century—and saw active service. In especial, leaden sling-bullets and sandstone ballista-balls seem to show that fire was directed from these camps upon the hill-fort; and this, taken together with the circumvallation, was thought to indicate a siege. This theory has been of late years regarded with suspicion, because the circumvallation presents features inconsistent with it. It would, however, be a mistake to suppose that the siege theory stands or falls with the circumvallation. In this paper it will be argued that there is no reason whatever to believe in any Roman circumvallation, but that the siege theory gives the

only possible explanation of the camps and their relation to the hill-fort.*

While examining the remains with Mr R. C. Reid in August, 1925, I was struck by the fact that the northern and western sides of the North Camp presented the appearance of unfinished earthworks, rather than of earthworks originally completed and then, as the excavators of 1898 supposed, destroyed. It seemed unlikely that, on ground of this sort, anyone should ever have taken the trouble to obliterate completely, or almost completely, a rampart and fosse of such great size as these parts of the North Camp must have been if they at all resembled the other parts of the two Roman camps; and the existing features did not suggest to my mind any such history. The south and east sides—using these terms for convenience as if the longer sides of the camp ran east and west, instead of roughly E.N.E. and W.S.W.—consist of a single ditch still three or four feet deep and a rampart of equal or even greater height; but this rampart, resembling that of the South Camp and greatly exceeding in size and strength that of any ordinary Roman marching-camp, ends abruptly at the S.W. and N.E. corners. From the S.W. corner to the W. gate, and from the N.E. corner to the next gate in the north side, which I shall call the N.E. gate, the rampart is much lower and is not continuous, being lumpy in outline and made of heaps of earth, lying just as they have been deposited by men

* Chief references: (a) For the Roman Period—Christison and Barbour, *The Roman Camps on Birrenswark Hill*, Proc. Soc. Ant. Scot., 1898-9; Barbour's part of the paper repeated in *Trans., Dumfriesshire and Galloway Nat. Hist. and Antiq. Soc.*, 16; Schulten, *Birrenswark, ein Britisches Numantia*, in *neue Jahrb. f. d. klass. Alt.*, 1914; Macdonald, *Roman Dumfriesshire*, in *Trans. Dumfriesshire and Galloway Nat. Hist. and Antiq. Soc.*; *Royal Commission on Historical Monuments, Dumfriesshire*. (b) For the Viking Age—Neilson, *Annals of the Solway*; Neilson, *Brunanburh and Burnswark*, in *Scottish Historical Review*, 1909; Hodgkin, *Political History of England*, I., 335. The form Burnswark is that used locally and adopted by the Ordnance Survey. The form Birrenswark was gratuitously invented by General Roy, and its retention is a mistaken homage to the memory of that great man.

emptying baskets brought up out of the ditch. This lumpy distribution of earth has been examined and explained as characteristic of half-finished earthwork by Messrs Simpson & Shaw (*Cumb. and West. Antiq. Soc. Trans.*, N.S., XXII., p. 401 and plan on p. 404). From the W. gate to the N.E. gate, the defences appeared to be in an even less advanced state. A faint ditch, fainter in some places than others, is traceable from the W. gate round the N.W. corner to the middle of the N. side, with what seems to be a gate—the N.W. gate—opposite the completed and conspicuous S.W. gate. About the middle of the N. side it vanishes. Similarly, a faint ditch continues westward from the N.E. gate, and then vanishes. These two ditches would naturally lie in the same straight line, and the intervening portion of the line would naturally, on close inspection, reveal traces of the works which, if the camp was ever completed, once connected them. But (in spite of the Ordnance Survey) they are not in the same straight line, and if produced they would not meet; nor was I able, then or subsequently, to see any trace of works connecting them in the angular manner shown conjecturally in Mr Barbour's plan, or in any other manner.

It seemed natural to infer that the North Camp had never been completed; that its enceinte had been fully constructed on the south and east, partially constructed for a short distance beyond the S.W. and N.E. corners, and merely marked out for the rest of the way; and even that not completely, but in such a way that a gap had been left between two portions, begun from opposite ends and so laid out that they would never have met. But before it could be confidently asserted that the North Camp was an unfinished earthwork, it was necessary to trench the line of its north rampart in order to ascertain whether there had been a ditch here of normal size, which had been filled in when this part of the camp was, as Mr Barbour supposed it to have been, destroyed. I therefore arranged for a day's digging on the site; Mr Reid kindly obtained the necessary permission and supplied the labour, in the person of a skilled drainer, whose experience proved most valuable.

Our first trench was dug across the faint but unmistakable ditch on the north side of the North Camp, about twenty yards east of the N.W. corner of the camp. The sub-soil was bright red clay, contrasting sharply with the dark grey disturbed clay. We found the ditch to consist of a mere furrow, a single spade wide and deep, about the size, in fact, of the modern open sheep drains which abound on this side of the hill. The upcast from this furrow had been thrown to the south side, making altogether a rudimentary fosse and rudimentary rampart. It was perfectly clear that no full-sized ditch had ever existed at this point.

The second trench was cut across the north ditch five yards west of the western edge of the causeway at the N.E. gate, close to the point at which Mr Barbour made a section revealing, or appearing to reveal, the wholly un-Roman scheme of a ditch between two ramparts. Here the ditch was deeper, its bottom being 2 feet 9 inches below the modern surface; but this depth is some 3 feet less than that of the completed ditch as explored by Mr Barbour. On the surface, this ditch is hardly more conspicuous than the rudimentary fosse found in our first trench; this is because it has been purposely filled up with a mass of grey clay. Between this grey clay and the undisturbed red clay there was no sign whatever of a black band of vegetable matter. Such a band is visible wherever a ditch, not scoured by a flow of water and not wholly devoid of vegetation on its sides, has been left open to the air; and the longer a ditch is left open, the thicker it is. Its absence here shows that this ditch was not left open long enough for grass to grow on its sides; in other words, it was filled in during the same year in which it was dug.

The third trench was cut close to the second, on the other side of the causeway. Here a well-developed ditch is visible on the surface, accompanied by a half-finished lumpy rampart. The trench showed that the ditch too was half-finished, and resembled, but somewhat exceeded, in depth that explored in the second trench. Its bottom was 3 feet 9 inches below the turf. The material lying upon its bottom

was not clay, but loose chippings of stone and sandy stuff washed off its sides, overlaid with black vegetable matter.

We have, therefore, three stages in the construction of the north rampart of the North Camp. On the east, between the N.E. corner and the N.E. gate, the ditch has been half-dug and the rampart half-constructed, and left in that condition. West of the N.E. gate this state of things has existed but exists no longer; the half-made rampart has been swept back into the half-dug ditch; and this has been done by the Romans themselves, since no one else could or would have done it immediately after the works had been partly constructed. Finally, the western part of this north rampart has been marked out with the spade and no more; and even this marking-out seems never to have been done in the central part. A conceivable explanation is that the north side was laid out simultaneously from its two ends by two working parties, and that the lines selected by them failed to meet. To correct this error, the partly-dug section of the defences immediately west of the N.E. gate was destroyed, and it was proposed to lay out a new line drawn straight from the N.E. gate to the end, or to some part, of the line already marked out eastward from the N.W. corner. This would produce a slight salient angle at the N.E. gate, and a slight re-entrant perhaps somewhere near the N.W. gate. But the process was arrested in the middle and never went further.

Errors in the laying-out of Roman fortifications are common. The rectangle of a Roman fort is very seldom a true rectangle; in fact, accuracy in the laying-out of right angles is rare enough in Romano-British work to call for special comment where it is found, as it is, for example, at Rudchester. This, however, is an error of a different kind, and resembles the case of the north-east angle of the earliest camp at Cawthorn, where two working parties have obviously met and failed to make an accurate junction. In this case the discrepancy was comparatively small, and could be "faked" without undoing anything that had been done; at Burnswark it was far greater, and seemed to indicate special haste, special lack of care or specially unfavourable circumstances. We shall return to this point later.

The gates of the North Camp also call for special attention. There are six, one at each end (E. and W.) and two in each side (S.E., S.W., N.W., N.E.). The S.W. gate has a clavicula of great size and strength, related to an ordinary clavicula as the "three brethren" on the north side of the South Camp are related to ordinary traverses. The "three brethren" are surely ballistaria; their shape and size render them quite unsuitable for defensive infantry tactics, but highly suitable as emplacements for artillery. Ballistaria are usually internal expansions of the rampart; but this is because they are usually designed to help in defending the rampart; and if they are designed for bombarding a hostile position it is desirable to push them forward and raise them up as far as possible. Hence the "three brethren," inexplicable as ordinary traverses, are easily intelligible as emplacements for artillery bombarding the hill-fort. The same explanation suits the clavicula of the North Camp. It is far too massive for the requirements of infantry fighting, and its club-headed ground-plan suggests that it is essentially a solid mound, like one of the "three brethren," connected with the camp by a neck of palisaded earthwork—a gun-pit provided with a communication-trench. This suggestion is reinforced by the fact that the hill-fort has three gateways on the south, one covered by each of the "three brethren," and one on the north, exactly opposite the clavicula.

The other gateways of the North Camp have traverses. We thought it possible that these traverses might be the visible remains of claviculae marked out but not completed; but trenching at the N.E. gate proved that this was not so. This makes it clear that the clavicula at the S.W. gate was a peculiar feature designed for a peculiar purpose, not the mark of a camp having clavicular gateways; the question of the chronological relation between clavicular gateways and traversed gateways therefore does not arise. In parenthesis, however, it may be said that there is no reason for making a chronological distinction between the two. The insignificance of all the traverses at this camp, as compared with the massiveness of the clavicula and the completed part of the

rampart, is remarkable, and seems to constitute further evidence for the view, here advanced, that the North Camp as a whole is unfinished; for the traverses on the east, west, and south sides of the South Camp, while far less massive than the "three brethren," are fully comparable in size with the rampart to which they belong.*

A careful inspection of the so-called circumvallation was enough to cast grave doubt on its antiquity. It has never been supposed to extend all round the hill; on the north-west no trace of it has ever been found; but this, we are told, is because the ground on that side is marshy and forms a natural obstacle. Now this is a misapprehension. The ground in question is certainly wet, but it is by no means marshy; its slope is sufficiently pronounced to drain it not indeed dry but dry enough to disqualify it as a natural obstacle; and it has never been artificially drained by anything more than a moderate number of shallow open sheep-drains. On this subject we can quote with confidence the expert opinion of Mr Reid and his drainer. The current explanation for the absence of circumvallations round this side of the hill—one-third of its circuit—must be abandoned.

On the north-east Mr Barbour shows his circumvallation as merging in the northern defences of the North Camp. This is an error; the mound in question, as the O.S. map quite correctly shows, travels tangentially past the N.E. corner of the camp and loses itself some distance beyond. The history of this mound is perfectly clear; it is the predecessor of the stone fence-wall which follows its line, and is in fact simply an old field-division. Burnswark Hill, like other pieces of uncultivated ground, is seamed with such old dikes, travelling in all directions, and it appears that the so-called

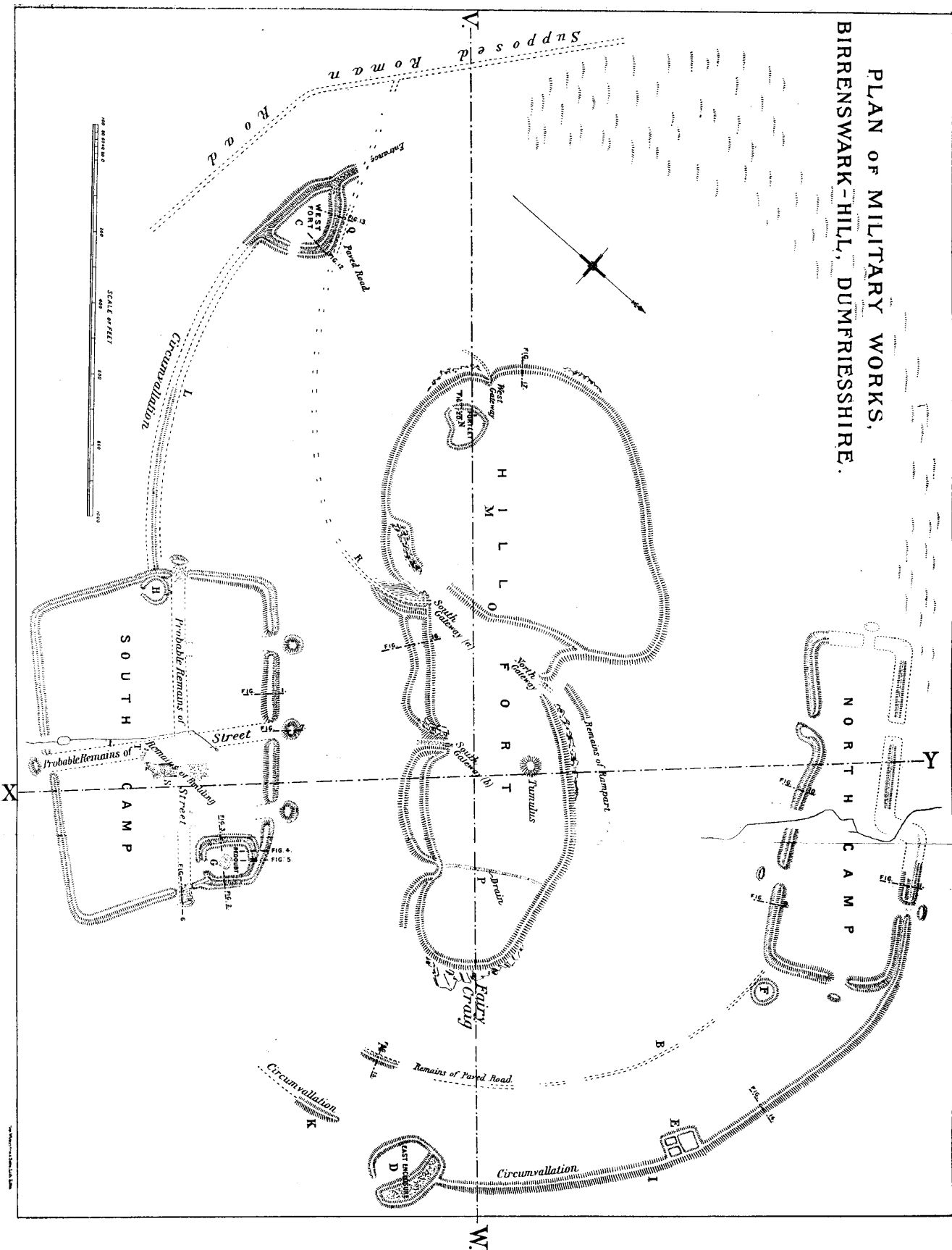
* But the traverse at the south gate of the South Camp is crescentic instead of oval. This may indicate incompleteness, for the ditch of an oval traverse is somewhat crescentic, and the traverse would tend to follow the same shape in its early stages and to have its concave side filled up last. This is too slight an indication to be strongly emphasised; but such as it is, it conveys a suggestion that the South Camp, like the North, but to a far less degree, was left unfinished on the side away from the hill-fort.

circumvallation has been pieced together out of fragments of these. Similarly, the so-called East Enclosure is quite certainly a sheepfold with paved floor and earthen walls, the predecessor of the stone sheepfold which stands to-day almost upon it. I was not able on the ground to identify Mr Barbour's K with certainty; his plotting of it appears not precisely correct; but if approximately correct, it is a natural bank produced by water-erosion. His L is, in my judgment, another old field-dike.

The excavators of 1898 traced a road joining the two camps and passing round the eastern end of the hill. This was taken to be an integral part of the Roman siege-works, and the main means of communication between the two investing armies. The excavators cut a trench across it, and report a ten-foot paved road with a ditch on its east side.* But they left three points unexplained. First, the precise course of the road. They trenched it at A, but from here to the North Camp they only marked it in dotted lines, evidently conjecturing its course and neither digging nor probing for it. Secondly, its value as a means of communication, commanded as it was at short range by the enemy's position and capable of being swept at any point by any kind of fire or even by stones rolled down the hill. Thirdly, its relation to the alleged circumvallation and to its own ditch: these works ought surely to lie between it and the enemy, whereas the reverse is the case. To anyone thinking the matter over on the ground, it is evident that the supposed road must have been worse than useless. We therefore asked ourselves, Does it exist? Careful search from A to the North Camp revealed no trace of it on the surface, either on Mr Barbour's line or on the (more probable) line leading to the east gate of the camp. It may be remarked in passing that F is part of an extensive system of quarries from which neighbouring fence-walls have been built; that there is a ruined farm, with associated dikes, be-

* In the ditch they found a ballista-ball. This does not prove the ditch to be of Roman date; such objects are no doubt numerous beneath the turf, and might find their way into any hollow such as a worn cart or sledge track,

PLAN OF MILITARY WORKS, BIRENSWARK-HILL, DUMFRIESSHIRE.



MR BARBOUR'S PLAN OF BURNSWARK.

tween F and E, and that a number of old paths exist in connection with the quarries and the ruined steading. At A we cut five trenches across the supposed road, ten yards apart, thus exploring 40 yards of it. We found what seemed to be an old track, evidently serving to lead stone from a large quarry half-way between the Redoubt and the Fairy Craig to Burnswark House or its outbuildings; but this track was not paved, the supposed pavement being similar to the hard stony ground revealed by trial trenches off its line, nor did it present any Roman features, nor did it continue in the direction of either camp. We concluded that evidence for the supposed road was wholly lacking, and that tactical considerations told strongly against its existence.

The fact seems to be that Gordon's conventionalised map, which shows the two camps as joined by some unexplained crescent-shaped "rampire," has induced subsequent inquirers from Roy onward to search for works connecting them; and this has led to the persistent misinterpretation of various dikes and paths. What induced Gordon to show such a feature on his map it is idle to inquire; certain it is that no earthwork prominent in his day has been since obliterated by the advance of cultivation.

One part of the circumvallation alone resists this interpretation. The so-called West Fort, a roughly triangular earthwork, is too elaborate in design and massive in construction to be dismissed as an assemblage of field-dikes or a sheepfold. It has a large double rampart with intermediate ditch, and a bottle-necked entrance at its western corner. There is no trace of an outer ditch, outside the second rampart; and it is perfectly certain that the earthworks are not of the familiar Roman double-ditched type. The ground plan and the section of the ramparts agree in this, that their design is utterly unlike anything Roman. Nor has any Roman object been found here. In order to test so far as possible the accepted view, we dug several trenches in it; we found rough stones, nothing that can be called paving; charcoal; and nothing else. In short, having after surface examination emphatically rejected the idea that it could be Roman, our trenches gave us no reason to change our opinion;

what it was, we do not know.* We cut a trench across the so-called paved road beside it, and found no trace of paving; only the natural subsoil, which at both ends of the hill is hard and stony.

We may now summarise our conclusions.

(a) Negative. The circumvallation, if not wholly mythical, has at least escaped our scrutiny; the remains hitherto so described have no right to the description. We found no trace of anything that deserved such a name. The supposed road connecting the two camps is in the same position. The "west fort" is not Roman, and may be mediæval; the other supposed forts on the circumvallation are farm-enclosures.

(b) Positive. The South Camp is a completed work, not a temporary marching-camp but a "semi-permanent" work like, for example, Cawthorn, designed for an occupation extending over a certain period of time, not a few days only. The existence of three gates on the north shows that special activity on that side was expected, and the development of their traverses into artillery-platforms† makes it probable that the main purpose of the camp was to attack the hill-fort. The North Camp is incomplete, but its defences were designed after the same pattern as those of the other; it has the same "semi-permanent" character. It was planned for operations against the hill-fort, for (i.) its defences have been completed in that direction before being even properly laid out to northward; (ii.) the one gate that faces a gate of the hill-fort has its traverse developed into a ballistarium. The error

* We conjecture, however, that it is an early mediæval house-garth. The ditch with a rampart on each side is characteristic, in Cumberland at least, of this and of no other type of earthwork; and alleged parallels in pre-historic Dumfriesshire earthworks appear to the present writer, judging from plans and sections, less satisfactory as parallels than could be wished. The size also would fit in with such an explanation. Mr Barbour found Early Iron Age objects—a broken quern and a piece of a glass armlet—in digging it, but these might turn up anywhere near a great Early Iron Age fort, and do not date the earthwork unless, which he does not assert, they were found in an occupation-level.

† Before regarding this identification as certain, parallel cases ought to be cited; and the writer regrets that he is at present unable to do this.

in laying out its north side, if we can really believe that so large a discrepancy was due to error, suggests that the work may have been done under fire or other difficulties arising from the immediate presence of the enemy. Its incomplete state proves that the purpose for which it was designed had been accomplished before it was more than half-finished. In this it differs markedly from the South Camp.

Each camp independently thus presents features showing it to have been designed for an attack on the hill-fort. The general style of the camps suggests that they are contemporary; the only point of difference being that the isolated ballistaria—the “three brethren”—of the South Camp are replaced by a clavicula-like ballistarium in the North Camp. I suggest that this is simply an improved version of the South Camp pattern, and does not indicate any chronological gap. If, moreover, the two camps are of different dates, we must imagine two Roman attacks on the hill-fort, conducted in precisely the same way but from opposite sides, the second making no use of the works constructed on the occasion of the first; which seems a difficult hypothesis. It is easier to reconstruct some such history as the following.

At some time, probably in the first century and possibly during the campaigns of Agricola, a Roman force of some 7,000 men met an equal or larger force of Britons in the Solway region, and defeated them. The Britons, though defeated, were able to throw themselves in good order into their hill-fort on Burnswark Hill. The Roman commander pushed his forces up the southern slope of the hill to within ballista-shot,*

* The extreme range of a ballista is stated to have been about a quarter of a mile. The ballistaria of the South Camp are about 150 yards from the gateways, which they respectively cover, but shooting up a steep slope they would find this range equivalent to perhaps 250 yards on the level. The clavicula of the North Camp is 250 yards from the north gate of the hill-fort, a distance which must have taxed its artillery to the utmost; but it is only about 150 yards from the three springs which, as suggested below, it may have been in part designed to cover. The South Camp has been so placed as to include a good spring; the Roman commander thus secured his own water supply and may have thought he was cutting off the enemy's, if he did not know of the springs on the opposite side of the hill.

dug himself in, and prepared for a close siege. That he bombarded the hill-fort we know, and we may infer that he assaulted it also; but after the siege had proceeded for some time he was reinforced by a second army about half the size of his own. He was now superior to the enemy in strength, and could therefore divide his forces; so the newly-arrived troops were directed to form a similar camp on the north side of the hill and transform the siege into a close blockade. The artillery of the new camp cut the defenders off from their water supply, which consisted of three springs on the north slope of the hill; and before the new camp had been completed a successful assault or voluntary capitulation brought the siege to an end. This story is, of course, conjectural; but every detail in it, and more which it would be tedious to state in full, is inferred from observed facts; and it is here offered as a reconsideration of the problem of interpreting the fortifications on Burnswark Hill.*

More About the Mines and Minerals of Wanlockhead and Leadhills.

By ROBERT BROWN.

In the year 1919 I read a paper to this Society on the "Mines and Minerals of Wanlockhead and Leadhills,"† so to-night I will try and avoid as far as possible a repetition of what I said on that occasion. But it may be necessary for me to refer to some of the remarks I made then.

Although Wanlockhead and Leadhills are situated away among the hills, on the border of Dumfriesshire and Lanarkshire, many of the lads that were reared 'mang the heather have gone out into the world and made good. It is to men like William Symington, James Taylor, and old John Hutchison, the village blacksmith, that we owe our present great railway system, and also the origin of the mighty ships that

* The reader ought to be reminded that the "Redoubt" in the South Camp was not re-examined on this occasion, and that no theory concerning it is here advanced.

† *Trans.*, 3rd Ser., Vol. VI., p. 124,

sail the ocean can be traced to our very doors. Little did those who saw the "Charlotte Dundas" on Dalswinton Loch on 14th October, 1780, realise the far reaching effect that incident would have on the affairs of the world and the progress of the human race.

History of the Lead Mining.

It seems strange that Wanlockhead and Leadhills, where the steam engine was first applied to navigation, were to be so long in receiving direct benefit from it. It was only in 1902-1903 that the Caledonian Railway Company (now the L.M.S. Railway Company) brought in a light railway from Elvanfoot to Leadhills and Wanlockhead. Those two villages are the highest situated in Scotland, being something like 1200 to 1400 feet above sea level. It can easily be understood the difficulty in getting material away from the mines and in getting coal and timber to them when the nearest stations to them were Elvanfoot, 7 miles, and Mennockfoot 6 miles away. All the transport was done by horses and carts. Had that system continued it is questionable whether the mines would have been working to-day or not, but the advent of the railway made possible the extensive developments which have taken place both at Wanlockhead and Leadhills. And if the lead keeps up at something like the present price of £35 10s I have no doubt that those developments will be carried much further, as those two companies possess by far the most productive and extensive mining field in Scotland. Most of the veins are found in the belt of the Lower Silurian Strata which stretches almost continuously across the country from Port Patrick to St. Abb's Head.

LEADHILLS.

The first record of mining in the district is that of a lead mine in Glengonnar being worked by the Monks of Newbattle in 1239. But it is an accepted fact that lead mining was carried on long before that time. In the reign of James IV. the river gravels of the district were found to be auriferous, and it seems as if the lead mining had been abandoned for a considerable time, owing to the attraction

of the rarer metal, gold. But in 1562 leadmining was commenced again, and the metal exported to Flanders for the extraction of silver. Up to 1592 the lead mines had only been worked intermittently. In that year the Leadhills Mines passed into the possession of Thomas Foullis, who engaged Bevis Bulmer, a skilled miner, to search for lead, and there is no doubt that he obtained a considerable quantity. But Bulmer is best known by his success in gold mining. A good many of the old dumps in the district are known as Bulmer's Dumps to the present day.

In 1637 the mines passed into the hands of Annie Foullis, who married James Hope of Hopetoun, ancestor of the Marquis of Linlithgow, the present proprietor. Sir James Hope actively interested himself in the industry, exporting the lead *via* Leith to Flanders. He introduced four wheeled waggons for transporting the lead overland, and in 1646 journeyed to the south of England, and thence to Flanders and Germany to inspect the various methods of smelting ores and other technical processes. His journal with detailed technical descriptions still exists, as do his letter-books for the years 1648-1652. The Hopetoun family worked the mines for a number of years, but soon after 1715 part of the ground was let to the Scots Mining Company, which was founded by Sir John Erskine of Alva, and was financed by the Sun Fire Office. This company leased the north-west portion of the property. Later on Marchbank and company took the south-west portion, while the Hopetoun family continued to work the veins in the north-west part of the field. The Scots Mining Company secured the services of Stirling, the mathematician, as manager, in 1735. He managed the mines for many years. To him was given the credit of being the first man to deepen the Clyde for the purpose of getting vessels of deep draught up into the centre of the city. Besides this, his name is associated with the founding of the Miners' Library in 1741, the first of its kind in Scotland. The Wanlockhead Miners' Library, which opened in 1756, was the second, and has been carried on successfully ever since. About 1780 the Hopetoun family ceased to work the mines on

their own account, and let the north-east portion of the property to the Darlington company, but they were unsuccessful, and stopped work in 1805. The Scots Mining Company then took up this part of the ground, and the south-east portion was let to Mr Horner, who carried it on until his death in 1817. His sons continued to carry on the mines until 1828. His lease was taken by the Leadhills Mining Company but owing to the Scots Mining Company interdicting the water rights they were unable to commence operations because litigations ensued which lasted upwards of twenty years.

In 1861 the whole of the Leadhills mines were let to a company, the principal partner being a Mr William Muir, of Leith. This company, under the name of the Leadhills Mining Company, have worked the mines with more or less success ever since. Mr John French Nevin was manager from 1861 to 1867, and his son John succeeded him. He died in 1879, when Mr Thomas Newbigging took over the management until 1894. At his decease he was succeeded by Mr William Henry Paull, who came from Wales, and he was followed in 1901 by Mr James White, who retired in 1908. Then Captain Baden Skewis took charge until 1921, when he left for Spain. He was succeeded by a Captain Hall, of Cornwall, who only held office for one year. Then the position was again taken over by Captain Skewis, who is still manager.

Present Workings.

Brow and Brown's veins are the only veins that are being worked at the present time, and both from Glengonnar shaft, situated at an altitude of 1460 feet, near to the boundary of Wanlockhead and Leadhills. One great advantage for the working of the mine at this place is that the railway is only a few yards from the shaft. This shaft is sunk to almost 260 fathoms below the surface. Brow vein trends north-west and fades south-west, at an angle of about 60 degrees; and Brown's vein fades east at 70 degrees. These veins vary from a few feet in width to over 18 feet. They have both been rich in ore-bearing material. The vein stone consists mainly of country rock cemented together with calcite and dolomite.

Brown's vein extends to a distance of 500 fathoms, and reaches to a depth of 100 fathoms below the adit level. Both Brow and Brown's veins are connected by cross-cuts to Gripps level, driven from Glengonnar shaft. All the material is brought up this shaft, then the useless stuff is discarded, and the rich ore is taken in waggon, attached to an endless chain, to the washing shed, where it is washed and hand-picked. The large pieces of galena are generally set aside and sold as potters' ore. The rest of the material is taken to the dressing floors, about half a mile away, by electric haulage. There it is crushed and dressed ready for the market. The company are again fortunate in having the railway near the dressing floors, as they can get the tailings, which are in great demand for building purposes and road dressing, put on rail with little expense.

I think the Leadhills Mining Company did a wise thing when they installed electricity as their motive power at Glengonnar shaft, where they have an excellent electric plant, generated by steam. I consider that the electric system of pumping is far and away the best, both for utility and economy.

The company are at present making another venture, which, if they have any luck at all, will open up a large mineral field. They commenced to sink a vertical shaft near the graveyard. When this is down to the desired depth they will be able to drive cross-cuts into many of the old veins which have yielded such a large amount of lead in the past. They commenced to sink this shaft on the day that the exhibition was opened at Wembley. Someone named it Wembley, so Wembley is the name that it is likely to be known by. When this mine is properly developed there is the chance that Susanna vein, the finest repository of secondary minerals of lead in Scotland, may again give up its treasures. This mine has been worked to 260 fathoms in length, and about 140 fathoms in depth, and was abandoned owing to the large amount of water in the mine. But, with the more up-to-date methods of pumping, and lead at the present price, there is some inducement to put down a suitable plant to cope with it. Susanna vein not only produced almost all the known varieties of lead

ores, but several new species of minerals were discovered there, such as Susannite, Leadhillite, Lanarkite, &c. Some of the other rare minerals found in this vein are Mimitite, Linarite, Caledonite, Malachite, Azurite, Collieite, &c.

Another great asset the Leadhills Mining Company has is the main adit level, which occurs at a height of 1100 feet at Glengonnar shaft, following the various veins northward to near the old smelting mills, about two miles down the Glengonnar valley. Smelting the lead has not been carried on for a number of years, owing to the deleterious effect the fumes had on the surrounding farm stock, and now all the lead ore is sold direct from the dressing floors.

WANLOCKHEAD.

History.

The lead mines are said to have been discovered or re-discovered by Cornelius Hardskins (a German) during the minority of James VI. They were opened up in 1680 by Sir James Stampfield, who carried them on fairly successfully till 1691. He was succeeded by Matthew Wilson, who held the lease till 1710, and worked the Straitsteps vein for a considerable distance under the Dod Hill. In 1710 Matthew Wilson was succeeded by a London company for smelting lead ore with coal. This company wrought extensively in Old Glencrieff and Belton vein with little success. They were fortunate in discovering the New Glencrieff vein, which proved to be very rich in lead ore, and they were able to raise a large quantity in a very short time. In 1721 this company amalgamated with the Friendly Mining Society, and worked extensively in all the principal veins—New Glencrieff, Old Glencrieff, Cove, and Belton vein. In 1725 the partnership was dissolved, and the mining field was divided between the Smelting Company and the Mining Society, who carried on separately till 1734, when both leases were resigned. That of the Smelting Company was held for a few years by Dean of Guild Wightman, and that of the Mining Society by Alexander and William Telfer, whose operations were rather unsuccessful at first, but later they found a rich deposit of ore in the west branch of New Glencrieff vein. In 1755 they were succeeded by Ronald Craw-

ford Meason & Co., who worked the veins till 1842. At that time the mines were entirely in the hands of the Marquis of Bute. But in 1842 the Duke of Buccleuch, the proprietor, took the mines into his own hand, and appointed as manager Mr James Stewart, who worked them successfully till his death in 1871, when he was succeeded by his son, Mr Thomas Barker Stewart, who worked the mines with more or less success till 1900. Then he was succeeded by Mr William Henry Paull, who worked the mines under difficult conditions till November, 1906, when the present Wanlockhead Leadmining Company took over the mines. They appointed the late Mr John Mitchell as manager.

Here let me mention, by the death of Mr Mitchell in 1920 the mining world in general, and Wanlockhead in particular, suffered an almost irreparable loss. He was a man of wide experience in lead mining. In fact he had few equals as far as knowledge of metalliferous mining was concerned. His whole work was mining, his whole hobby was mining. I believe that much of his time that should have been given to sleep was spent dreaming of new schemes for the successful working of the mines. At his death he was succeeded by his two sons, Mr James and Mr William Mitchell, who acted as joint managers until a few months ago, when Mr William was appointed manager.

It is rather unfortunate for the successful working of the two mines that the project suggested by the late Mr Mitchell did not materialise—that was to drive a low level from Enterkinfoot right through the mine field of the whole district at a depth of 160 fathoms from the adit level. Had it been commenced when it was suggested it would have been finished long before this time, and thus saved the consumption of thousands of pounds worth of coal every year, as the coal used at Wanlockhead mines alone is something like 20 tons per day. So, with the further developments that are likely to take place in the near future, this coal consumption will be greatly augmented.

Present Workings.

Since the present company took over the mines they have been fairly successful in their operations, but owing to the

new method of mining the great amount of ground that can be cut in a short time requires a large mine field to last long.

At the present time they are driving the cross-cut that I have already mentioned at the 160 fathom level, and have cut several of the old veins, which give promise of ore-bearing ground. They cut the Lochnell vein a few months ago, and this vein was carrying lead on both the hanging-wall and the foot-wall. Both put together would be about 12 inches to 14 inches wide. Lochnell vein may be a continuation of Wilson's vein. It runs more or less in a north-and-south direction, and joins the Straitsteps vein a little to the north of Margaret's shaft, and was formerly thought to be a branch of the Cove vein. This vein has been worked to about 77 fathoms below the adit level, with ore-bearing ground 116 fathoms in length and about the same in depth. So it would appear that in the near future the old veins, which it was believed did not carry lead beyond 120 to 130 fathoms in depth, will again be the centre of operations.

The only veins that are now working are the New Glencrieff vein, discovered between 1710 and 1721, and the West Groove vein, now known as the west branch of New Glencrieff vein. These have proved to be the richest veins in Scotland, and are now worked to the depth of 290 fathoms below the adit level, and still carrying good lead. So with this experience it is evident that there is no one who can say with any degree of certainty how far down these veins will carry ore.

Formation of Veins.

With regard to the formation of veins and the infilling of the same, several theories are put forward as to how they are filled up. Hutton believed that veins were filled from the interior of the earth. He thought that the mineral matter had been projected upwards by an extraordinary expansive force. Werner believed that the veins were filled from above, the mineral matter having been held in solution on the earth's surface. To my mind the best explanation is that a mineral vein or lode is the result of a gradual filling in of a fissure crack or fault by the successive depositions of "ore'a" matter; or

it may be the result of the replacement and impregnation of the ordinary constituents of the surrounding rocks by "ore'a" matter, along such a zone of weakness as might be caused by faulting or thrusting.

With reference to an old belief that lead grew, my experience with the pseudomorphous specimens found in the west branch of New Glencrieff vein makes this belief not so ridiculous after all. I don't mean that it grows like a plant, but with the flow of the thermol waters carrying mineral matter in solution through the veins it is quite possible that some parts of the vein that carried lead thousands of years ago may be carrying quite a different mineral to-day. I well remember when I was a boy being down the mine. I was surprised at seeing a large vug showing some traces of lead on the foot wall. I asked an old miner the reason for such a small quantity of lead being in such a large hole. His reply was: "We are either thousands of years too early or thousands of years too late." It is rather unfortunate for mineowners that the ore deposits are so erratic and uncertain in their appearance, as no one can say with any degree of certainty when a knot or bunch of lead will appear or disappear.

METHODS OF WORKING.

In giving a description of the methods of working the lead mines, one is struck with the advancement that has been made since the days of the hammer and jumper. Even with the air driven rock-drill great improvements have been made. All the earlier varieties were of the heavy reciprocating type and did good work, but were too heavy to handle and not suitable for every kind of work. A good many of the rock-drills put on the market have been tried at Wanlockhead with more or less success. The dry-boring type was tried for some time, but was discarded owing to the effect the dust had on the health of the workmen. Some of the water-flushed and self-rotating and self-feeding type were also tried; these required little attention from the miner, but they were discarded owing to the liability of the finer parts to break and the expense incurred in replacing them.

The rock-drill that is mostly in use at the present time

is much simpler in construction. There is no rotating gear and little mechanism to get out of order. It is hand-rotated and water-flushed, and can be worked with much less expense. The drills are made of hollow steel, so when the machine is in action the water is forced through the drill to the cutting point. This completely does away with dust, which was so injurious to the health of the miner. The rock-drills are generally fixed to a column with a radial arm, with air-fed telescope drill, which moves forward as it cuts its way into the rock. There are always two men employed in each shift in each working. The miners' shift is 8 hours, usually from 6 a.m. to 2 p.m., and from 2 p.m. to 10 p.m., and from 10 p.m. to 6 a.m.; and they take each shift in turns, so a full party is composed of 6 men.

The explosives mostly used are gelatine dynamite, and gelignite. The main advantage of these explosives over gunpowder is their enormous strength and their being practically unaffected by water. Besides they are safe explosives if proper care is taken in using them. To get the best results they must be kept at a certain temperature, because they are less sensitive to the blow given by the detonator when in a semi-frozen state. Several methods are adopted to keep the explosives up to the proper temperature. A special pan is supplied by the makers for this purpose. It consists of an outer can filled with hot water which incloses a receptacle for the explosives. The outer can is surrounded by a bag of painted canvas, filled by a bad conductor of heat, so that the water retains its heat for a long time. The usual method for cutting ground is to bore a sufficient number of holes in the forehead or stope, then to press home with a wooden rod or charge-stick a suitable quantity of explosives to break what ground is wanted. This is where the knowledge of the experienced miner comes in, that is, to know what is the proper quantity to put in each hole. A great amount of explosives can be wasted through an insufficient knowledge of its power. Before the present company took over the mines the usual system was to sink 20 fathoms before putting out the drivages. This had both advantages and disadvantages compared with

the system now in operation, that is to sink 40 fathoms before commencing to drive the levels in the 20 fathom lifts. There was less chance of missing lead-bearing ground, but against this the 40 fathom lifts do away with cutting a lot of poor or useless ground. As no trouble has been experienced either in putting the rises or winzes through this depth of ground, the system is likely to continue.

In cutting the ground between the levels, either the underhand stoping or overhand stoping are adopted. Both have their advantages and disadvantages, but the method used depends greatly on circumstances. The underhand stoping means working from the floor of the level downwards. Then all the rich material is drawn up into the level with a windlass or winch; and, when storing is possible, the useless rock is deposited on platforms of timber. One great disadvantage is the winding up of the ore and water by hand labour. The overhand stoping is working from the roof of the level upwards. This method is generally adopted, and considered to be the most advantageous and economical, but there is a great chance of rich ore being lost unless great care is taken in cleaning up the floor of the stope after each blast. When a winze can be cut from a higher to a lower level in the rich ground, it is a great advantage, as the lead raised pays for the ground cut, besides ventilating the workings. In commencing the overhand stoping, which is done after the level is cut to the desired length, they take away a first head to the end of the ore-bearing ground. A head means a rise of 6 feet from the roof of the level. When this is done a bunning or platform is put up of strong pieces of round timber (stempels) fixed between the hanging and foot-walls, about 30 inches apart. These are covered with polings or strong boards, which are again covered with any useless material to resist the shock of the next blasting. When another head is taken away all the poor stuff is left on this bunning, making footing for the miners, and the rich ore and all stuff not required for the filling up of the ground cut is shovelled or wheeled in barrows into holes left for that purpose. These holes are lined with timber, and are placed at any distance suitable for the length of the

lode. These are provided with shoots and doors at the bottom, which do away with hand filling, and the ore can be stored till the tram waggons are ready to receive it. In the Wanlockhead mine all the material is drawn from the workings to the winding shaft by ponies, while at Leadhills mine electric haulage is used. Both of these methods are a great improvement on the old system of manual labour, as they can take several waggons at a time. At Wanlockhead each waggon holds about 15 cubic feet of stuff, and the winding skip holds about two waggons. It empties into other waggons at the top of the shaft, and these are taken to the dressing floors a short distance away.

Ore Dressing Plant.

The ore dressing plant is of a very interesting nature. The stuff as it comes from the mines is tipped over grizzlies or screens, the smalls passing through into a Chinese shoot, the over-size to a conveyor, which delivers into the stone-breaker. From the stone-breaker another conveyor delivers the broken stuff into a hopper, and from the hopper to a 10 m.m. shaking screen, which delivers into roller crushers, revolving at 13 revolutions per minute. From the rollers it passes to an elevator, which elevates the crushed stuff to a set of seven trommels, varying in sizes from 10 m.m. down to $2\frac{1}{4}$ m.m., all stuff over 10 m.m. returning to the rollers to be re-crushed.

All stuff passing through the grizzlies into the Chinese shoot is taken by boys in small waggons in to a hopper which delivers it on to another set of shaking screen, rolls, elevator, and trommels. Then the material from both sets of trommels passes into fourteen four-compartment jigs, with perforated plates, in sizes from 10 m.m. down to $2\frac{1}{4}$ m.m., the same sizes as the trommels. All stuff under $2\frac{1}{4}$ m.m. is treated as sands and slimes. What passes through the $2\frac{1}{4}$ m.m. trommels goes into a set of classifiers, which feed the sand and slime tables. These consist of six Lurig sand tables, made by a German firm; and three James's sand tables, and three James's slime tables, American inventions. The middlings from the Lurig sand tables are raised by a double dipper or raft-wheel to tables for re-treatment.

There is also a chat plant for re-crushing and re-dressing the ore coming out of the jigs, not clean enough for smelting. This plant consists of a set of 24 inch rolls revolving at thirty revolutions per minute, and the stuff is elevated to a set of trommels 4 m.m., 3 m.m., and $2\frac{1}{4}$ m.m. The sand and slimes from this mill pass to the tables. There are 6 sets of four-compartment jigs which are fed from the trommels and classifiers.

As at Leadhills, all the sand from the dressing plant, which at one time was considered a waste product, is now very much in demand for road dressing and building purposes.

Smelting Mills.

All the lead ore is taken by rail from the dressing floors to the smelting mills, about one mile down the Wanlock. This mill consists of five Scotch hearths, two roasting furnaces, and one slag hearth. A large water wheel is in use for driving the blowers for the hearths, and an exhaust fan for keeping the house free of fumes. The system of condensing the fumes from the hearths and furnaces is very good, but the great difficulty has always been to get mortar that would resist the action of the fumes. Cement, Arden lime, and ordinary lime have been tried, also concrete walls, but none of them are able to resist the fumes, more especially when they are wet. The present condenser, built with bricks and cement, and pointed with China clay in the inside, has given better results than anything ever tried. Before the wet method of condensing the fumes was adopted a large amount of lead must have been lost, but now the fumes have to pass through about a mile of flues before they reach the chimney stalk at the top of the hill; so the loss has been reduced to a minimum.

Boiler Plant and Pumps.

The boiler plant which supplies steam to all the engines about the mine is composed of three Babcock and Wilcox steam boilers with a combined heating surface of about 7000 superficial feet. These boilers give very satisfactory results as quick steam makers. At the 160 fathom level a Riedlar

pump has been working for a number of years, which throws 400 gallons of water per minute to the adit level. The company have put down recently at the same level one of Allan's multi-stage high pumping turbines, which runs at 7500 revolutions per minute, and throws 400 gallons of water per minute to a height to 1000 feet. At the 80 fathoms level there is another pump with 300 gallons capacity, which also delivers its water at the adit level. They have for winding a splendid compound winding engine, built by Andrew Barclay, Son & Co., Kilmarnock; and for taking the material to and from the mines they have a light locomotive, built by the same makers. They have two air compressors, one by Balliss & Morcom which generates 1000 cubic feet of free air per minute, and another of 700 cubic feet per minute, which can be used when the other is undergoing repair.

Old Wood Pump Pipes.

Some time ago a very interesting relic was discovered in the 40 fathom level, west branch of New Glencrieff mine. When driving north on this level the miners cut into an old pump shaft which had not been used since 1765. They found a set of wood pump pipes which measured about 66 inches in circumference. The only metal pipe in the column was the working bucket barrel. The bucket-door piece and the clack-door piece were also made of wood. I understand that an attempt was made to get those interesting relics of the wood age to the surface. But mainly owing to the dangerous position of the pipes in the shaft the attempt was abandoned, as there were no supports in the shaft, and the pipes were lying at different angles across the shaft.

DESCRIPTION OF MINERALS.

Galena.

In giving a short description of some of the minerals found in Wanlockhead and Leadhills, I cannot do better than give galena the first mention, as it is the parent mineral of most of the rare specimens found in the district, and it is practically for galena alone that the two mines are worked. Lead is so well known, almost to everybody, that to describe

it fully is quite unnecessary. Lead is generally supposed to be the most anciently known of metals, and the ores of lead are very widely distributed. It is found to a greater or less extent in almost every country in the world, and its uses are so numerous that it is a very important metal. In one year Wanlockhead and Leadhills has been known to produce 5178 tons of lead. Galena contains about 86.6 per cent. of lead, 13.4 of sulphur. Its hardness is 2.5; gravity, 7.4 to 7.6. It sometimes contains silver, copper, antimony, bismuth, iron, and platinum. The silver found in Wanlockhead lead was from 7 to 11 ounces per ton. Minium lead oxide is never found in any great quantity, only coating other minerals. Cerussite, i.e., lead carbonate, and pyromorphite, i.e., lead phosphate, are the most plentiful of the lead ores; and fine crystals of them both are to be found on almost any of the old mine dumps. Plattnerite is seldom ever met with, and found only in small specimens, generally associated with leadhillite and pyromorphite. Pyrolusite is often taken for this mineral. Its colour is iron black, streak brown. Chemical composition, 86.2 lead, 13.8 oxygen, with traces of sulphuric acid. Collicite, or calcium-vanado-pyromorphite, occurs in black botryoidal masses, often coating other minerals. This mineral is a pyromorphite, in which calcium replaces lead and vanadic acid replaces phosphoric acid. It is found on new vein and Belton vein, Wanlockhead coating vanadinite, and at Hopeful vein coating pyromorphite. Mimetite is seldom found in either Wanlockhead or Leadhills, and only on the old mine dumps. I have one good specimen, showing mimetite on one side and pyromorphite on the other, from Belton vein. Its comp. 90.7 arsenate of lead, 9.3 chloride of lead; colour, wax yellow.

Leadhillite.—A good many fine specimens of this interesting mineral have been found during the last few years at Susanna and Hopeful veins. This is a sulphate combined with a carbonate of lead; the colour is white or yellowish, sometimes greenish. Hardness, 2.5; sp. gr., 6.5.

Susannite.—This is very similar to Leadhillite, but crystallises in hexagonal form. Some believe that this

mineral is only another form of Leadhillite, but my opinion is in favour of those that believe that it is a distinct variety and a much rarer mineral than Leadhillite. And I am pleased to say that this is one of the many rare minerals that have been re-discovered, after a lapse of 50 years, by Mr John Weir and Mr John Blackwood, of Leadhills, and myself at Susanna and Hopeful veins, Leadhills.

Lanarkite, which is considered to be the rarest of the Leadhills minerals, much resembles Leadhillite, but contains less carbonate of lead. The crystals are moni-clinic; colour, greenish or yellowish white; partially soluble in nitric acid with effervescence. Hardness, 2 to 2.5; sp. gr., 6.8 to 7.

Linarite, one of the most beautiful of the rare minerals, was found in the old dumps at Hopeful vein and East Stoy-voyage in fairly large crystals. This is a sulphate of lead and copper protoxide, with a light azure-blue colour.

Caledonite, often found associated with Linarite, is a composition of copper, carbonate, and lead with sulphate of lead. Crystals are Rhombic; the colour is verdigris to mountain green, and it also much resembles Leadhillite. Hardness, 2.5 to 3; gr., 6.4. Some very fine specimens of this mineral have also been found.

Vanadinite, like pyromorphite, crystallises in hexagonal form, but most of the specimens found in the district are globular, generally coating calamine or some other mineral.

Dechenite is seldom ever met with. I have only found it on New vein, Wanlockhead Dod, associated with vanadinite and calamine, and one specimen with vanadinite, psittacinite, and pyromorphite. The crystals are mostly botryoidal; the colour dark or reddish yellow. Its composition is 54.7 lead oxide, and 45.3 vanadic acid. This is another of the minerals that has always been looked upon as doubtful. (Dr. Heddle left a note in pencil that he obtained a single specimen of this mineral in an old heap from the High Pirn Mine, Wanlock Dod.)

Eosite.—Another of the doubtful minerals found on the old mine dumps at Hopeful vein, Leadhills, by John Weir, John Blackwood, and myself. The crystals, minute tetra-

gonal; colour, aurora red, with brownish orange-yellow streak; shows reaction for molybdena, vanadium, and lead.

Crocoisite, or *Crocite*.—This is another rare mineral which may be added to the list of minerals found in the district. I had never seen it or heard of anyone who had seen it until four years ago, when several small specimens were found, associated with cerussite, pyromorphite, and Leadhillite, on an old heap overgrown with grass, from the Hopeful vein. It is unfortunate that those rare minerals are found in such small quantities that it is difficult to get sufficient material to make a proper analysis. The chemical composition of this beautiful mineral is 31 chromic acid and 69 lead protoxide. The colour is hyacinth or aurora red.

Psittacinite, or *Mottremite*, is another variety new to the district. This is a basic vanadate of lead and copper. I found it on the Belton vein, near the head of White's Cleuch, Wanlock Dod, and on Scar vein, Leadhills Dod. This is the first time that it has been identified as having been found in Scotland. When I find any mineral that I have a doubt about I always send it to either the British Museum, London, or the Scottish Museum, Edinburgh, for verification, and I am glad to say that they are always pleased to do anything to assist me. When I found this mineral I sent a piece of it to Mr Campbell Smith, of the British Museum, for his opinion. Strange to say, when he made a comparison with another specimen in the Museum (by Greg) from Leadhills, named Vauquelinite, he found the two specimens to be identical.

Vauquelinite is another mineral seldom found. Its chemical composition is 61 lead protoxide, 11 copper protoxide, 28 chromic acid; the crystals, monoclinic or botryoidal; colour, blackish or dark olive-green; found on New vein, Wanlockhead Dod. I have one specimen from Hopeful vein, and it is rather a unique combination. It is seldom that so many of the rare minerals are found grouped together. It consists of Susannite, Leadhillite, Plattnerite, Crocoisite, Eosite, Cerussite, Pyromorphite, and Quartz. A glass is required for the smaller crystals, but they are quite distinct and well formed.

Aurichalcite is another of the doubtful minerals. This mineral was found at Susanna vein in fine pearly and verdigris-green coloured crystals.

Erinite is generally found coating other minerals, sometimes replacing them. The colour is mostly dull Emerald or grass green, found at Susanna and Belton veins, associated with Linarite, Caledonite, and Cerussite.

Niccolite and *Cobaltite* are seldom met with, more especially in combination, in this district. In fact cobaltite may be added to the list of new minerals found in the district. Some good specimens were found recently in the dressing floors, having been tipped over the grizzlies. The mineral came from the west branch of New Glencrieff mine, but I have never been able to find out what part of the mine it came from. This is only the second time that I have found niccolite, and cobaltite only once. Niccolite and cobaltite have recently been found in west branch (north), No. 4 level, New Glencrieff vein. The composition of this mineral is nickel, arsenic, cobalt, iron, sulphur, and antimony. Cobalt is, next to platinum, the most difficult to melt of all metals. Its gravity is 8.538.

Witherite (barium carbonate) has for the second time been found in the 80 fathoms level, west branch of New Glencrieff mine, at about 80 fathoms, and also at 140 fathoms north of the winding shaft. From the 80 to the 40 fathoms level might justly be termed one of nature's laboratories. The vugs run almost continuously from the one level to the other. In this part of the mine it seems as if nature had changed its plan, not once but several times. Here a large assortment of beautiful pseudomorphous specimens of barytes after witherite have been found. These would require a paper entirely devoted to themselves if a full description of them were given. It is rather strange that no crystals of witherite are to be found, except in a state of pseudomorphism. Some of the specimens showed two and three pseudomorphous forms. At the 40 fathoms level they showed the first generation to be barytes, the second calcite enclosing barytes, the third witherite coating calcite, the fourth witherite changed into barytes. Specimens found further down the

mine seemed to take other pseudomorphous forms. Some showed the barytes entirely removed, leaving a thin coating of iron pyrites on the inside of the calcite shell, with pure white pseudomorphous crystals of barytes after witherite on the outside. Others showed as if nature had again changed its plan. After the barytes had been removed it had been re-deposited in another crystalline form. Others showed the witherite partly changed, which makes it quite evident that the process of alteration is still in operation. I have another interesting specimen showing several pseudomorphous forms. The matrix was composed of laminated barytes crystals. On the top of the barytes were built pieces of ordinary vein stone covered and cemented together by fine nailhead calcites. On top of these pieces of cock's comb barytes had been deposited, and had been coated with iron-pyrites, which was also covered with calcite. All the different minerals had again been partly covered with globular crystals of witherite, about one inch in diameter, which in turn had been changed into barytes. The latter was again going away, leaving a thin globular shell, with fine snow-white crystals covering both inside and out. Let me mention only another of these pseudomorphs, found at the 80 fathoms level. This crystal was like a globe 9 inches diameter, cut in two. It was composed mostly of witherite, with a cap of barytes about one quarter of an inch thick, which again showed that the change was still going on at this depth.

Witherite has also been found recently at Wembley, Leadhills, the second place where it has been discovered in Scotland.

Gold.—The question as to whether there is a sufficient quantity of gold in the alluvium of Wanlockhead and Leadhills to warrant a trial being made with up-to-date methods for its recovery is continually being raised. I knew of a party of gentlemen who had such faith in the possibilities that they were prepared to find the money and the plant to give it a trial. They even went so far as to approach the Marquis of Linlithgow's factor about it, but he thought that it could not be made a paying proposition. Besides, I understand that the present companies have the right to work all

the minerals in the district. Let us take into consideration the large quantity of gold that was collected in 1921 during the strike, which, unfortunately for the prosperity of both villages, lasted from January till November of the same year. This was the first strike that ever took place in Wanlockhead, though Leadhills has been less fortunate. As that summer was an exceptionally fine one, a good many of the young men in both villages, more especially at Leadhills, spent a great deal of time hunting that elusive metal. The most persistent and most fortunate of the seekers were Mr John Weir and Mr John Blackwood. Both of them collected a wonderful amount of gold. Several thousand grains were picked up. Some of the pieces found weighed from 20 to 100 grains each. There was no trouble in getting one shilling the grain for the gold found from collectors who wanted a sample of Scottish gold. This is almost four times its true value. So, after the experience of 1921, there can be no doubt that in some parts of the district there is gold to be found in payable quantities. But again the gold is disseminated in such small quantities in most of the alluvium that I do not believe there is a sufficient number of rich spots to justify anyone spending much money on this venture. Had all the gold that is in the district been confined to a small area, the result would have been quite different. Therefore I am afraid that until someone finds an auriferous vein, which is said to exist in the district, the same question will sometimes arise with the same unsatisfactory answer.

In concluding this paper, allow me to draw your attention to a rather interesting report from Moscow, which announces that a leading Russian scientist, Dr. Manniloff, has disclosed important evidence suggesting that male and female sex exists among minerals. Dr. Manniloff is a member of the Psycho-Therapeutic Association in Leningrad, and recently addressed the Association on his discoveries. He declared that after exhaustive experiments he hopes to prove the existence of one harmonious system of sex throughout the entire creation, from human beings down to stones.

In an interview the Russian scientist said :—" While conducting research work with a view to analysing sex in human

beings, animals and plants, he stumbled upon evidence which hints strongly at the possibility of sex in minerals. In this work he reached his findings by employing radio-active tests. His attention was first arrested by the discovery that the same mineral occurs in two varying forms—the one consisting of cubic crystals, the other octagonal crystals. In these experiments he had made use of the most typical mineral, namely, pyrite." When crystalised into cubes pyrite has caused the discoloration of the solution in which it was immersed, a typical male reaction. Crystalised into octagonal crystals, pyrite gave a typical female reaction. He repeated this experiment with 11 different minerals, and obtained the same amazing results in each case. He does not affirm that his experiments lead to final and indisputable proof of the existence of sex in minerals; only refers to the astonishing evidence pointing to this possibility. Should this theory put forward by Dr. Manniloff be correct, it will completely revolutionise our ideas about the mineral world, and to my mind I do not see anything impossible about it. I have often thought that if we knew more about the wonderful laws of nature, the laws that govern the animal, the vegetable, and the mineral world, we might find that the difference between each of them is not so great after all.

*LIST OF PSEUDOMORPHOUS MINERALS FOUND IN
WANLOCKHEAD AND LEADHILLS.*

Anglesite after Galena	Hemimorphite after Calcite
Barytes after Witherite	Hemimorphite after Zinc Blend
Barytes after Barytes	Limonite after Pyrites
Calamine after Calcite	Linarite after Galena
Calamine after Galena	Limonite after Calcite
Calamine after Vanadinite	Malachite after Galena
Calcite after Galena	Minium after Galena
Calcite after Barytes	Plattnerite after Pyromorphite
Calcite after Leadhillite	Pyromorphite after Galena
Cerussite after Anglesite	Pyromorphite after Calcite
Cerussite after Galena	Pyromorphite after Leadhillite
Cerussite after Lanarkite	Pyrites (Iron) after Barytes
Cerussite after Leadhillite	Quartz after Barytes
Cerussite after Pyromorphite	Quartz after Anglesite
Chrysocolla after Cerussite	Quartz after Calcite
Chrysocolla after Galena	Quartz after Galena
Dolomite after Calcite	Quartz after Psilomelane
Erinite after Cerussite	Vanadinite after Calamine
Galena after Pyromorphite	Vanadinite after Galena
Hematite after Calcite	Wad after Calcite

LIST OF MINERALS FOUND IN WANLOCKHEAD
AND LEADHILLS.

Anglesite	Jasper
Annabergite	Kupfernickel
Aragonite	Lanarkite
Asholane	Leadhillite
Aurichalcite	Lead (native)
Azurite	Laumonite
Barytes	Limonite
Calamine	Linarite
Calcite	Lydianstone
Caledonite	Malacconite
Cerussite	Malachite
Chalcedony	Minium
Chrysocolla	Meteoric Iron
Chalcopyrite	Mimetite
Chlorite	Mountain Wood
Chalybite	Mountain Leather
Crocoisite	Niecolite
Cobaltite	Olivinite
Calcium-Vanado-Pyromorphite	Plattnerite
Copper (native)	Plumbo-Aragonite
Dechenite	Plumbo-Calcite
Dolomite (Pearl Spar)	Psilomelans
Erythrine (Cobalt Bloom)	Psittacinite (Motttramite)
Eosite	Pyrites (Iron)
Erinite	Pyrolusite
Fluor Spar	Pyromorphite
Galena	Quartz
Graphite	Susannite
Gold	Strontianite
Greenockite	Titanite
Gypsum	Tile Ore
Goslarite	Vanadinite
Hematite	Vauquelinite
Hemimorphite	Wad
Hydrocerussite	Witherite
Jamesonite	Zinc Blende

Notes on the Flora of Mid Nithsdale.

By J. GLADSTONE and W. A. SCOTT.

The following has been checked with Mr G. F. Scott-Elliot's "Flora of Dumfriesshire," and constitute new place records at least :—

Aconitum napellus, Linn., Maxwellton (Escape); Closeburn.

Cochlearia Armoracia, Linn. (Escape?), Croalchapel. (Record 1919.)

Genista anglica, Linn., Beuchan.

- Trifolium medium*, Linn., Scaur.
Alchemilla conjuncta, Bab., Cample Cleuch. (Record 1919.)
Saxifraga granulata, Linn., Capenoch; Closeburn Castle.
Sanicula europaea, Linn., Scaur.
Sherardia arvensis, Linn., Capenoch.
Tanacetum vulgare, Linn., Stepends; Gateside.
Artemisia vulgaris, Linn., Trigony.
Senecio aquaticus, Huds., Hallscaur.
Carlina vulgaris, Linn., Glenwhargen; Craigturra; Dal-
 peddar.
Carduus eriophorus, Linn., Closeburn. (Record 1918.)
Centaurea Cyanus, Linn., Capenoch.
Hieracium aurantiacum, Linn., Capenoch; Craigdarroch.
Hieracium sabaudum, Sm., Capenoch.
Vaccinium Vitis-Idæa, Linn., Glenleith Fell.
Lysimachia Nummularia, Linn., Morton Loch; Penfillan;
 Capenoch.
Vinca minor, Linn., Jarbruck.
Lycopus europæus, Linn., Drumlanrig Woods.
Origanum vulgare, Linn., Capenoch.
Lamium maculatum, Linn., Dabton Woods.
Polygonum amphibium, Linn., Maxwellton Loch.
Euphorbia amygdaloides, Linn., Shinnelwood; Drumlanrig
 Woods.
Urtica urens, Linn., Thornhill Smithy.
Parietaria officinalis, Linn., Newabbey.
Salix alba, Linn., Scaur.
Sparganium ramosum, Huds., Druidhall.
Sparganium minimum, Flr., Capenoch.
Listera cordata R. Br., Blackchubb.
Habenaria viridis, R. Br., Capenoch.
Paris quadrifolia, Linn., Auchenbainzie, Drumlanrig Woods.
Polygonatum multiflorum All, Thornhill.
Allium oleraceum, Shawsholm; Trigony Wood.
Scirpus pauciflorus, Light f., Queensberry.
Carex pallescens, Linn., Blackstone.
Carex pendula, Linn., Thornhill.
Carex vesicaria, Linn., Capenoch.

Millium effusum, Linn., Thornhill.
Aira cæspitosa, Linn., Barr (Tynron).
Festuca vivipara, Sm., Correifron. (Record 1924.)
Poa nemoralis, Linn., Capenoch.
Lycopodium clavatum, Linn., Capenoch; Dalgonar.
Lycopodium Selago, Linn., Capenoch.
Asplenium Adiantum-nigrum, Linn., Craigturra.
Ceterach officinarum, Desv., Speddoch.
Scolopendrium vulgare, Symons., Sweetbit; Closeburn;
 Speddoch.
Osmunda regalis, Linn., Lincluden.
Ophioglossum vulgatum, Linn., Thornhill; Berryhole; Burn.
Botrychium Lunaria, Sw., Dunreggan; Capenoch; Scaur.

Notes on the Family of M'Caskie.

By NORMAN J. M'CASKIE, M.A., M.D.Camb.

A family, named M'Caskie, was settled in Dumfries from the end of the seventeenth until the beginning of the twentieth century.

The name is a variant of MacAskell,¹ which is a compound of the Celtic patronymic prefix with the Scandinavian, Askell, a contraction of Asketil, the cauldron of the Ases, divine descendants of Odin, dwelling in the mythological Asgard. It is one of the many Scottish names of Norse origin, and is evidence of the influence which Norway had on the formation of our people. A name of almost the same derivation is MacCorquodale, Thorketil, Thor's cauldron.

Whether the name had a merely metaphorical meaning, "a vessel of holiness," "a holy sacrifice," or whether its possessor actually held a priestly office, as keeper of the sacrificial cauldron, which was an essential in the ceremonies

¹ *Etymological Dictionary of the Gaelic Language*, Alexander MacBain; *The Romance of Names*, Ernest Weekley, John Murray, 1914; *Surnames*, Ernest Weekley, 1916; *The Norse Influence on Celtic Scotland*, George Henderson, 1910; *The Scottish Macs*, Rev. J. B. Johnston, 1922; *Irish Names and Surnames*, Rev. P. Woulfe, 1922.

of the Scandinavian ritual, I do not know, but in any case the name connotes some connexion with the pagan mysteries of the old Norse religion, and preserves a tradition, however faint and remote, which is long antecedent to the advent of Christianity into Northern Europe.

Another derivation of the name, which was mentioned in the *Weekly Scotsman* of April 3rd, 1915, has been suggested in a recent letter to me by Mr W. M'C. Wallace — that MacCaskie is a phonetic rendering of MacGaisgeadhich (the son of the champion or hero); and he also believes that MacCaskie and MacCaskill are distinct names. This seems improbable to me, as there is no hint of this spelling in the earliest extant form of the name, and in early documents MacCaskie and MacCaskill are used indifferently. The Rev. J. B. Johnston and the Rev. P. Woulfe, whom I consulted, both agree with my opinion. Mr Johnston wrote that it is true that MacCaskie is a fair phonetic rendering of MacGaisgeach, a warrior, and that "some Irish MacCaskies may come from it, but that the identity of MacCaskie and MacCaskill is practically certain." Father Woulfe wrote that "MacCaskie is a very rare name in Ireland. Ascaid, which is pronounced 'Oskie,' is no doubt a 'pet' form of Askell, and so MacCaskie and MacCaskell are practically the same name. It was a case where the two surnames were synonymous and interchangeable."

Askell² is a not uncommon name in the Sagas from the tenth to the thirteenth century. An Askell, son of Olmod, and father of Aslak, lived in the days of Olaf Trygvæson, 1000 A.D. His family were strong opponents to the introduction of Christianity, and may have chosen a pagan name for this reason, but any original pagan significance was lost later, as the name is borne by a Christian bishop of Stavanger in the thirteenth century.

Askell, son of Torquil, was the last king of Dublin, when it was captured by the Anglo-Normans in September, 1170. He and a number of his followers escaped in their ships to

² *The Saga Library*, William Morris, Bernard Quaritch, 1893.

Man and the Islands. Giraldus Cambrensis³ relates that "about Pentecost (May 16th, 1171) Askell, formerly prince of the men of Dublin, landed, with Norwegians and Islanders, in 60 ships . . . warlike men clothed round with iron after the Danish custom, some with long coats of mail, some with iron plates skilfully sewn together : also with round red shields strengthened in circles with iron ; men of iron minds as well as iron arms." The attempt to recover the kingdom failed, and Askell was taken prisoner and beheaded in his own hall.⁴ There is a coin of Ascil MacTorquil shown in Lindsay's *Coinage of Ireland*, published in Cork in 1839.

Whether this Askell, or some other Scandinavian invader, who "made a name for himself," was the ancestor of the families bearing his name, can never be known, but, less than a century after the fall of Dublin, the patronymic is found in the records of the Isle of Man.

In 1257 Magnus,⁵ the last king of Man and the Islands, granted a charter to the Bishop of Man and the Isles, and among the witnesses is Fogalis M'Hascatt'. The charter is in Latin, written with many contractions, and the last syllable of the name, -ell or -ill, is represented by an apostrophe. This entry is interesting, as it preserves the full form of the Norse Asketil, before the transition to the later Askell.

In the middle of the fourteenth century the name appears in the Isle of Skye. It may be that there is no relation between the families of Man and of Skye, but it is interesting, in view of a tradition⁶ that the MacLeods of Skye are descended from a kinsman of Magnus, the last king of Man, that a family, a member of which is a witness to a charter granted by this Magnus, should appear in the next century in association with the MacLeods. It must be stated, how-

³ *Expugnatio Hibernica*, Vol. I.

⁴ *Annals of Ulster: Annals of the Four Masters*.

⁵ *Monumenta de Insula Manniæ*, Vol. II., J. R. Oliver, M.D., Douglas, 1861.

⁶ *History of the MacLeods*, Alexander Mackenzie, 1889; *The MacLeods*, the Rev. R. C. MacLeod, 1906; *The Clans, Septs, and Regiments of the Scottish Highlands*, Frank Adam, 1908.

ever, that this descent of the MacLeod chiefs is regarded by modern authorities as more than doubtful, and I do not think that it can be relied on as evidence of the common origin of the two families of MacAskill.

In the reign of Edward II., a bearer of the name rose to prominence during the wars between England and Scotland. Norway had ceded the Isle of Man to Scotland in 1266, and it remained under Scottish rule until its cession in 1290 to Edward I.

In 1311 Edward II. issued a writ,⁷ in which he enjoined his sheriffs, bailiffs, and faithful subjects in the counties of Chester, Lancaster, Cumberland, and Westmoreland to afford assistance to the seneschal of Man, "our beloved and faithful" Gilbert Makasky, against Robert Bruce, who was planning an attack on the island.

Dated from Berwick on Tweed, Dec. 15th, 1311.

On the next day, December 16th, a writ was issued by Edward II. from Berwick to Gilbert MacAskel, respecting the arrest of malefactors or enemies of the Isle of Man.

In 1312 a writ was issued by the King to Gilbert Makaskill, "Keeper of his land of Man," respecting the delivery of money.

Easter Term, 1316. Exchequer Memoranda. Cumberland.

Having audited the compotus of Gilbert Makasky, constable of the castle and keeper of the Isle of Man, from 18th February till 1st May, 4th year, under the King's writ, signed with "the seal he uses for Scotland," on which latter day the King gave the island, with lordship and regality, to Henry de Beaumont for life, to be held for the same services as the old lords did to the King of Scotland, and ordered Gilbert to be exonerated from all issues from that date—he owes £641 14s 2½d.

Dec. 4th, 1318. Close Rolls. York.

The King commands the Treasurer and Chamberlain to pay Gilbert Makaskel, late seneschal of the Isle of Man, 350

⁷ *Munimenta de Insula Mannie.*

marks, which he had advanced to the King's late receiver of Carlisle out of his own funds for munitions against the Scots, as the receiver's executors refuse to give up the counterpart of the indenture : as also a balance of £500 due him by the King for expenses occurred in service against the rebels in the Isle of Man and elsewhere.

March 24th, 1319. Exchequer Memoranda. York.

Writ in favour of Gilbert Makasky, who, while constable and keeper of the castle and Isle of Man, between 8th Feb. and 1st May, 1310-11, had expended various sums in the King's service on John of Argyll and others, under various royal mandates which he has lost in Scotland by the attacks of the enemy, allowing him in consideration of his own good services in Man and on the Scottish Marches, the sum of £308 17s 6½d received and so expended 24th March.

Easter, 1319. Exchequer Memoranda.

As Gilbert Makasky, late Warden of Man, seeks allowance in his compotus for certain men-at-arms at 2s and foot 3d per diem, and the barons are averse to allow the same in the Treasurer's absence, who is at the Parliament at York, being above the usual rate of 12d for men-at-arms and 2d for foot, they adjourned the accounting to the quinzaine of Trinity. Before which day Gilbert died.

No further mention of the matter occurs in the records, and, as Edward II. was soon involved in troubles of his own, it may be presumed that the money was never paid. The loss of such a large sum for those days must have beggared Gilbert's estate, and if he had children plunged them into ruin. After his death the possession of the Isle of Man was in dispute between England and Scotland, and it was subjected to a miserable period of raids and warfare until the defeat of David II. at Neville's Cross in 1346.

I can find no further reference to the name in Man until the entry of a John M'Caskell⁸ as tenant of the Stanleys in 1515 in their Manorial Roll.

From these extracts it is seen that the name is spelt

⁸ *Manorial Roll of the Isle of Man*, Rev. T. Talbot, 1924.

indifferently as Makasky, MacAskel, Makaskill or Makaskel, and that the forms are interchangeable. There are a great many minor variations in the spelling, but as a rule it appears as MacAskill or MacCaskill in the North, and as MacAskie or MacCaskie, or without the prefix as Caskie, in the South and in Ireland. The following extracts from the Post Office Directory of Edinburgh show the confusion which arose in more modern times :—

1811—Mrs General M'Caskell.

1833—M'Caskie and Anderson.

M'Caskill, Thomas (of M'Caskill and Anderson).

Mrs General M'Caskill.

1834—M'Caskie and Anderson.

M'Caskie, Thomas' (of M'Caskie and Anderson).

Mrs General M'Caskie.

The MacAskills are a sept of the Macleods, and, according to traditions collected by Bannatyne Macleod of Glendale (b. 1790, d. 1856), were their lieutenants in early times. I do not know from what sources these traditions were collected. Canon R. C. MacLeod kindly allowed me to see a copy of the manuscript, part of which was used in a lecture delivered before the Gaelic Society of Inverness by Alexander Mackenzie and published in *The Scottish Highlander*, November 11th and December 2nd, 1897 (Inverness). It is stated that the MacCaskills were for several generations the Lieutenants of the Chief both by sea and land, and held large possessions under the MacLeods as Commanders of the galleys, or bir-linns, and one of them always accompanied the chief as his henchman.

William MacCaskill repulsed a raid of the Frasers in the days of Malcolm,⁹ third chief of MacLeod, b. circa 1296, succeeded 1320, died circa 1370. The story is related as follows by Bannatyne MacLeod :—

“ Soon after Malcolm had carried off the wife of Fraser of Glenelg, the clan Fraser resolved on vengeance, and, to effect this, a large force was collected in Glenelg, which, having committed every outrage on the MacLeods of that

⁹ *History of the MacLeods*, Alexander Mackenzie, 1889.

Barony, proceeded to Skye. Here they met with no resistance until they reached the water of Drynoch, where the MacLeods had hastily collected a body of men under Iain Reier, a bastard brother of Malcolm, who, with most other persons of note amongst the MacLeods, was slain and the remainder put to flight. Malcolm himself was at Pabbay in Harris, whither a swift galley was despatched with the sad tidings. He immediately collected all the forces he could, and, landing in Trotternish, was joined by several others of his vassals. The Frasers in the meantime had laid waste Minginish and Bracadale, carrying off the cattle and spoil of the vanquished. A foster brother of Malcolm, and the first of the name who is mentioned, a William MacCaskill, who had been left seneschal of Dunvegan, collected a select body of men, among them his six younger brothers, and resolved to recover the spoil of the MacLeods from the Frasers or perish in the attempt. They took up their position in a wood above Broadford, on the direct road through which the Frasers had to pass. The Frasers, completely off their guard, were suddenly attacked and their leader slain. This threw them into inextricable confusion: the greater part of them were slain and the whole of the booty was recovered by MacCaskill, who was joined by the chief as the fight finished."

The next reference in the manuscript is to a raid in the days of William, 5th chief of MacLeod, b. circa 1365, succeeded 1392, d. circa 1402, when the Macdonalds, under Alister, brother of the Lord of the Isles, and ancestor of the Macdonalds of Keppoch, invaded Skye and landed at Eynort. William collected his clan and met the invaders at the head of Loch Sligachan. Here a fierce and bloody encounter ensued, which ended in the rout and total defeat of the Macdonalds, with the loss of their leader. Few of them escaped alive, their galleys having been captured by MacCaskill, who put every soul on board to death, and carried their heads to Dunvegan, where they were numbered and delivered to the chief's warder.

There are two references to the MacAskills in A. W. Mackenzie's *History of the MacLeods* (Inverness, 1889). The

first states that Neil MacLeod, 4th of Gesto, the earliest cadet branch of the MacLeods of Harris, married the daughter of the Chief of the MacCaskells (no date is given): the second gives an account of the murder of MacCaskill of Ebost by his brother-in-law, John MacLeod, 6th of Gesto, who was saved from the vengeance of the MacCaskills of Rhundunan by his wife's father. The story is given in full in Alexander Cameron's *History and Traditions of the Isle of Skye* (Inverness, 1871).

Canon MacLeod tells me that the earliest rent roll at Dunvegan, dated 1664, gives the names of ten MacCaskills who were tacksmen on the Skye estates of MacLeod in that year. Their names are Kenneth, Dan, Peter, Finlay, Peter, Kaskill, Allan, on farms in Minginish; Peter on a farm in Bracadale; Murdo on a farm in Glendale; Neil on a farm in Waternish. The rents vary from £212 16s od (Scots) to £36 os od (Scots).

Mr John Mackenzie, factor to MacLeod of MacLeod, informed me "that, according to the family tradition, there were two branches of the MacAskills—the family of Rhue-n-dunan known as Clan-vic-Donnil-Dubh and the family of Talisker known as Clann-vic-Ailein (sons of Allan). The Rhue family continued in possession of their lands until 1846, when they emigrated to New Zealand. Of this family came John MacCaskill, ensign in the regiment raised by MacLeod for the Government in 1745. The Talisker family was removed to Glendale at the beginning of the seventeenth century by Sir Rory Mor to make room for his son, another Sir Roderick, whose descendants were afterwards known as MacLeods of Talisker. The MacAskills never prospered in Glendale, and as an authentic family are extinct."

At the present time there are several families of the name in Skye.

There is a town, named M'Caskill, in South Carolina, which no doubt was founded by emigrants from the Western Islands, and an island in the Pacific bears the name.

The first appearance of the name in the south-west of

Scotland is in Dumbarton in 1494. In *The Accounts of the Lord High Treasurer of Scotland*, Vol. I., p. 245, Thome M'Kasky is mentioned as receiving pay, in a section headed : *Thir ar the expenses maid opone the byggan of the Kyngis (James IV.) row barge byggyte in Dunbertane.* He received pay at the rate of iiis (Scots) a day, and the work of building the " barge " lasted from September until the following March.

The name appears next, in 1591, at Lesmahagow, where Thomas M'Casky, notary public, subscribes a bond of caution for Allane and Johnne Jaksoun, who bind themselves in 300 merks each that Thomas Hammiltoun and others of his family " shall be harmless of the said persons." Not an uncommon document in those troublous times (*Register of the Privy Council of Scotland*. Vol. IV., page 710).

In the 17th Century the name was fairly widespread in the south-west of Scotland, and the first record is found in the Lanark Testaments, where the will of Adam M'Caskie, " messenger in Abbey Grein within the parochin of Lesmahagow," who died in 1625, is entered. He may have been the son of Thomas M'Casky, the notary, but there are no registers of Lesmahagow of this date to prove the relation. The will is worth quoting, if not for the spelling, for the careful inventory of his effects :

" In the first the said umquhile Adam MacKaskie had the guidis, geir, sowmes of money of the availlis and pryces eftir following pertaining to him the tyme of his deceis foir-said viz. : ane gray naige pryce thair of £13 6s 8d. Item twa calfit ky pryce of the peice ourheid £12. Inde £24. Item ane quey of thrie yeir auld pryce £8. Item the sawing of halff ane boll beir estimat to two bollis beir pryce of the boll with the fodder £6 inde £12. Item in wtenceillis and domicieillis with the abulzementis of his bodie estimat to £26 13s 4d. Summa of the Inventar £84. Na debtis awin to the deid." He had two sons, one of whom died in Lesmahagow in 1631.

The National League and Covenant of 1638 is signed by Jon M'Coskie in the " toune of monegoffe " (Minnigaff in

Galloway), and by Jon and Robert M'Coskrie in "bardrochwood," "with our hands at the pen led be the notars under-written at o^r commands becaus we canot wryt o^r selffs," which probably accounts for the strange spelling of their names.¹⁰

A Janet MacKaskie was married to John Whyte, merchant in Edinburgh, in 1642.¹¹ In 1650 Patrick M'Caskie held kirklands at Monygaffe.¹²

1688, Jan. 11th. Inhibition at the instance of Patrick M'Caskie, merchant in Glasgow, against Alexander Agnew of Cladehouse, for non-payment of £1000 (Scots, I trust) abstracted by the said Alexander from complainer while staying at the said Alexander's house as a common inn.¹³

1688. Death of Patrick M'Caskie, merchant, Glasgow (Kilmarnock).

1685. The proof of the will of Andrew M'Caskie, Clerk of Kilmarnock, who died in 1685, at the end of which the commissary states succinctly:—"et sic debita excedunt bona." His wife, Sara Reid, is mentioned, but there is no trace of the family in the registers of Kilmarnock, and the only other connection with the town is a sasine of land to — M'Caskie, apothecary, in the Ayr sasines.

A family of Caskie, descendants of which are now in Virginia, was settled in Stewarton during the 17th century.

These scattered references are not enough to enable one to trace the descent of the family, and it is not until a branch settled in Dumfries at the end of the 17th century that a more or less connected pedigree can be constructed. During the 18th century they were merchants and traders, and rose to no position of importance in the town. In most cases they left no wills, possessed no landed property, and engaged in no litigation, so that there is little beyond the evidence of the registers of Births, Marriages, and Deaths, and these are sometimes incomplete, to show the relationship between the various members of the family.

¹⁰ *Transactions of the Dumfriesshire and Galloway Natural History and Antiquarian Society*, 1913-14, Third Series, Vol. II., p. 256-7.

¹¹ *Edinburgh Register of Marriages*.

¹² M'Kerlie's *History of Lands and their Owners in Galloway*.

¹³ *Wigtown Inhibitions*, 1688, February 28th.

The first mention of the family in Dumfries is the marriage of Allan M'Caskie to Margaret Kirkpatrick in 1699. He was admitted burghess in 1712, and the entry in the Town Council Minutes is a wonderful example of tautological expression :—

“ The said day Thomas Glendinning baxter¹⁴ and Allan M'Casky Tobacco Spinner were admitted and received Burgesses and freemen of this Burgh with liberty to them to use exerce and enjoy the haille immunities priviledges liberties and freedoms other burgesses or freemen of the same does can or may enjoy who being personally present accepted the same in and upon them and gave their oaths of burghessship in common form and the said Thomas is to pay to John Gilhagy thes^r fourty pound Scots of composition and the sd Alan fifty merks for which he is to be charged for at compting for his intromissions.”

Mr G. W. Shirley thinks that this entry implies the first appearance of the family in Dumfries for these reasons :— (1) The large sum paid : sons and sons-in-law only paid a small composition ; (2) the fullness of the entry ; (3) as it was illegal for anyone except a burghess to trade as a merchant, it would appear from the reference to intromissions that this burghessship corrected an illegality.

The last male representative of the family in Dumfries was Robert M'Caskie, who died at the age of 82 in 1902. He was the son of Robert M'Caskie, b. 1785, d. 1827, and Mary Turner, b. 1791, d. 1868.

My own branch of the family, descended from Thomas M'Caskie, b. 1785, left Dumfries over a hundred years ago, and to-day is settled in England and in America. The

¹⁴ Letter by John Maxwell of Terraughty and Munches, 1720-1814. “ In 1725 potatoes were first introduced into the Stewartry. During these times when potatoes were not generally raised in the country there was, for the most part, a great scarcity of food. . . . At that period there was only one baker in Dumfries, and he made bawbee baps of coarse flour, chiefly bran, which he occasionally carried in creels to the Fairs of Urr and Kirkpatrick ” (*Book of Caerlaverock*, by Sir William Fraser, VI., p. 577). Was Glendinning this “ one baker ? ”

descendants of his brother, Ebenezer M'Caskie, have changed the spelling of their name to Macaskie, and are now in England. Another branch, descended from John M'Caskie, b. circa 1772, left Dumfries about the same time, and is now in Elgin. The descendants of Robert M'Caskie, b. 1785, d. 1827, and Mary Turner, b. 1791, d. 1868, have left Dumfries, and many of them are in England.

A family spelling its name as M'Askie, exists to-day at Omagh, in the North of Ireland. I can learn nothing of their history, except that they have been settled in Ulster for a long time. The Rev. P. Woulfe mentions M'Oskie (obsolete), MacAskie, MacCaskie, Caskey, as a rare North of Ireland surname, in his *Irish Names and Surnames*, and he also gives MacAskill.

A branch of the Irish family emigrated to Australia in the 19th century from Armagh, and spell their name as M'Caskie, and others have gone to America, where the name is also spelt M'Caskey.

No arms were recorded at the Lyon Office, nor at the College of Heralds, by any family of MacCaskill or M'Caskie, until Norman M'Caskie, M.D. Edin., obtained a grant in 1909 from the Lord Lyon. The arms—Vair, on a bend or three crosses urdy gules : crest, a pegasus argent, couped at the loins, crined and unguled or : motto, "Spur on"—have no special meaning nor reference to the history of the family.

Mr John Mackenzie informed me that the MacCaskills of Rhuendunan always used as a crest a dexter hand holding a dagger, with the motto, "Manu forti." The arms were azure, three bears' heads couped argent. The MacCaskills believed that their arms had been registered prior to 1672, at which date a general registration of all arms was ordered in Scotland by Act of Parliament, but evidence cannot be found, and there is no subsequent record.

This coat, but not this crest, is that granted officially to Forbes. The Mackay coat is the same, with the addition of a gold chevron charged with a roebuck's head between two hands grasping daggers, and their crest is a hand holding a dagger, with the motto, "Manu forti."

This crest and motto are placed above a blank shield in the Hall of Gray's Inn, of which Stuart Macaskie, K.C., was Treasurer in 1903.

From this account it is seen that our name first appears in the middle of the thirteenth century, 700 years ago, that it is of Norse origin, and that families bearing the name were settled in the Isle of Man, in the Western Islands, in South-West Scotland, and in Ireland. There is no documentary proof, and nothing beyond the common name, to connect them, but there is nothing inherently improbable in their being of one stock and descended from one ancestor.

I wish to express my thanks and my sense of indebtedness for the help which I have received in the compilation of these notes to Canon R. C. Macleod of Macleod, the Rev. J. B. Johnston, the Rev. P. Woulfe, Mr G. W. Shirley, Mr John Mackenzie, Mr W. M'C. Wallace, Mr J. A. Caskie of Virginia, U.S.A.; and to various members of my family.

Extracts from the Parochial Registers of Dumfries, now in the Register House in Edinburgh, with Extracts from Other Registers.

BAPTISMS.

1700. December 8th.—John, oldest lawfull son to Allan M'Caskie, tobacco-spinner, and Margaret Kirkpatrick his spouse.
1726. July 14th.—*Stephen, lawful son to James M'Caskie, merchant: witnesses, Robert Smith and Robert Johnston, copper smiths.
1726. September 11th.—Agnes, lawful daughter to John M'Caskie, merchant; witnesses John Smith and James M'Caskie, merchant.
1726. November 20th.—Jean, lawful daughter to James M'Caskie, merchant: witness John M'Caskie.
1729. May 18th.—James, lawful son to John M'Casky.
- 1731.—May 17th.—Janet, lawful daughter to John M'Caskie, merchant.

* Mentioned in *Memorials of St. Michael's*, by Wm. M'Dowall, page 220; Adam & Charles Black, Edinburgh, 1876.

- 1731. October 11th.—Jean, lawful daughter to James M'Caskie, marchant.
- 1732. October 8th.—Samuel, lawful son to Samuel M'Caskie, workman.
- 1733. December 2nd.—Henereta, lawful daughter to James M'Caskie, Chandler.
- 1735. August 25th.—James, lawful son to James M'Caskie, merchant.
- 1736. September 14th.—Samuel, lawful son to Samuel M'Caskie, workman.
- 1738. February 5th.—Anne, lawful daughter to James M'Caskie, chandler.
- 1740. March 30th.—Robert, lawful son to James M'Caskie, chandler : witness John M'Caskie, chandler.
- 1745. May 5th.—Ebenezer, lawful son to James M'Caskie, tobacconist.
- 1757. July 24th.—James, lawful son to James M'Caskie, Junior ; witnesses James Clarke and James M'Caskie.
- 1758. October 2nd.—George, lawful son to James M'Caskie, Junior, merchant.
- 1768. August 17th.—Robert M'Caskie, tallow chandler and Euphame Ewart a daughter Mary born.

(Kirkcudbright Register of Births.)

- 1768. November 6th.—John and James, twin children to Robert M'Caskie, merchant.
- 1776. November 17th.—George, lawful son to James M'Caskie, merchant, witness Robert M'Caskie.
- 1779. July 4th.—Mary, lawful daughter to James M'Caskie, chandler.
- 1781. May 3rd.—Agnes, lawful daughter to James M'Caskie, candlemaker.
- 1785. July 7th.—Robert, lawful son to Robert M'Caskie, hairdresser.
- 1787. January 7th.—Allan, lawful son to James M'Caskie, tallow chandler ; witness Robert M'Caskie.
- 1807. January 2nd.—Peggy, or Margaret, lawful daughter to Allan M'Caskie, hatter.

1809. December 2nd.—Allan M'Caskie, Hatter, Grass Market, and Isobella Hogg his spouse had a son born 24th November last named Allan.

(St. Cuthbert's Register, Edinburgh.)

1818. April 4th.—Ebenezer M'Caskie and Margaret Kirk a son George born.

(Kirkcudbright Register of Births.)

1808. July 25th.—Isabella, to Robert M'Caskie and Mary Turner.
 1815. January 13th.—Mary, to Robert M'Caskie and Mary Turner.
 1817. January 19th.—James, to Robert M'Caskie and Mary Turner.
 1819. May 7th.—Agnes, to Robert M'Caskie, Junior, and Mary Turner.

The Register of Baptisms is nearly complete.

EXTRACTS FROM THE REGISTER OF PROCLAMATIONS AND MARRIAGES.

1699. December 2nd.—Allan M'Caskie, tobacco-spinner, and Margaret Kirkpatrick, both in this parish, gave up their names to be proclaimed and consigned two dollars; and after proclamation were married upon the twentieth day of the same Month. Witnesses, John Brown, tobacco-spinner, and John M'Cartney, wright.
 1724. September 25th.—*James M'Caskie and Agnes Lawson daughter to John Lawson, merchant.
 1725. August 18th.—†John M'Caskie, merchant, and Agnes Neilson, relict of John Loch, merchant.
 1729. March 28th.—Samuel M'Caskie, workman, and Janet Kirkpatrick.

* Town Council Minutes, May 20th, 1723—John and Jas. M'Askie, sons to Alein M'Caskie, admitted burgesses.

† Died December 4th, 1837, aged 73. *Memorials of St. Michael's*, page 217.

1752. September 14th (new style). — Walter Turnbull, mason, to Agnes M'Caskie, daughter to John M'Caskie, merchant.
1765. October 6th. — Robert M'Caskie, son to James M'Caskie, merchant in this place, to Euphemia Ewart, daughter to John Ewart, joiner, in Kirkcudbright.
1767. January 1st.—John M'Cartney, tailor, to Jannet M'Caskie, daughter of the deceased John M'Caskie, both in this place.
1784. December 11th.—*Robert M'Caskie, barber, and Isabel Copland from the parish of Urr.
1787. November 24th.—Robert M'Caskie, Tallow chandler, and Janet Donaldson, daughter of the deceased Joseph Donaldson.
1801. August 9th.—George M'Caskie and Elizabeth Bailiff.
1804. April 29th.—Robert M'Caskie and Jean Carruthers.
1805. January 9th. — Thomas M'Caskie and Margaret Garron were judicially married. (Annan Marriage Register.)
1812. March 7th.—Sergeant John MacCaskie of 6th R.V.B. and Margaret Davie Robertson of Fort George were this day regularly married at Fort George. (Register of the Parish of Ardersier, County of Inverness.)

EXTRACTS FROM THE REGISTER OF BURIALS.

N.B.—There are no entries from 1791 to 1807.

1729. May 3rd.—James, son to James M'Caskie, merchant.
- 1739 November 6th.—Stephen, son to James M'Caskie, merchant.
1734. January 21st.—Allan M'Caskie, tobacconist.
1734. April 14th.—Samuel, son to Samuel M'Caskie, workman.
1734. August 25th.—James, son to John M'Caskie, merchant.
1744. March 20th.—Margaret Kirkpatrick, relict of Allan M'Caskie, deceased.
1758. November 1st.—George M'Caskie, son to James M'Caskie, merchant.

1765. August 1st.—Agnes M'Caskie, spouse to Walter Turnbull, merchant.
1769. August 23rd. — John M'Caskie, son to Robert M'Caskie, merchant.
1769. November 28th.—Marion M'Caskie, daughter to Robert M'Caskie, merchant.
1775. December 2nd.—James M'Caskie, Senior, merchant.
1777. February 4th.—Agnes Lawson, relict of James M'Caskie, Senior.
1778. February 15th.—Jannet M'Caskie, spouse to John M'Cartney, Taylor.
1787. July 30th.—Euphemia Ewart, spouse to Robert M'Caskie.
1804. May 4th.—Janet Donaldson, wife of Robert M'Caskie, tallow chandler. (Memorials of St. Michael's, p. 78.)
1809. January 26th.—James M'Caskie, aged 74.
1815. May 4th.—James M'Caskie, aged 2 years.
1818. July 30th.—Robert M'Caskie, aged 80 years.
1819. May 6th.—James M'Caskie, aged 6 months.
1821. March 15th.—Robert M'Caskie, aged 42 years.
1822. February 10th.—Charlotte M'Caskie, aged 73 years.
1838. July 19th.—Thomas M'Caskie, aet : 53. (Register of Deaths, St. Cuthbert's, Edinburgh.)
1839. Ebenezer M'Caskie, age 47. (Register of Deaths, St. Cuthbert's, Edinburgh.)
1855. November 13th.—John M'Caskie, aged 78, born in Dumfriesshire, parish not known, parents' names not known, husband of Margaret Robertson. (Register of Forres, County of Elgin.)

19th February, 1926.

Chairman—Mr ROBERT MAXWELL.

Old-Time Life.

By Mr NIGEL MACMILLAN, The Knowe, Kirkconnel.

[The author, who was 82 years of age and well known as a contributor on agricultural subjects to the local papers,

spoke on customs and habits in his early days in Kilmacolm among the farming community : education, courting, Sunday observance, kirk patronage, gypsies, health superstitions, the vernacular. Full report *Courier and Herald*, 20th February, 1926.]

Regime of Dumfries Rainfall.

By Captain J. D. BALLANTYNE.

The subject of the weather in all its bewildering variety of moods is of perennial interest to dwellers in these favoured isles. Hence I shall not need to offer any apologies for introducing such a topic, especially as no one can really say that my subject is a dry one in this locale. The object of inquiry is to discover if there are any well marked phases in the local rainfall which may help us towards the fulfilment of one of our greatest desires—the true forecasting of our seasons' weather. This may have been possible to-day had our forebears left us reliable records of our Island weather for the few thousands of years in which rain has fallen upon humanity in our land. The very short period of which we possess reliable records will give us, when carefully investigated, amazing results.

In our Locale the records of Cargen date back many years beyond that of any other station, and through the courtesy of Colonel R. F. Dudgeon, who has given us the yearly totals for sixty-six years, we are enabled to commence work. First let me introduce you to the actual number of hundreths of inches of rain which have fallen year by year in the gardens of Cargen since 1860 A.D. Here it is :

	60's	70's	80's	90's	1st Decade	2nd Decade	20's
0	4427	3997	3077	3953	5447	5621	5212
1	4425	4454	4451	4766	4244	4986	4917
2	4749	6350	4443	3945	3721	5437	4042
3	4060	4354	4466	3755	6086	4738	5855
4	4012	5106	4385	4943	3891	4671	4880
5	4119	4314	4093	3870	3469	4565	4703
6	5017	4822	4331	3882	4542	5145	
7	3108	6142	3206	4948	4929	4314	
8	5435	3435	3576	4912	4666	5175	
9	5040	3672	3707	4923	5265	3645	

At first glance the variety of the numbers gives us a feeling of hopelessness, but a second and more careful examination will show us that there are distinct limits. In short, 3077 is our lowest number and 6350 is our highest over a period of sixty-six years. We can hardly expect that in this limited period, although it covers practically the lifetime of a human being, we have our highest or lowest possible figures; but still one could say with some confidence that in this neighbourhood our rainfall will rarely be below 30 inches or over 64 inches. This is something to know, but since the varieties of agriculture possible between these two extremes are great, the knowledge alone is of little value. But could one know when to expect a tendency to either extreme one can picture vast changes in the acreage of corn and grass that would take place. How far are we from being able to foretell such years?

Let us group still further in various ways. First take each decade and mark its wettest and driest years :

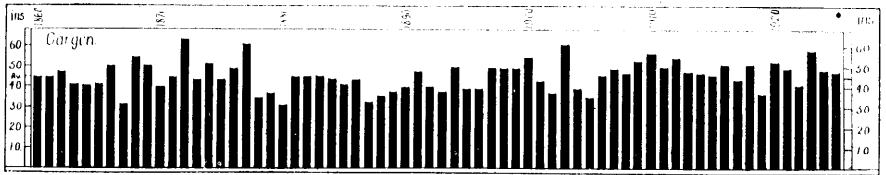
High	5435	6350	4466	4948	6086	5621	5855
Low	3108	3435	3077	3755	3469	3645	4042
Diff.	2327	2915	1389	1193	2617	1976	

Here we can observe one or two curious facts which in themselves indicate that closer study will probably give more definite information. Thus the second and fifth sets of maxima indicate two rainy periods with a drier intervening period, and others beyond. The minima figures also indicate two similar crests of rainy years with drier troughs, and this is still further amplified when the differences are considered. This alone indicates that there is some periodicity in our spells of very rainy weather, and also that these are more intense in their wetness than the dry years are in dryness. This also means that dry years are more frequent than wet years.*

Figures are all very well in their way, but sometimes when these are really representative of things, it is as well to examine the things. We can hardly examine jars of water of so many inches in depth placed side by side, each

* Vide *Fifty Years' Rainfall at Cargen*.

year with its own jar of water. Yet by means of a diagram we can secure a fairly close idea of such a museum collection, added to each year. Here is our diagram :



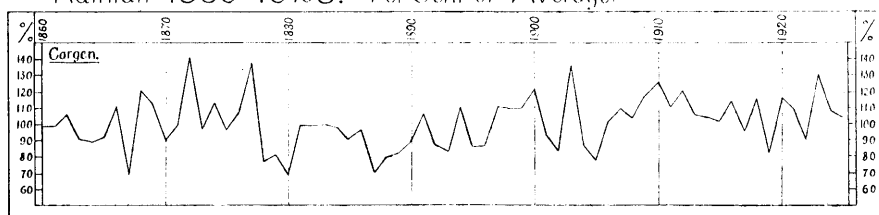
This shows at a glance that the 60's and the first decade of the present century were inclined to be wet, and that the 70's were decidedly dry years. There is also another peculiarity of our weather indicated on this graph, and that is the number of periods of three years or so which have a sequence of two dry one wet.* In the nineties, commencing 1889, you have a fine series of such periods.

Our next steps will be endeavours to smooth out the erratic steps of our graph as just presented to you. If the water were allowed to smooth itself out it would give us this process worked to the extreme. The line would indicate an average depth of 44.86 for all the first sixty years. But this average is not the true average of the station, a series of wet years would raise it, whilst a series of dry years would lower it. A graph worked out from the first year, and indicating the growth of the average, shows us that after the first forty years or so the rise and fall never varies by more than three per cent. from this average. This fact ought to be kept before all our weather pessimists—that our rainiest years are really so little extraordinary that their greatest efforts cannot alter our average rainfall by as much as three per cent. Let us take this sixty years' average as a starting point for other calculations, and find what percentage of the average each year has contributed in its turn. This, for our station, gives a graph almost identical with our first one; but it has this advantage—it can be used when comparing this with other stations whose average is different

* These continue until 1910 before breaking up.

but whose fluctuations may be similar. Here is the graph.
All our other calculations will be reduced to percentages.

Rainfall 1860-1925.—Per Cent of Average.

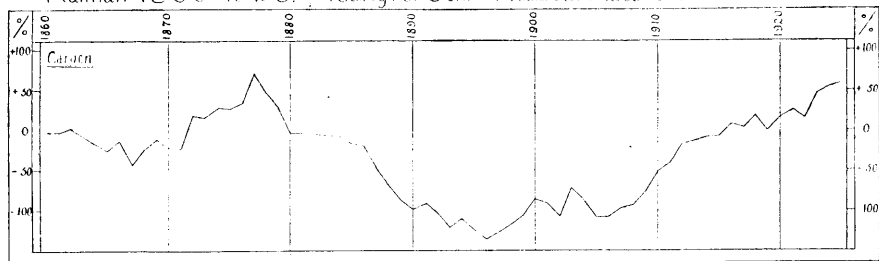


The actual percentage figures, as you will have seen, bring us no further towards our goal. Let us mark the variation from the 100 as + or —, thus constructing a new table of figures. These show thirty-four years with a deficit and the remaining thirty-two with a surplus. Our year 1860 had a deficit of 1.4 per cent; the next year, 1861, was again deficient by 1.4 per cent.; and so the two years together had a debit of 2.8 per cent. on an average year. The following year, 1862, however, was fine for our business, and showed a surplus of 5.8 per cent. This wiped out the debit balance and left 3 per cent. in hand, which the next year, with a loss of 9.6 per cent., promptly turned into a net deficit of 6.6 per cent.

These figures show us the actual net working of our company and are known as “Residual Mass” indicators. Their progress is given to you in the table at the end.

It is made visible to you in its movements by the graph—

Rainfall 1860-1925.—Yearly Per Cent. Residual Mass Curve.

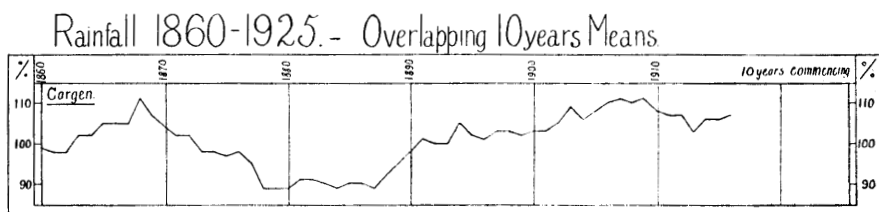


Compare this graph with the previous one and you will

perceive that we have secured a great advance. The irregularities have been softened down and the great periodic control made manifest by the wave form of the graph.

This periodic function must be secured before any value can be given to the shorter and more erratic pulsations of our weather. Hence we will proceed to try and smooth our graph until the graph gives us two crests or two troughs so that we can fix our period of waxing and waning rainfall.

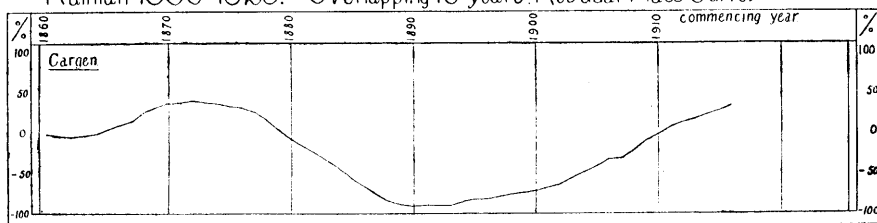
So far we have worked only with our yearly percentages. These can be smoothed a little from their personal idiosyncrasies by being regionally grouped into communities—of ten year periods. The next series of calculations will be worked as follows: The first ten years are totalled and the average taken; then starting with the second year of this series as the first of the next ten, another average is struck, and so on until we reach our last possible group of ten consecutive years. We secure a table of some fifty-five figures from these overlapping series of ten years. These are worked out as percentages, their balance found, and the residual mass numbers calculated. This permits us to present a new type of balance sheet as the next graph shows.



A comparison of our new curve with the yearly per cent. of the sixty years' average, both on the same scale,* will show you how much we have smoothed the curve and eliminated erratic action. The ten years' per cent.

* Readers should draw these for themselves.

Rainfall 1860-1925. - Overlapping 10 years. Residual Mass Curve.

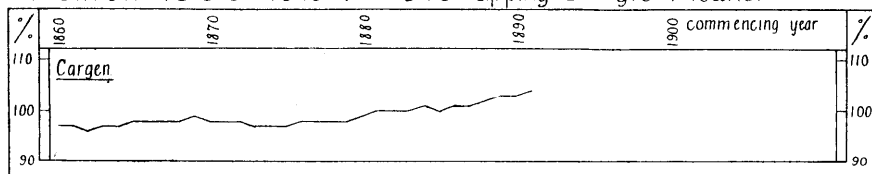


Residual Mass Curve gives us our first distinct wave form of graph, and from this we may conclude that our wet periods occur at intervals of nearly forty-five years. An average rainfall calculated for this period—say from 1872 to 1917—would give us a truer average than that for the sixty years. This average is usually termed the “normal” rainfall for the station.

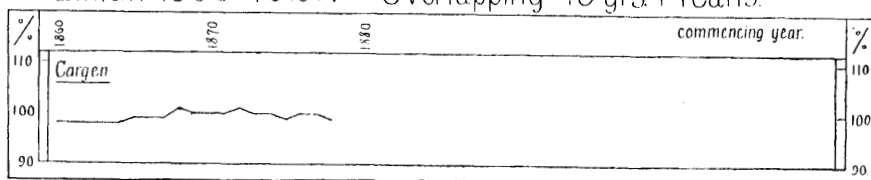
Here it is well to note that this period has been determined for a great number of stations specially selected throughout the British Isles, and although there is much variation, yet the great majority work out to thirty-five years, as does also the average of the whole group. To stabilise all results worked on this basis, the years 1881-1915 have been taken. Our sixty years' average was 4486. The Government basic normal would be 4481, and our true normal (circ.), 4454. These can be used as a local base.

Working on the same principles the overlapping series of thirty-five years and forty-five years were utilised to produce residual mass curves. Owing to insufficient data it is obviously impossible to complete the full wave curve until we have another ten years or so of figures to aid us. Again we are forced to blame our ancestors for not leaving us the wherewithal to determine our own weather.

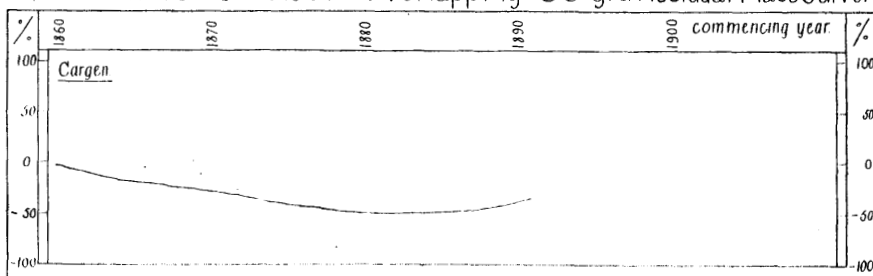
Rainfall 1860-1925. Overlapping 35 yrs Means.



Rainfall 1860-1925. Overlapping 45 yrs. Means.



Rainfall 1860-1925. Overlapping 35 yrs Residual Mass Curve.



The investigation of the sequence of dry, dry, wet requires very detailed work on the monthly figures as this periodic fluctuation, as shown by its disappearances and reappearances, is not due to yearly swings. The period ($3\frac{1}{2}$ years) is more trying, and is not here attempted.

The Excavation of Auchencas.

By R. C. REID, Esq.

Following on a recent visit of this Society to Auchencas Castle, Sir William Younger, Bart., its public-spirited proprietor, decided to have some excavations made, in the hopes of throwing light on some of the problems presented by this ruin.

Work could not be started till November, 1924, and it proceeded at intervals, as weather permitted, into January, 1925. Two or three estate workers, supplemented by unemployed from Moffat, were utilised under the immediate supervision of Mr Waugh, the head gardener at Auchen

Régime of Dumfries Rainfall

RESIDUAL MASS INDICATORS.

Year or commencing year.	Inches of rain.	Percentage of 60 years' average.	Deviation.	Per cent. residue.	Average of 10 yrs., commencing	Ten years' per cent.	Deviation.	Residue.	Average of 35 yrs., commencing	Per cent.	Deviation.	Residue.	Average of 45 yrs., commencing	Per cent.	Deviation	Residue.	
1860	44.27	98.6	-1.4	-1.4	44.392	99	-1	-1	43.467	97	-3	-3	44.012	98	-2	-2	
61	44.25	98.6	-1.4	-2.8	43.962	98	-2	-3	43.308	97	-3	-6	43.800	98	-2	-4	
62	47.49	105.8	+5.8	+3.0	43.991	98	-2	-5	43.152	96	-4	-10	43.826	98	-2	-6	
63	40.60	90.4	-9.6	-6.6	45.592	102	+2	-3	43.209	97	-3	-13	43.866	98	-2	-8	
64	40.12	89.4	-10.6	-17.2	45.886	102	+2	-1	43.453	97	-3	-16	44.000	98	-2	-10	
65	41.19	91.7	-8.3	-25.5	46.980	105	+5	+4	43.713	98	-2	-18	44.278	99	-1	-11	
66	50.17	111.8	+11.8	-13.7	47.175	105	+5	+9	44.092	98	-2	-20	44.612	99	-1	-12	
67	31.08	69.2	-30.8	-44.5	46.980	105	+5	+14	43.872	98	-2	-22	44.606	99	-1	-13	
68	54.35	121.1	+21.1	-23.4	50.014	111	+11	+25	44.047	98	-2	-24	45.124	100	-1	-13	
69	50.40	112.3	+12.3	-11.1	48.014	107	+7	+32	44.233	99	-1	-25	44.968	100	0	-13	
1870	39.97	89.1	-10.9	-22.0	46.646	104	+4	+36	43.904	98	-2	-27	44.886	100	0	-13	
71	44.54	99.3	-7	-22.7	45.726	102	+2	+38	43.754	98	-2	-29	45.012	100	0	-13	
72	63.50	141.5	+41.5	+18.8	45.723	102	+2	+40	43.779	98	-2	-31	45.166	101	+1	-12	
73	43.54	97.0	-3.0	+15.8	43.816	98	-2	+38	43.373	97	-3	-34	44.714	100	0	-12	
74	51.06	113.8	+13.8	+29.6	43.928	98	-2	+36	43.462	97	-3	-37	44.896	100	0	-12	
75	43.14	96.1	-3.9	+25.7	43.207	97	-3	+33	43.507	97	-3	-40	44.572	99	-1	-13	
76	48.22	107.5	+7.5	+33.2	43.986	98	-2	+31	43.881	98	-2	-42	44.772	100	0	-13	
77	61.42	136.9	+36.9	+70.1	42.459	95	-5	+26	43.928	98	-2	-44	44.292	100	0	-13	
78	34.35	76.5	-23.5	+46.6	39.559	89	-11	+15	43.726	98	-2	-46	44.326	99	-1	-14	
79	36.72	81.8	-18.2	+28.4	39.700	89	-11	+4	44.098	98	-2	-48					
1880	30.77	68.6	-31.4	-3.0	39.735	89	-11	-7	44.384	99	-1	-49					
81	44.51	99.2	-8	-3.8	40.611	91	-9	-16	44.808	100	0	-49					
82	44.43	99.0	-1.0	-4.8	40.926	91	-9	-25	45.006	100	0	-49					
83	44.66	99.5	-5	-5.3	40.428	90	-10	-35	44.970	100	0	-49					
84	43.85	97.7	-2.3	-7.6	39.917	89	-11	-46	45.174	101	+1	-48					
85	40.93	91.2	-8.8	-16.4	40.275	90	-10	-56	44.962	100	0	-48					
86	43.31	96.5	-3.5	-19.9	40.052	90	-10	-66	45.280	101	+1	-47					
87	32.06	71.5	-28.5	-48.4	39.603	89	-11	-77	45.448	101	+1	-46					
88	35.76	79.7	-20.3	-68.7	41.345	92	-8	-85	45.688	102	+2	-44					
89	37.07	82.6	-17.4	-86.1	42.681	95	-5	-90	46.339	103	+3	-41					
1890	39.53	88.1	-11.9	-98.0	43.897	98	-2	-92	46.388	103	+3	-38					
91	47.66	106.2	+6.2	-91.8	45.391	101	+1	-91	46.888	104	+4	-34					
92	39.45	87.9	-12.1	-103.9	44.869	100	0	-91									
93	37.55	83.7	-16.3	-120.2	44.645	100	0	-91									
94	49.43	110.2	+10.2	-110.0	46.976	105	+5	-86									
95	38.70	86.2	-13.8	-123.8	45.924	102	+2	-84									
96	38.82	86.5	-13.5	-137.3	45.523	101	+1	-83									
97	49.48	110.3	+10.3	-127.0	46.183	103	+3	-80									
98	49.12	109.5	+9.5	-117.5	46.164	103	+3	-77									
99	49.23	109.7	+9.7	-107.8	45.918	102	+2	-75									
1900	54.47	121.4	+21.4	-86.4	46.260	103	+3	-72									
01	42.44	94.6	-5.4	-91.8	46.434	103	+3	-69									
02	37.21	82.9	-17.1	-108.9	47.176	105	+5	-64									
03	60.86	135.6	+35.6	-73.3	48.892	109	+9	-55									
04	38.91	86.7	-13.3	-86.6	47.544	106	+6	-49									
05	34.69	77.3	-22.7	-109.3	48.324	108	+7	-42									
06	45.42	101.2	+1.2	-108.1	49.420	110	+10	-32									
07	49.29	109.8	+9.8	-98.3	50.023	111	+11	-31									
08	46.66	104.0	+4.0	-94.3	49.408	110	+10	-21									
09	52.65	117.3	+17.3	-77.0	49.917	111	+11	-10									
1910	56.21	125.3	+25.3	-51.7	48.297	108	+8	-2									
11	49.86	111.1	+11.1	-40.6	47.888	107	+7	+5									
12	54.37	121.2	+21.2	-19.4	47.819	107	+7	+12									
13	47.38	105.5	+5.5	-13.9	46.424	103	+3	+15									
14	46.71	104.1	+4.1	-9.8	47.541	106	+6	+21 (1860)									
15	45.65	101.7	+1.7	-8.1	47.750	106	+6	+27 (1861)									
16	51.45	114.7	+14.7	+6.6	47.888	107	+7	+34 (1862)									
17	43.14	95.9	-4.1	+2.5													
18	51.75	115.3	+15.3	+17.8													
19	36.45	81.0	-19.0	-1.2													
1920	52.12	116.2	+16.2	+15.0													
21	49.17	109.6	+9.6	+24.6													
22	40.42	90.1	-9.9	+14.7													
23	58.55	130.6	+30.6	+45.3													
24	48.80	108.8	+8.8	+54.1													
25	47.03	104.8	+4.8	+58.9													
																Average 45 Years Normals ...	
																Air Ministry Basic Normal ...	
																Mid per cent. Graph ...	
																Average for 60 years ...	
																44.538 inches.	
																= 44.81 inches.	
																44.483 inches.	
																44.86 inches.	

Castle. On behalf of this Society Mr R. C. Reid paid frequent visits as director of operations, whilst the Ancient Monuments Commission took a lively interest in the work.*

It was decided in the first instance to concentrate on the two main problems, the gateway and the traditional underground passage, leaving till later the questions of the 14th century reconstructions or alterations and the inside of the castle.

The castle stands on high marshy ground about two miles south-west of Moffat, on the north bank of the Garpol Burn, commanding a magnificent view of Upper Annandale. Below it in the valley, clearly visible, lie Lochhouse Tower and the ruined Frenchland Tower, structures of a much later period. It was visited on 12th May, 1912, by the Ancient Monuments Commission, and is described in their published *Inventory*, p. 132. Thanks are due to the Controller of H.M. Stationery Office for permission to reproduce their plan of the site. The other plans were specially drawn for this paper by Mr James Flett, and the photographs are by Mr W. M. Mackenzie, Secretary of the Royal Commission on Ancient and Historical Monuments, to both of whom the thanks of the Society are due.

The Gateway.

In the *Inventory* the Commissioners are very cautious in describing the gate—"probably gained by a drawbridge over the inner ditch to a forework at the western end of the north wall." It was at this forework that work was commenced. The indications pointed to a forework with inner gate through the curtain wall, and an outer gate at right angles to the wall and facing the north-west tower. But it was quite possible, as was maintained by some authorities who were present at the commencement of operations, that the forework was the remains of a rectangular tower of later date erected to flank the gate which pierced the curtain directly opposite the drawbridge. First a trench was driven up against the found of

* Both the Secretary and the Architect of that Commission paid a special visit to the site.

the curtain opposite the drawbridge. This exposed the foot of the curtain, and proved that the gate was not there. The next step was to clear the forework following the outer line of the curtain wall from the north-west tower. This revealed the paved floor of the forework some three feet below the surface. Of the curtain wall facing, only the bottom layer remained. An outer and an inner gate were exposed to view. The outer gate faced west, and was covered by the north-west tower just 17 feet distant. Only the southern freestone rybat of the outer gate remained, and there was no sign of a portcullis. The outside width of this forework is 15 feet; the gate, six feet wide, being placed centrally. The interior of the forework measures 10 ft. 2 in. by 28 ft. 10 in. A mere glance at it shows it to be of later date than the curtain wall. Its external wall of 4 ft. 6 in. is not in keeping dimensionally with the rest of the structure.

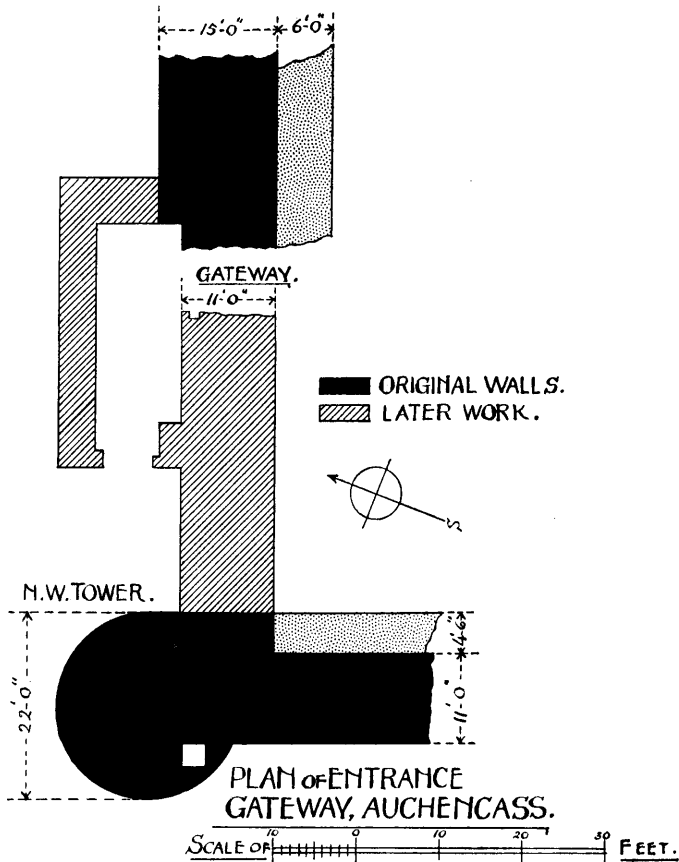
The remains of the inner gate are better preserved, and the excavators here unearthed a number of cut freestones, several being chamfered, which obviously had been part of the gateway. Both rybats of freestone were found in position, and the design of one quite distinct. A square slot cut in the rybat immediately in front of where the gate was hung may indicate where a portcullis stood, but whether the curtain wall here was high enough to allow for the raising of a portcullis is a question that cannot now be answered.

On entering this inner gate, the immense width of the curtain wall on the left hand—some 21 feet—can be realised. On the right hand the curtain wall is only 18 feet thick. But very little of that short section remains. Like the gateway, it has probably been reconstructed. The original builders are scarcely likely to have deliberately weakened the curtain so close to the most vulnerable part—the gateway.

Two or three short trenches were cut in hopes of throwing light on the drawbridge. No sign of an abutment on the far side of the moat could be found, nor was any evidence of a central pier in the moat discovered. The stone-dyker has been far too busy pillaging! But there were probably abutments of masonry on both sides of the moat, spanned by a wooden drawbridge.

The Underground Passage.

There are stories of such passages attached by tradition to many old castles and monasteries. Auchencas is no exception. For tradition makes the impossible assertion that an underground passage runs from Auchencas to Lochhouse.



Now, when a tradition confines itself to a mere statement of fact, it can frequently be shown to be in substance correct. But when it amplifies that original fact, then it may safely be distrusted. If tradition had contented itself with the statement that there was at Auchencas an underground passage,

its truth could be demonstrated, but when it proceeds to bring in Lochhouse we may safely disregard it, for Auchencas must have been uninhabited at least a century before Lochhouse was built. The underground passage at Auchencas must remain a mystery.

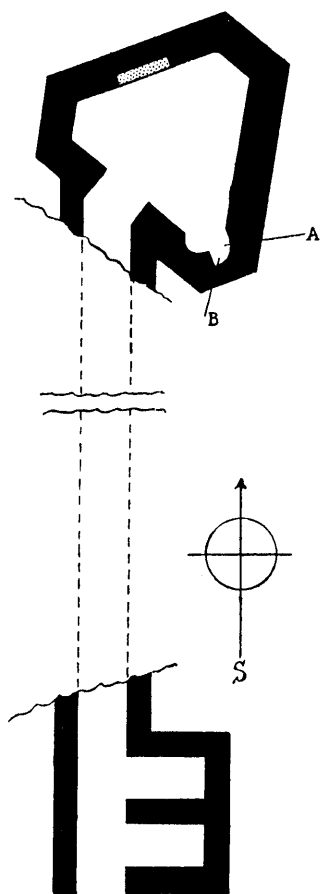
East of the castle and outside the moat the surrounding embankment opened out into a plateau. At its southern end, where the entrance is to some extent concealed, there is the entrance to an underground vaulted passage, which terminates about the centre of the plateau in a ruinous polyhedral apartment open to the sky. The apartment was full of debris, and the passage choked with debris and water. The meaning of this passage and apartment was obscure, unless there was another passage communicating from the apartment to the castle. Accordingly both passage and apartment were drained and cleared. No communicating passage was found, and the whole structure and the extraordinary shape and details of the apartment defy explanation.

At the entrance to the passage was a chamber 4 ft. by 7 ft., with 2 ft. walls vaulted. Excavation revealed alongside of it the foundations of another chamber of the same size. If, as has been suggested, this was a guard chamber, why should there have been two? The passage is 78 ft. long, 4 ft. broad, and 7 ft. 9 in. high. It has been well built, and is of later date than the castle. When built it had been excavated, not tunnelled, and the crown of the vault covered with a few inches of soil. The apartment is some 15 ft. by 20 ft., with six faces of varying measurements. In the middle of the northern face the stonework for 4 ft. 8 in. wide slopes back from some 4 ft. above the ground up to the wall head, 7 ft. 9 in. high. Its meaning is not apparent.

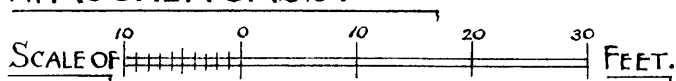
In the south-eastern corner is an even more puzzling feature, figured in the accompanying plan.

The wall of the curve represented by the figure A is not perpendicular like all the other walls of this chamber. The foot of the curve is now missing, but there is no doubt that it sloped inwards in its descent towards the re-entrant angle B, akin to a section of an inverted cone. In spite of much in-

genuity of conjecture, the significance of this corner still awaits an explanation. The soil exposed by the now missing lower portion of this curve had a distinctly blackened appear-



PLAN OF UNDERGROUND
PASSAGE AND CHAMBER
AT AUCHENCASS.

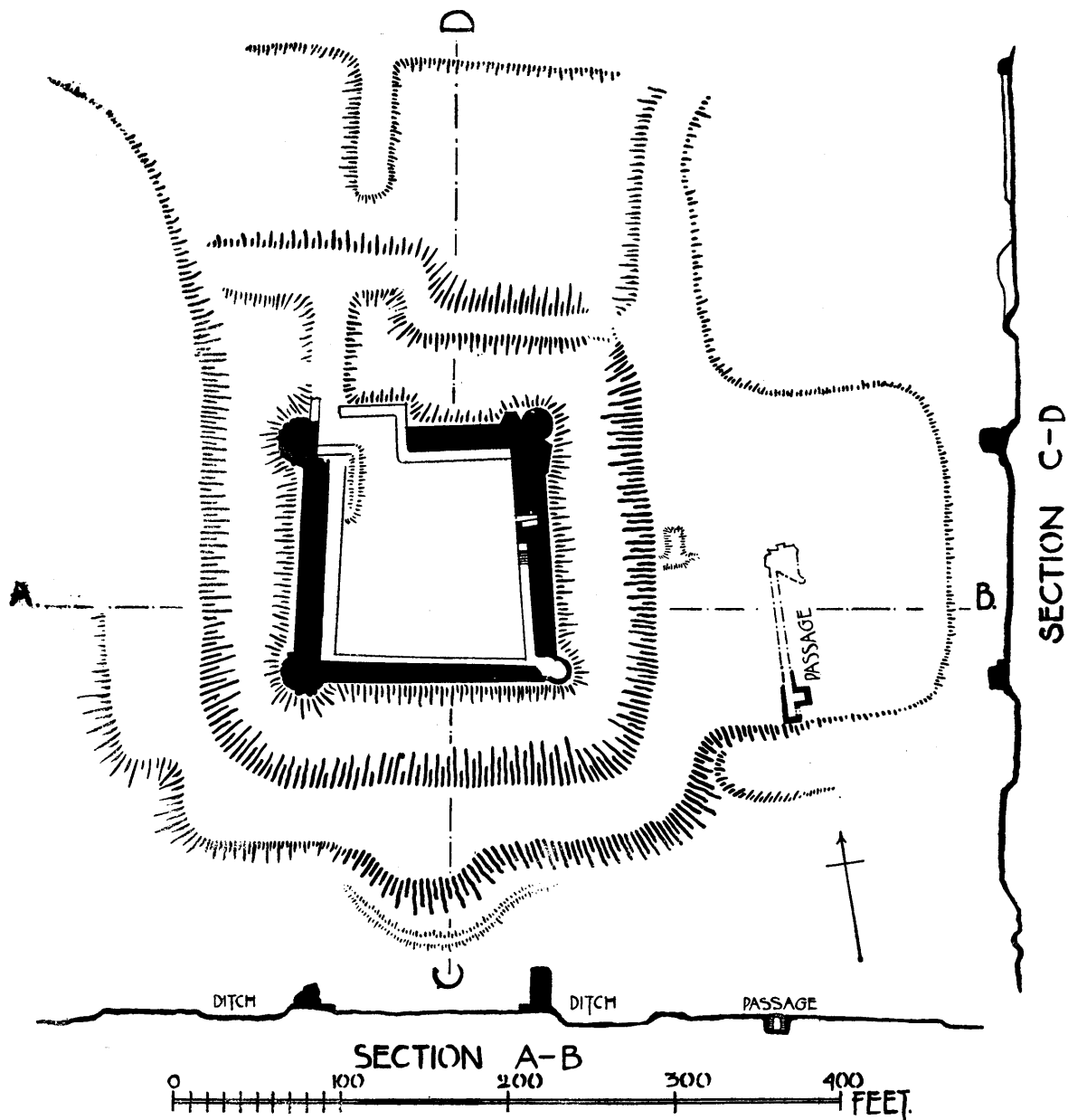


ance, but it is almost impossible to construe this corner as a fireplace.

The western face of the apartment nearest to the castle is only 3 ft. wide. Only the top few layers of stone remain. The earth behind had been removed for some 2 ft. back. It exposes a face of natural undisturbed till. A large stone, now shored up, might conceivably have been built in as a lintel to an entrance door on this face, but it is unlikely, for had there been an entrance here to another underground passage or had the original builders contemplated making such a passage, the entrance would have been either arched like the existing passage, or a lintel of larger dimensions built in, for there is no reason to suppose that a second passage into this chamber would have been narrower than the existing one. If the builders had intended this as the entrance to another passage, they must have changed their minds before completion, there being no jambs in situ. It looks more as if some modern excavator had suspected here a passage leading to the castle that had been built up, and proceeded to pull down the wall to see what was behind it. But that suggestion, however likely, still leaves unexplained the meaning and significance of both chamber and existing passage. For unless it was the intention of the builders to connect the chamber with the castle by a passage, the whole of the work is incomprehensible.

The "Three Cappit Hous."

The whole problem of this chamber and passage is further complicated by the fact that on the top of this chamber, within living memory, was a modern erection in the form of a cottage, which was used by the proprietors as a convenient luncheon place for their shooting parties. The design of the cottage is not known, but it must have followed the peculiar shape of the original chamber beneath it. It was crowned with a triangular roof sloping away from its apex in three faces. Hence it was known as the "three cappit hous." It may be, of course, that the whole of this super-structure was modern, but it was quite probable that it was part of the



original—in ruins—adapted to, and roofed for, modern requirements. Down to the ground level it has all gone. The ground level shows a width of wall of 3 ft., of which the wall head supporting the floor beams is 1 ft. 3 in. The walls of the super-structure were therefore less than 2 ft. thick. This is not the thickness of wall one would expect of a building above ground coeval with the passage. If the super-structure was modern, how was the original chamber roofed? One would expect vaulting, as in the passage, but the polyhedral shape of the chamber must have rendered a vaulted roof a subject of peculiar architectural difficulty. Besides, the dome of the vault would have protruded high above ground level, nullifying its subterranean purpose—concealment. Again, if a flat wood roof to the chamber had been erected, covered with earth, it would soon have rotted and fallen in; and as it is extremely unlikely that the builders erected a super-structure less than 2 ft. thick—in which case concealment could not have been a motive—then we are reduced to the conclusion that the chamber, whatever its purpose, was left uncompleted by its builders and without a roof, before they could have commenced any underground passage connecting this chamber with the castle.

The Latrines.

Simultaneously with the clearing of this mysterious underground chamber, work was commenced at clearing what was thought might be an entrance, within the castle, to a passage leading under the moat to the chamber. On the east side of the courtyard is a chamber 9 ft. 3 in. by 4 ft. 1½ in. running well into the thickness of the curtain wall. On the south side of this chamber in the floor was a pit choked with debris, which the Ancient Monument Commissioners thought might be a pit draining to the ditch. As, however, it was thought it might be the entrance to an underground passage, it was decided to clear it. At a level of 7 ft. 8 in. from the floor of this chamber the bottom of the pit was found, paved with a good slope towards the moat. The paving pierced the wall through an aperture 2 ft. by 4 ft. 6 in., and a cutting made outside the wall revealed where it came through and entered

the moat. It was obvious that this was no underground passage, but, as hinted by the Commissioners, a latrine. At the other end of the pit was found a drain running out into the courtyard, which it was decided to follow up.

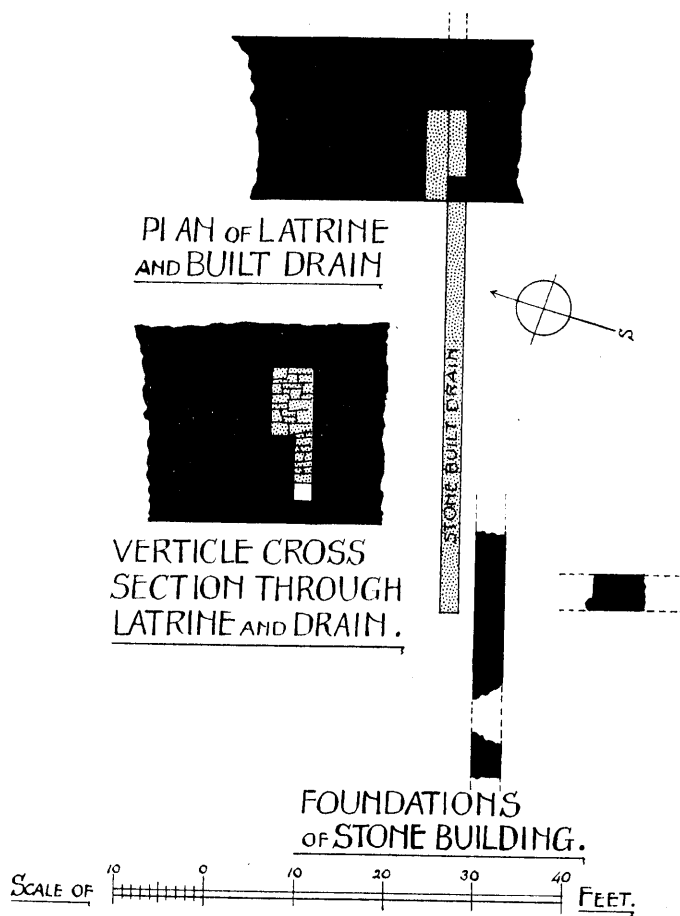
The other latrine was found quite accidentally at the close of the excavations. During an examination of the north-west tower a workman lifted a flat stone, at the top of the curtain wall at its junction with the tower, revealing a square-built hole, 3 ft. by 2 ft. 8 in., full of stones. This was cleared, as it was thought it might be a well,* to the depth of 10 ft. 6 in., where a paved sloping bottom was found running under a low arch downwards to the moat. The present lip of the latrine is 9 ft. 6 in. below the highest point of the tower, which, as will be shown, must have been considerably higher originally. The latrine, which is on the south-west side of the tower, was clearly used from the parapet walk; all the indications point to its having been added at a later date. One side of it is the original curtain wall, and there are no tie stones into the wall. It is probable that part of the tower where it joins the west curtain wall was pulled down and rebuilt, incorporating this latrine.

The Courtyard.

In a 13th century castle of this design one expects to find the dwelling apartments, kitchen, stables, &c., built up against the curtain walls, leaving an open space in the centre. Experience shows that our forebears of that century had the same appreciation of the sun and shelter as we have. If the climate then was anything like it is now, this was an important consideration at such an altitude as Auchencas. We must therefore look for such buildings on the northern and eastern sides of the courtyard. Such buildings, we know, were—originally at least—made of wood, and of the pent roof type. Their backs were the curtain wall, from which the roof sloped towards the courtyard. At a later date stone would take the place of wood.

* cf. The well at Buittle Castle up against the inner face of the curtain wall.

In order to find some remains of such buildings, a wide trench was dug along the inside base of the curtain wall between the gate and the north-eastern tower. No remains of stone foundations were found. But the soil at the base of the



wall was impregnated with a great quantity of wood ashes and burnt wood. The inevitable deduction is that on this site were originally wooden dwellings which had been consumed by fire.

Incidentally the foot of the curtain exposed by this trench

gives a very good idea of the massive crudity of the masonry of the original castle.

No attempt was made to explore the courtyard thoroughly and systematically, such an undertaking being beyond the scope of this excavation. But two of the corners of the courtyard were explored, the north-west and south-east. Both were only partial investigations, and the former would undoubtedly have repaid complete excavation.

The investigation of the north-west corner was mainly undertaken to place beyond doubt the fact that the towers were solid and not cylindrical. If the latter, there must have been some mode of ingress, and a doorway at the base was sought. But the excavations did not reveal a door. On the contrary, it showed that the tower was no tower at all, only a bastion, that it was solid and had been built as an addition—though a contemporary one. Both the outside and inside facing of the curtain wall could be followed to the point where the walls formed a right angle. There seems to have been considerable structural alterations in this corner. The rampart walk, if it can be so described, disappears, and in the corner were the remains of a stone and lime building, with what looked like a flue. The debris piled in this corner was, however, so formidable that complete excavation was too big an undertaking, and it is doubtful whether the conditions would have yielded a definite plan of the building.

Similar conditions were found in the south-east corner, where again there was abundant evidence of reconstruction and vestiges of a stone and lime building. Mention has already been made of a drain running from the courtyard into the eastern latrine. This was followed up. It was a well-built drain, some 18 inches wide, covered with rough slabs of stone. Forty-five feet from the latrine it ended, being 39 ft. 6 in. from the north wall at this point. On its south side, and running parallel with it only a few inches away, were the remains of foundations of a stone building, but it had been so pillaged that it was not possible to form any judgment. It was at least 27 ft. (east to west) by 19 ft., and it had clearly been served by the drain. The western fragment of these



AUCHENCAS.

Interior of West Curtain Wall showing Latrine on Left.

foundations was probably the end of the building, abutting on a roadway running straight into the courtyard from the gateway. The building probably belongs to the period of reconstruction, and as the drain is obviously associated with it, it too must be ascribed to the same period.

The Curtain Walls.

An examination of the curtain walls brought to light several interesting features not noted by the Ancient Monuments Commission. In the first place, walls and towers alike are not built of solid masonry. The walls are faced on both sides with huge boulders, which at one time may have been interpinned by wedges of small stones driven into the intervening mortar. Time and the disintegrating effect of the weather have removed almost all signs of wedges and mortar, save where a fall of debris has preserved the original face of the wall. The space between the facings was then filled with earth and boulders, a primitive method of construction, which can only denote a very early stage of 13th century castle building.* On the east curtain wall the section pierced by the outflow of the latrine bears every sign of reconstruction. The wall here is well preserved and plumb. Plenty of mortar is visible. Its builder had ideas of his craft far superior to those engaged on the original structure. The interior of the chamber composing the latrine has all the appearance of the crudity of the original work, but it is quite evident from the accompanying illustration of the exterior of this chamber, as seen from the courtyard, that it has been built up against the curtain wall at some later date, for no tie stones are visible.

The curtain walls vary in thickness, that between the gate and north-east tower being 15 feet, whilst the west wall about the middle is about 11 feet,† the south wall 10 feet, and east wall 11 feet.

* cf. Gleaston Castle, c. 1250, where "there are remains of considerable portions of clay hearted curtain wall."—J. F. Curwen's *Castles and Towers of Cumberland and Westmorland*, p. 142.

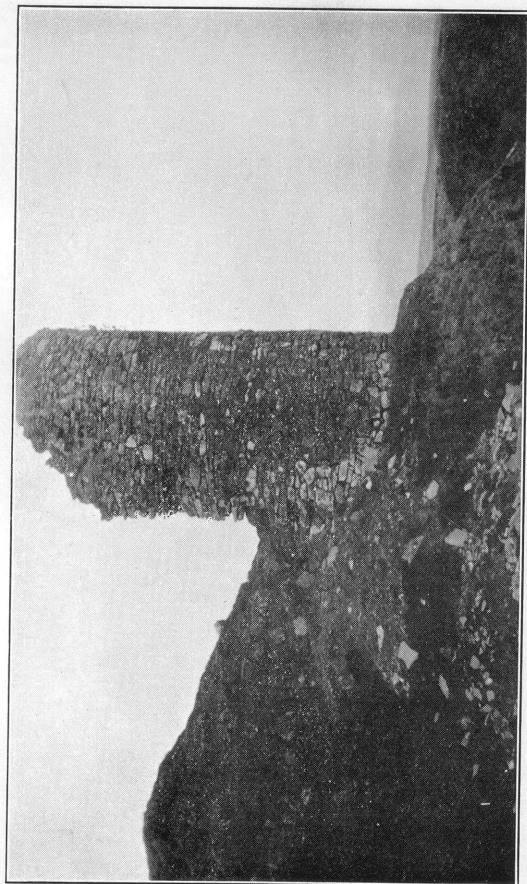
† Two measurements gave 11 ft. 3 in. and 10 ft. 4 in.

Inside the curtain walls runs an elevated walk, now for the most part about 5 feet above ground. Originally this must have been within a few feet of the top of the original wall. It, too, varies in thickness—at the north wall east of the gate it is 6 feet wide, on the east wall 4 feet, on the west wall only $3\frac{1}{2}$ feet, whilst on the south wall it is 4 feet, rapidly reducing from that width close into the south-eastern corner, where much reconstruction has taken place. Whenever it may have been erected, the walk cannot have been part of the original design of the castle, for wherever it has fallen, or been removed, the inner facing of the curtain wall is disclosed. Yet it has every appearance of being contemporary. There are no signs of any steps up to the walk. But it is possible, as suggested,* that the ascent may have been by a flight of steps at the southern end of the eastern latrine. It is not quite clear what this walk was intended for. Normally it would be expected to take the place of a rampart walk, and to rise to within 3-4 feet of the top of the wall. But in that case, whilst forming a protection to a look-out, it would seriously hamper the defence, for a defender on the walk behind a 10 feet wall could not possibly “get at” an outside attacker at the foot of the wall. To compete with an attacker at the foot of the wall, a rampart walk on the top of the wall was essential, carrying a light rampart, over which it was possible to lean, and there can be little doubt that such a rampart walk surmounted these walls originally. Where a curtain wall connected cylindrical towers of several stories, such an inner walk was not uncommon, as it linked up the towers at its level and enabled reinforcements to get from one tower to another without descent to, and ascent from, the courtyard. But in the case of circular bastions, as at Auchencas, this argument carries less weight. It is possible that this walk was originally carried to the full height of the wall, being little else than an inner strengthening core to the existing wall.

The Towers.

As already indicated, the towers, with the exception of

* *Inventory of Ancient Monuments, Dumfriesshire*, p. 131.



AUCHENCAS.

South-East Tower of 14th Century from the South.

the south-eastern one, are really solid bastions built on after the wall had been erected—but, as far as can be judged, contemporary. It is possible that there may have been five, as in the case of Buittle and Tibbers, the fifth one covering the ground now occupied by the forework. In that case the gateway would have entered the courtyard between the towers in direct line with the bridge. Time did not permit a search for possible foundations under the forework, and the north-west corner was too vast a jumble of debris to enable this possibility to be ascertained. Certainly there were no signs of any such original gate in the outer foundations of the wall beside the north-west tower.

The south-east tower is a full century later than the others. It is much smaller, is a true tower—that is to say, it is hollow, and was divided into two floors, the top one probably being level with the rampart. There is no indication of how the bottom one was entered, unless by steps down from the rampart. The shape of its windows and the type of masonry indicate 14th century. It was probably erected within the foundations of a bastion similar to the existing ones. This tower is what enables us to date the reconstruction work of the castle, and probably of the mysterious chamber and passage outside the walls. This tower also enables us to conjecture the original height of the curtain walls.

The Embankment.

The castle is surrounded by a wide moat, the earth from which has been thrown up to form a wide embankment around it. As will be seen from the plan, this embankment widens into a broad elevated plateau on the east and a much smaller plateau on the south. In the plan this is shown shaped like an arc. It is really square shaped. It was quite obvious that this embankment was intended as an outer defence, and must have been crowned by some defensive erection—either wall or stockade. A number of trenches were cut through the crown of the scarp of this embankment in hopes of settling this question. No evidence of any defensive work of any sort was found except on the small southern plateau. Here wall founda-

tions were located, but only covering the plateau. To make sure that it was not part of a building, a trench was driven right across the plateau on the line C—D. No other stone foundations were disclosed, which established that the foundations were remains of a defensive wall covering the plateau only. But this trench brought to light one significant fact. Over a fairly large area of this plateau was a very thick layer—fully one foot deep—of wood ash and charcoal, evidence of a very big conflagration. If some wooden dwelling on this site had been burnt it could not possibly have left so thick a deposit of ash. The wooden material for such a blaze must have been gathered up at this point, and must have employed some labour in the gathering. Only one explanation can be found. All round the embankment save for a few yards at this spot must have once stood a substantial stockade or pallisade of logs. This at some date must have been deliberately destroyed and pulled down, gathered up and piled, and burnt at this spot.

General Conclusions.

The most important point of interest revealed by these excavations relates to the date of the castle. It has been authoritatively assigned to the late 13th century,* mainly on the ground that it has all the features of such a structure—an enceinte with corner towers. But if it is what is known as Edwardian, then it must be in the same category as Kirkcudbright, Wigtown, and Tibbers. In Scotland this type was the direct successor to the early Norman mote. Indeed in the case of Tibbers the castle is actually built on the site of the mote. The date of Tibbers can be historically fixed. It was under construction in 1289.† Auchencas cannot therefore be later; and when the two are compared it has to be admitted that Auchencas must be of earlier date, for it possesses two features that are unknown in Scottish castles—its solid corner towers and the earthen core of its walls and towers. These features place Auchencas in a class by itself, and, according

* *Hist. Monuments Commission's Report on Dumfriesshire*,

† Bain, II., 1005,

to the natural law of development and the primitive nature of the structure, it must be given earlier date of construction than our known local examples of Edwardian Castle. It is a link between the Norman Mote and the Edwardian Castle, and as such is unique.

Apart from what history may have to tell us, this excavation has established beyond doubt that there were two distinct occupations in the 13th and 14th centuries, between which there must have been a prolonged period when the structure stood in utter ruin. The Castle must have consisted originally of curtain walls and bastion towers, perhaps five in number, surrounded by a moat and stockaded outwork. The moat was spanned by a wooden bridge, part of which was perhaps a drawbridge. The gateway in all probability faced the bridge, being flanked by two bastion towers of which only one, in the north-west corner, survives. Very shortly after completion what we now know as the parapet walk was added to the curtain walls. Inside the courtyard along the north wall (and perhaps on other sides of the courtyard) was a row of wooden buildings with a lean-to roof up against the curtain wall—by analogy of one story. Such must have been its condition when it was destroyed. It is obvious that the destruction was not accidental. The destroyers did their work thoroughly. Short of complete demolition they rendered the Castle useless as a place of defence. The wooden buildings in the courtyard, the living quarters of its occupants, were burnt, even the stockading of the outworks was pulled down and consumed by fire. The bridge, of course, met a similar fate. Two huge breaches were made in the walls, one in the south-east corner where the bastion was demolished, the other at that most vital part of every castle, the gateway. The gateway and its eastern flanking bastion disappeared, and the beasts of the field could wander unmolested through its inviolable precincts. For some time the Castle must have stood thus. Then man once more took possession and commenced to restore the fabric. His first aim was to repair the breaches. But he brought to his task different ideas to those of the original builder. In the cen-

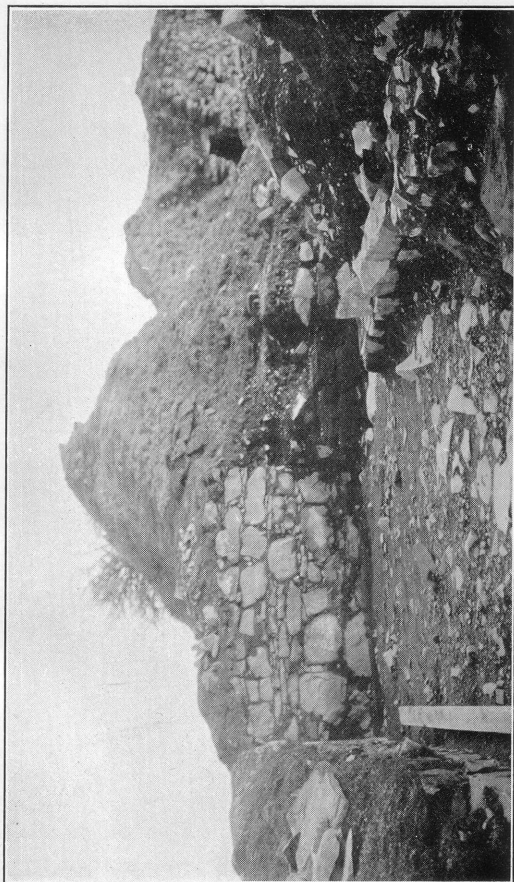
tury that had elapsed the principles of castle-building had developed. Man had new ideas, different requirements, which have left their mark on the structure. The true idea of a tower was understood better, so in the yawning breach in the south-east corner a cylindrical tower took the place of the original demolished bastion. The three remaining bastions were left *in situ*, perhaps repaired. The gateway was entirely reconstructed according to the principles then in vogue. It no longer opened direct on to the bridge, but was approached through a forework parallel to the curtain and then pierced the curtain just where the original fifth bastion may once have stood.* The reconstructed curtain wall between the new gate and north-west tower was rebuilt some feet thinner than the old one. Within the courtyard the new comers replaced wood buildings with stone, obvious traces of which are found in the north-west and south-east corners. Further, a central stone building was erected. Nor were the sanitary amenities overlooked. A latrine was excavated in the eastern curtain which necessitated the reconstruction of that wall where the outflow pierced it, and a drain was connected to the latrine from the central building.† Finally the parapet latrine was added to the north-west bastion, and at the same time must have been commenced in the outer defences—the mysterious underground chamber and passage—probably never completed and a mystery still. Such was the Castle in the 14th century till once again it became untenanted and a convenient quarry for the builder.

Auchencas in History.

Until the 15th century history is, with one solitary exception, silent about this castle. In December, 1306, Roger de

* The design of the forework is characteristic of the current methods of defence. Ingress by a turn to the left at the foot of the curtain wall was a favourite device, especially if the forework was not arched but an open pend. For it exposed the attackers on their right side—the side unprotected by the shields, which they held in their left hands—to the missiles of the defenders.

† It has been suggested that this drain was required at the central building because the latter was used as a kitchen.



AUCHENCAS.

Gateway from North-West showing Forework.

Kirkpatrick, "chevaler" (knight) and seigneur, of Haughencas, is recorded as lending money to Sir Humphrey de Bohun, Earl of Hereford and Essex, who at that time was the English Lord of Annandale.* So at that date Sir Roger was Lord of Auchencas, and presumably lived there. This sole surviving reference raises at once the interesting question of the origin of the Kirkpatrick family. We know that the originator of the family was a Norman or Anglo-Norman named Ivo, who possessed no surname till he was granted by Brus, Lord of Annandale, the lands of Kirkpatrick. These lands have been assumed to have been in the immediate vicinity of Closeburn, and on the strength of the assumption the Kirkpatricks of Closeburn have claimed to be the main line of the family. In their eagerness they have even annexed to themselves the well-known story of the death of the Red Comyn at the hands of Bruce and Kirkpatrick, adopting the latter's "I'll mak' siccar" as their motto. But it can be shown that the Kirkpatricks of Closeburn were not the main line, and that the Kirkpatrick who participated in the death of Comyn was not an ancestor but a collateral. The main line dying out at the close of the 15th century, left the Closeburn family senior male representatives of the original Ivo. Now we know that Closeburn was not acquired by the Kirkpatricks till 1232,† and as the family were well-known in Annandale before that date, it is obvious that in Annandale we must seek its habitat. There are only two places named Kirkpatrick in Annandale—Kirkpatrick-Fleming and Kirkpatrick-Juxta—and in view of the 1306 record it is obvious that in Kirkpatrick-Juxta we must seek the home of the Kirkpatricks. Sir William Fraser has pointed out that Ivo was granted the lands of Kirkpatrick between 1190 and 1214,‡ and elsewhere writes with a tantalising lack of particulars that he received a part of the Barony of Kirkpatrick-Juxta. This is borne out by the knowledge that the descendants of Sir Roger of 1306

* Bain, IV., 1823.

Ramage, *Drumlanrig and the Douglasses*, p. 193.

† *Hist. MSS. Commission XV th Report*, p. 38 and p. 50.

described themselves as "of that Ilk."† It is certain that the first Ivo cannot have built Auchencas, which must date from half a century later, but it is equally certain that he must have had some fortified residence on his lands. Within half a mile of Auchencas further up the Garpol Burn lies a fine Norman mote with bailey attached on a knoll in a bend of the burn. It seems probable that here at the Garpol mote was the first home of the Kirkpatricks.* At a later date, somewhere about the middle of the 13th century, the Lord of Kirkpatrick, desiring a more commodious residence, decided to build a stone castle, such as were springing up in numbers all over England. He chose a site further down the burn, perhaps because it gave him a commanding view down Annandale and of the entrance to the hill valleys debouching on Moffat—a strategical outlook lacking at the mote—or more probably because there was abundance of surface stone, not available at the mote. If a guess may be hazarded, the builder of Auchencas was Sir Humphrey de Kirkpatrick, steward of Annandale, who was a witness as late as 1245.‡ Here at any rate his descendant, Sir Roger, lived in 1306. It was he who gave the final stab to Comyn at the Greyfriars on 10th February, 1304, and in consequence must have seen his lands overrun and castle occupied by the English. He was probably a young man at the time, as his deed might imply, for he was alive as late as 1357. But in the dark days that overtook Bruce he must have submitted to the English. Between 1312 and 1313, the tide having turned for Bruce, the Scots recaptured nearly all the castles in Scotland from the English, "Buittle, Dalswinton, Caerlaverock, and perhaps Lochmaben surrendering to Edward de Brus."§ They were all destroyed according to the general policy of Bruce. It seems likely that though Auchencas is

† cf. Sir Duncan of Kirkpatrick, Lord of that Ilk, 1372 (*Hist. MSS. Com. XVth Report*, p. 51).

* It is significant that up the Garpol Burn runs a disused track direct through the hills to Closeburn.

‡ Bain, I., 1680, and *Drumlanrig Papers*, p. 40.

§ Sir Herbert Maxwell, *Robert the Bruce*, p. 190.

not mentioned it shared the fate of the others, for it is known that in 1313 Sir Roger was in garrison at Lochmaben in English service.* This would end what excavation has shown to be the first occupation. After Bannockburn Sir Roger must have made his peace with Bruce and returned to his home. It seems probable that this was the period of reconstruction and second occupation. After Bruce's death Annandale was again overrun, and became an English province, and Sir Roger and his wife Margaret fled to England in 1332.† This may be the time of the second destruction and final abandonment of Auchencas. In 1321 his son, Humphrey de Kirkpatrick, had received a grant of Torthorwald and Roucan,‡ which from that time must have been the family residence, though after the English were ejected from Annandale the Kirkpatricks must have regained the ruined Auchencas. Sir Duncan Kirkpatrick of Torthorwald, the last of the family, was dead by 1425, leaving three co-heiresses — Elizabeth, married to William Carlyle of Kinmount, an ancestor of the Lords Carlyle, and designed “ of Torthorwald ” in right of his wife; Jonet, married to Thomas Graham, designed “ of Auchincas ” in right of his wife; and Isabella, who married on 12th November, 1412, Gilbert Grierson, younger of Lag. Thomas Graham of Auchencas was ancestor of the Grahams of Thornick. At a much later date the property passed into the hands of the Johnstones of Corehead, from whom it was acquired in recent times by the father of the present proprietor.

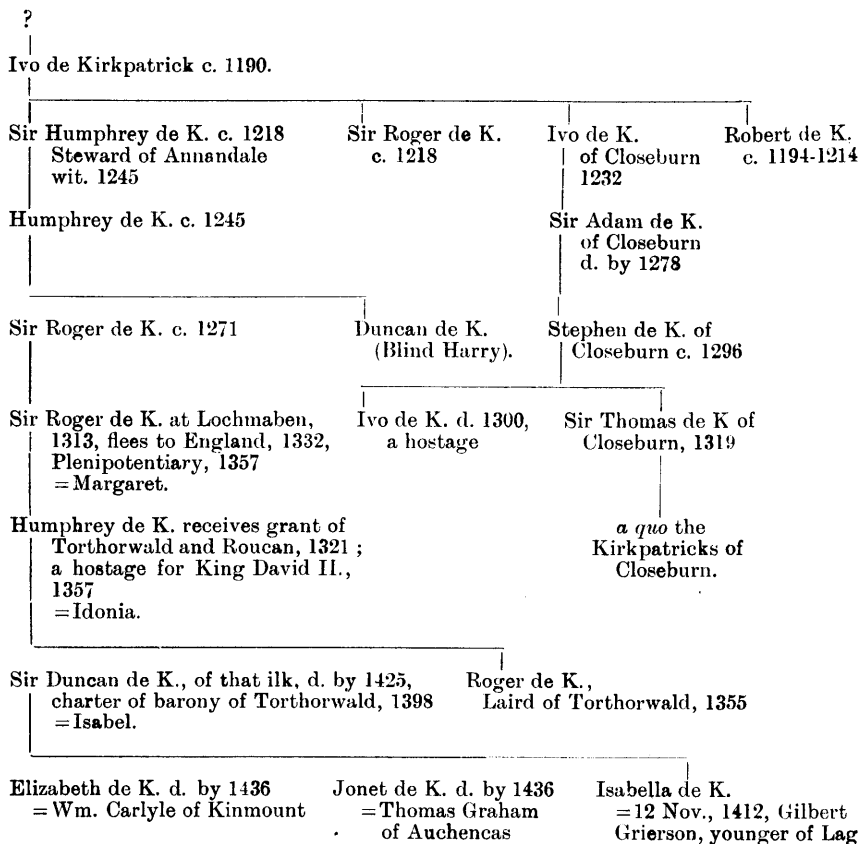
The attached pedigree of the Kirkpatricks of that Ilk, whilst explaining these notes, must only be considered as tentative. Material is yet lacking, and may never come to light, to establish all the particulars satisfactorily.

* Bain, III., 336.

† Bain, III., 1072.

‡ *Drumlanrig Papers*, p. 42.

Kirkpatrick of that Ilk and Torthorwald.



Ardwall Island and its Ancient Cross.

By W. G. COLLINGWOOD and R. C. REID.

In view of the recent discovery of an old cross on this island, it was deemed advisable to visit and examine the spot, in hopes of locating a burial ground or other relics. Through the kindness of Lady Ardwall, the proprietrix, this was accomplished.

The island is the central one of a group of three rocky islets to the east of the mouth of the Fleet, lying close in to the shore opposite Knockbrev. It is the largest of the three, and is accessible on foot at low tide. It is now uninhabited save for a cottage used as an occasional summer resort by a resident on the mainland. But in the past it has supported a fair population. Not more than 40 acres in extent, it was once divided into three holdings, of which the boundary dykes and foundations of steadings can be traced. It even boasted of a licensed house, which did some business with the crews of vessels which used to lie up in the channel between the island and mainland. Of the other two islands, the one to the west of Ardwall island has never been inhabited. The island to the east was once inhabited, a lonely gable still standing as evidence of former habitation.* Neither of these two islands were inspected.

On the landward side of Ardwall island is a narrow spit of sand amongst the rocks, the only natural landing place. Close to this one might expect to find a burying ground. Here the cross had been discovered lying on its side close to the dyke, where it had obviously been thrown on one side. No sign of a burial ground could be found, though on the left just inside of the gate through which one enters on landing and beside the site where the cross had lain are vestiges of a

* A local tradition states that the last occupant of the eastern island was the builder of the gable. He had put by some money, and decided to build a good cottage there for himself. He was a glutton, with a failing for fresh fish. When the walls of his house were up, but the roof not on, he caught a fine 10 lb. cod. He at once sat down to a solitary meal and consumed the whole fish. But he died of the effect, and the ruined gable still stands to testify to his gluttony.

small enclosure which may have been a burial ground. A little digging was done here in hopes of finding something to confirm the suggestion, but without avail. A steading had once stood a few yards off. For its erection the burial ground may have been pillaged just as in course of time the steading was pulled down to form a dyke round the north side of the island. No sign of mote or any other kind of earthwork was to be found on the island. There are, however, interesting vestiges of a very different era. There are several subterranean chambers, which had been used by smugglers two centuries or so ago. Local tradition asserts a Norse origin, and affirms that they were originally burial chambers, which in later times had been found to be convenient repositories for contraband. The sites of five are still visible, and others are reported to have been filled in and lost sight of. Only one is now capable of entry, and it was investigated. Entrance is effected through a square, dry-built hole some two feet square. Directly below was a long cigar-shaped chamber cut out of the solid rock, extending at least 10 feet in one direction, but blocked with debris at the other end. The chamber was six feet high by four feet wide.

The inside was rough-hewn by some instrument resembling a pick. The entrance had formerly been closed by a boulder, and some pains had been taken to render the site unnoticeable. This was specially the case in a series of these chambers lying between the cottage and the spring on the south-eastern shore. Here the foundations of an old dyke were visible, embedded in which at intervals were boulders of a most natural and unsuspecting appearance. Yet three of these boulders conceal chambers, two of which are now filled in and inaccessible, whilst the third will soon be filled up since it is used as the cottage ashpit. This series of chambers ran along the line of the dyke, and are said to have communicated, though that is impossible to verify.

It is possible that the chambers are of later date than the dyke, for when a stone dyke stood there it would have been impossible to enter them. And as there seems no valid reason for attributing antiquity to the dyke, it may be that these

chambers were made specifically for the smuggling trade, by which they were undoubtedly used. Their position on an island within 300 yards of the mainland was ideal for the contraband trade, and no doubt the licensed house featured as a blind to the Exciseman.

At the same time it should not be lost sight of that somewhat similar chambers, apparently sepulchral, are recorded at Dunsinane fort—the only Scottish hill fort associated with underground chambers. Within the circumvallation were found two underground chambers 20 feet in length, 6-8 feet wide, and 5-6 feet high, the extremities of which communicated with each other through two narrow passages 2 feet wide by 3 feet high. The walls were dry-stone built, converging from some 3 feet above the floor till the roof was spanned by flagstones laid across. Refuse of bones of animals and ashes implied habitation, but three human skeletons indicated burial. Perhaps a place of burial had later been used as a place of hiding. The fort was a vitrified fort of the early Iron Age. Not until the Ardwall island chambers have been carefully excavated can any opinion be offered on their age. Such places have been made to serve many purposes in succeeding ages. It is not a regular Viking structure, though the Norse are known to have used earth houses as hiding holes.* In the saga of Gisli, the soursop or outlaw,† it is mentioned that “Gisli was always in his earth house when strangers came to the isle,” a hiding place perhaps imitated from what the Norse had seen in Scotland. If, then, these Ardwall island chambers were not made for the smuggling trade, they may be tentatively assigned to the period of the Dunsinane fort chambers. In the latter case the dyke would be superimposed on the chambers, leaving, however, sufficient local recollection of their existence to enable the later day smugglers to locate and use them.‡

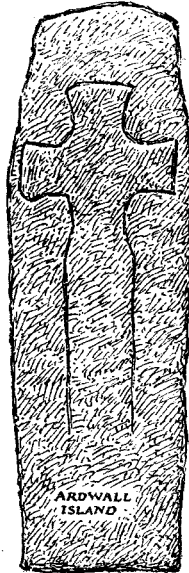
Only one tradition relating to the island was noted. Half

* Anderson's *Iron Age of Scotland*, p. 290.

† Composed in 12th century, relating events, circa 950.

‡ It is impossible, of course, to date the dyke, but it cannot be left out of the problem,

a century or so ago a Belfast ship was wrecked off the coast. The captain's wife was on board, and is believed to have concealed on her person the ship's papers and all the available cash. The whole crew were drowned, and her body was left at low tide on the sands to the west of the island. Here she was found by Laurie Higgins, an Irishman, who lived in poverty on the island. He reported it, and in due course



the woman's son came from Belfast to identify the body. To him were handed the ship's papers. He enquired where his mother's rings were and the ship's money. Higgins had seen neither, and suggested a search on the sands. There the rings were discovered by Higgins. Repute, too, said that he knew about the money. At least he no longer lived in poverty, he prospered, and presently acquired the public-house. Laurie Higgins met his end returning late one dark night across the water. Perhaps Laurie had visited a Gatehouse bar; perhaps, as was rumoured, he had an enemy who had cast envious eyes upon the public-house. At any rate he was drowned, and the boat when recovered was found to have

had a plug removed from it. To this day the island as often as not is spoken of as Laurie's Isle.

The cross-slab found on Ardwall Island, and now erected in the grounds of Ardwall House, where it will be in safe keeping, is apparently an example of the series illustrated by the ancient cross-slab in the Old Church of Anwoth. This is described and figured in these *Transactions*, 3rd series, X., p. 229 and fig. 44, as "of about 1100"; that is to say, late eleventh or early twelfth century, and the reasons for so dating it are given in the text. But the Ardwall slab, though of the same class, can be dated only very roughly, because its weathered condition gives no more than faint indications of its design, and it bears no ornament by which it could be more precisely classified. It measures about 34 inches long by 10½ inches in width, too small to be the grave-cover of a full-sized grave; and yet many mediæval grave-slabs are small. It may have been the headstone of a grave, which would suggest that in its time there was some sort of chapel on the island, as there have been on many such islands. And if the chapel was of wood, it is useless now to look for its remains. But it is equally possible that there was no chapel or graveyard but only this one interment, perhaps of a shipwrecked person or of a hermit who lived on the island.

19th March, 1926.

Chairman—Mr R. C. REID.

Two Pioneer Galloway Agriculturists — Robert Maxwell of Arkland and William Craik of Arbigland.

By G. W. SHIRLEY.

These two men, contemporaries (for Robert Maxwell was only some eight years older than William Craik and preceded him in commencing farming on his own account by but three though the latter outlived him by thirty-

three years), emerge just at the critical period in the agriculture of this district, when practices centuries old were to yield to newer methods. They identified themselves with that movement and were more distinguished than any others in promoting it and, although I know nothing of agriculture, I hope, by letting these individuals speak for themselves and specialists for the rest, to give some clear idea of the work they accomplished, and so pay honour where it is due.

Of the two, Craik was the practical farmer. He made his experiments pay. But Maxwell, possessed of an idealism and a devotion to public service, knew better how to serve others than himself. To his practical knowledge was added a far-sighted vision, the objectives of which were not to be realised until long after his day. He was by nature a publicist and writer, an expert adviser, too often unpaid, who would have all men till their fields as well as he tilled his. In his enthusiasm he propounded schemes and methods far in advance of his time. If he did not originate—and no man was more likely to have done so—he was the life and pivot of the first agricultural society in these isles, the progenitor and model of many more. He propounded a scheme for training young men in agriculture on a suitable farm. He advocated a course of University lectures, and when his patron died was not daunted, but delivered a course himself with private support only. Thus he anticipated our Agricultural Colleges and University Chairs of Agriculture. Yet his work was less remembered than that of his practical colleague. He died in obscurity in 1765, while Craik, in 1776, when elected first president of the newly founded "Society for the Improvement of Agriculture" in the South-West, was declared "the parent and patron of spirited, regular, and elegant improvements in the art of husbandry in this part of Scotland." The ruined Arkland they had apparently forgotten, but now, I suppose, there is little to choose between the dusty heaps of oblivion to which the farming community has consigned them both.

Before proceeding with these biographical notes, let us

get some idea of the agricultural condition of this part of the country about the beginning of the 18th century. The well-known letter, dated 8th February, 1811, of John Maxwell of Munches, who was born in 1720 and remembered events occurring in 1723, is valuable. It was in that year that many Galloway proprietors enclosed their grounds to stock them with black cattle and turned out their tenants, thereby causing widespread distress which culminated in the rioting of the "Levellers." These tenants "in general," says Munches, "lived very meanly on kail, groats, milk, graddon ground in querns turned by the hand and the grain dried in a pot, together with a crock ewe now and then about Martinmas. . . . In 1725 potatoes were first introduced into this Stewartry by William Hyland, from Ireland, who carried them on horses' backs to Edinburgh, where he sold them by pounds and ounces. During these times, when potatoes were not generally raised in the country, there was for the most part a great scarcity of food, bordering on famine; for, in the Stewartry of Kirkcudbright and county of Dumfries, there was not as much victual produced as was necessary for supplying the inhabitants, and the chief part of what was required for that purpose was brought from the Sandbeds of Esk, in tumbling cars, on the Wednesdays, to Dumfries; and when the waters were high by reason of spates, and there being no bridges, so that these cars could not come with the meal, I have seen the tradesmen's wives in the streets of Dumfries crying, because there was none to be got. . . . The produce of the country, in general, was grey corn, and you might have travelled from Dumfries to Kirkcudbright, which is twenty-seven miles, without seeing any other grain except in a gentleman's croft, which, in general, produced bear or big, for one third part, another third in white oats, and the remaining third in grey oats. At that period no wheat was raised in the country; what was used was brought from Teviot, and it was believed that the soil would not produce wheat. . . . In these times cattle were also very low. I remember of being present at the

Bridge-end of Dumfries in 1736, when Anthony M'Kie of Netherlaw sold five score of five-year-old Galloway cattle, in good condition, to an Englishman at £2 12s 6d each; and old Robert Halliday, who was tenant of a great part of the Preston estate, told me that he reckoned he could graze his cattle on his farms for 2s 6d a-head; that is to say, that his rent corresponded to that sum. . . . There was then no lime used for improving the land."

Munches then pays a compliment to Craik, saying he "was a man of uncommon accomplishments," and that while few proprietors concerned themselves anent any of the articles of husbandry except black cattle, he "was among the first that undertook to improve the soil" and brought some of it "to such perfection . . . that I, on walking over the surface, sunk as if I had trodden on new-fallen snow"¹; but, although Munches was Arkland's nephew, he does not so much as mention him.^{1a}

So much for what met the eye, and now for technical details which we gather from an "Essay" first published in 1732 and reprinted by Maxwell.²

"Husbandry," we are informed, "till of late was entirely managed in Scotland by the Vulgar, who like Moles, ran on blindly in the Track their Fathers had made before them. . . . Their method was, dunging for a Crop of Bear, after it taking a Crop of Oats, and so on; dunging the one Half of their Arable every Year as long as they lived. This is the Practice in the Northern Shires to this Day. . . . Gentlemen of this Country ought to consider, that this is setting two Farms to pay the Rent of one." We learn from him that the first improvements were making folds for cattle and sowing peas, and that "some of our Farmers in the South, finding that Pease did not prove good and sure Crops, have lately fallen into an Improvement, I mean Fallowing." As a further improve-

¹ *Book of Caerlaverock*, v. I., p. 576

^{1a} Munches' mother was Eliz. Maxwell, eldest daughter of James Maxwell of Arkland, and sister of Robert.

² *Practical Husbandry*, p. 338 *et seq.*

ment on this he advocates the sowing of turnips, and remarks, "In Galloway they have been sown for several Years with great Success. . . . The Right Honourable John Earl of Stair was the first that introduced the Turnip Husbandry, besides many other valuable improvements, into our Country." The succession of crops "even by the most knowing" was at this time fallow, wheat, pease, barley, oats, and fallow, or fallow, oats, pease, barley or oats, and fallow.

Maxwell himself describes the traditional methods. "A Farm is divided into what is called Croft and Field Lands, and these are sub-divided into Falls: the Croft Land into four Falls and the Field Land into two; the Croft Land is plowed three Years for so many Crops and rests one; the Field Land is plowed three Years and lies three. The Fall of Croft Land, after it has rested its year, gets what Dung from Cattle the Farm affords, and then Bear is made from that new Ley, with only two bad Plowings, and sometimes but one; the first not until about April."

"The Field Land gets neither Dung, Lime or Taithing, either when it is lying or going, and must give three Crops of Oats, though some of them will scarcely return the Seed, and so Croft and Field Lands must go their Rounds, and have done so from Time immemorial, without any material Alteration, except in a very few Instances."³

The land was, we see, wholly undrained except by Nature, and had just begun to be enclosed. The system of agriculture was little different from that described in Adamnan's "Life of S. Columba," that of the three-field system in vogue both in England and Scotland in the 6th century. The only essential variation introduced by 1100 years' experience was the custom of alternating grazing with tillage. Such was the condition of husbandry when Maxwell and Craik commenced farming, but one must not forget another serious element that Maxwell so often inveighs against "the Unskilfulness and Laziness of the Farmers,

3 *Practical Husbandman*, p. 369.

their Tenaciousness to detestable Customs, and the Settled Hatred to all Improvements and Improvers, which makes them indocile, and keeps them in Ignorance and Poverty."

This is not the place in which to recount the history of agricultural literature, but because of his influence on both our subjects we cannot pass by Jethro Tull. His work, "Horse-hoeing Husbandry," published in 1730-1, was the first to discard and show the fallacy of the deductive method. "A thoroughly experienced practical farmer whose successful methods," says Middleton, "had drawn widespread attention to his Berkshire farm . . . his remarks were based on original observations, and it is clear that he did not merely copy opinions from scientific treatises . . . (which) must give him a foremost place among the scientific agriculturists, not only of the 18th century but of all time."

I. Robert Maxwell of Arkland.

Robert Maxwell was born at Arkland, Kirkpatrick-Durham, in 1695. He was the eldest son of James Maxwell of Arkland and Margaret, daughter of Robert Neilson of Barncaillie. After receiving "an education becoming his rank," as we are informed by Thomas Murray,⁴ he was bred a writer in Edinburgh and lived some time in that city in the profession of the law.⁵ About the year 1723 he took a lease of a farm on the estate of Cliftonhall, near Edinburgh, containing about 130 acres all arable, for four periods of 19 years at a money-rent of £50. Murray says he was "perhaps the first person that had taken a lease in this country of any great duration or that afforded an eminent example of skilful practical farming." W. A. S. Hewins says that "during the first half of the 18th century he probably did more than any other to introduce and encourage new methods."⁶ This claim, for we know little of his work at Cliftonhall, is based upon the work which he did for the Society of Improvers in the Knowledge of Agriculture in

⁴ *Literary History of Galloway*, 2nd edition, Edin., 1832, p. 169.

⁵ *Op. cit.*, Preface, vii.

⁶ *Dict. of Nat. Biography*.

Scotland. It is probably only his modesty which prevents us asserting that he was its originator. Of its President, Sir Thomas Hope of Rankeilor, to whom Edinburgh owes "the rich meadows and pleasant walks" made out of a morass called Straiton's Loch, and now called "Hope Park," he rather guardedly writes "It has been much owing to Mr Hope of Rankeilor, your Preses, that the Society was entered into and that the Spirit in it rose so high and hath been so long supported." And we are equally left unenlightened in this volume as to who its Secretary was, though it was none other than Maxwell.⁷ The Society was founded in Edinburgh on 8th June, 1723, and we have the authority of Professor T. H. Middleton for stating that it was "the first association to be formed for the express purpose of promoting agriculture."⁸ The Society at its first meeting agreed to meet once in every fourteen days during the months of June, July, November, December, January, and February; to have four general meetings every year, and an annual general meeting in February, the subscription being a crown at entry and a crown yearly. They agreed that their Council of twenty-five should divide itself in classes to study different branches and correspond with the most intelligent in all the different counties, and that farmers and gardeners who desired should be received as members gratis, but their chief resolution was "That all Members of the Society who want the Opinion of the Council concerning their Farms or Grounds, shall, upon sending to the Secretary the exact Situation and Nature of them, with Queries concerning Particulars, be answered by the Council, without any Expense, except Postage. That it be recommended to the said Persons, to return the Secretary a particular Account of the Success; and that this shall be immediately inserted in the News-papers, to certiorate all concerned."

The Society must have sprung rapidly into favour. "The number of its Members increased so much, that it amounted to upwards of 300 of the Flower of the Nation,

⁷ *Practical Bee-Master*, title page.

⁸ *British Association Report*, 1912, p. 721.

whereof about 50 were Peers."⁹ Of these the Duke of Athole, besides consulting with other persons of great distinction in forming the plan and beginning the work, made Acts for suppressing frauds in the weaving and bleaching of linen cloth, the Duke of Hamilton proposed resolutions against buying foreign linen and drinking foreign spirits; John the 2nd Earl of Stair, at Castle Kennedy and at Newliston, made improvements in the use of lucern and sanfoin, and introduced turnip, cabbage, and carrot husbandry by the plough. He set up a linen manufactory and showed that the Galloway hills could raise better cattle than even the Lothians and Fife; the Earl of Hopetoun "improved both on the Surface and within the Bowels of the Earth"; the Earl of Ilay experimented on mosslands, succeeding in producing good corn and grass upon what was thought worthless, and introduced "the American and Balm of Gilead Firs, the Larix and other useful plants," and obtained an appropriation of public funds for the encouragement of fisheries and manufactures, "which is the greatest national Good that has been done this Country these hundred Years past," and among its members, which ran to some 400, we note the names of Alexander Boswell, younger, of Auchinleck, James Burnet of Monboddo, Sir John Clerk of Pennicuik, Mr Charles Areskine of Tinwald, Duncan Forbes of Cullodan, Patrick Heron of Heron, and Mr Heron of Bargallie, Mr William Hamilton, mathematician in Perth, Mr Colin MacLaurin, professor of mathematics in Edinburgh, and Robert Riddell of Glenriddell. Enquiries came from all parts of the country and upon all subjects, and all these seem either to have been dealt with by Maxwell himself with the approval of his Council or to have been submitted to his opinion. The subjects mainly dealt with were the draining of boggy land, such as the Lochar Moss (a subject on which Mr Peter Rae of Kirkconnel contributed a letter), the use of marl and lime, the effects of seaweed as manure, the cultivation of potatoes, hops, sanfoin and flax and hemp, the

⁹ *The Practical Farmer*, p. 382.

feeding of cattle, and the employment of steeps for corn, the advantages of enclosing, the manufacture and dyeing of linen, the protection of fisheries, and the improving of whisky distillation. New methods which the Society advocated were the adoption of the Rotheran plough designed to be drawn by two horses, the efficacy and mode of burning clay or sub-soil, a method which the Earl of Halifax imparted to Lord Cathcart; the cutting and planting of seed potatoes; the need for enclosing arable lands—and above all, the introduction of root crops to complete the circle of rotation. It was largely due to the activities of the Society that the Scots farmers who were almost the last to take kindly to bare-fallowing were among the first and readiest to displace the practice by manuring and root-growing.¹⁰ Among the contributions is a local one by Mr Heron of Bargally,¹¹ “in whose gardens” Maxwell tells us “there is a great Variety of Curiosities to be observed.” This advocates the planting of what Heron calls “the old Roman Cytisus,” which he believes “to be the small bastard Cinna,” and which “fattens all sorts of cattle to a Wonder.” There is also a contribution by the celebrated Mr Tull, advocating the Doctrine of Pulveration, which Maxwell calls the “Doctrine of Doctrines in Husbandry.”¹² Early in its career in 1724 the Society published a volume written in “a familiar Stile, such as the country farmers might easily understand” on fallowing, and sowing grass seeds, flax, and hemp, of which I have never seen a copy,¹³ but which Maxwell partly wrote and probably edited.

In 1739 the Society for Propagating Christian Knowledge in Scotland, established in 1709, having obtained a second charter enabling it to lay out part of its funds in

¹⁰ Stephen's *Book of the Farm*, 4th ed., v. III., p. 44.

¹¹ *Transactions of the Soc. of Imp. in the Knowledge of Agriculture*, p. 174.

¹² *Practical Farmer*, p. 252.

¹³ *A Treatise concerning the Manner of Fallowing of Ground, by the Society for Improving the Knowledge of Agriculture*, Edin., 1724.

training lads in agriculture, Maxwell laid before it a " Memorial " in which he proposed that if the Society would give him the loan of at least £200 for five years without interest he would take yearly four to six young men above 16 years of age from the Society's schools and instruct them in agriculture for three or four years at £3 per annum, inclusive of bed and board.

We learn from this " Memorial " that his house had been burned down, which was occasioned by dressing lint, and that the Earl of Stair had built a lint mill within a mile of the farm, which enabled him again to grow flax, and that he proposed to grow on his farm wheat, peas, barley, grass, flax, turnips, cabbages, potatoes, parsnips, carrots, and to have milch cows, sheep, and horses. To indicate the state of agriculture, we may note that the S.P.C.K. asked him what he was going to do with the roots and herbs grown, to which he replied that besides table use they were good fodder, and described how they might be preserved by pitting, he having eaten " cabbages, sweet and tender, in April, in the famous Mr Heron of Bargally's House."

The Society of Improvers, to whom the S.P.C.K. had referred the matter, in supporting Maxwell's " Memorial " and giving their approval to his scheme, urged " that it was very useful and practicable," and " we are fully convinced that Mr Maxwell is not only capable, being in the Practise of the greatest Part of such Husbandry, but will prove diligent in such an Undertaking, he having on several Occasions discovered his Abilities to us, and his Sufficiency to execute all the Purposes mentioned in the Memorials." The scheme did not come to fruition, the S.P.C.K. informing him " that they were resolved to encourage the Design, but that Difficulties were in the way, which required Time to remove." Thus the S.P.C.K. lost the honour of establishing the first Agricultural College, and Maxwell's disappointment was no doubt bitter.

In 1743 the Society of Improvers, when in its twentieth year and already on the wane, commissioned Maxwell to edit

its "Transactions."¹⁴ It is a volume of 458 pp., with an illustration of the Rotheran plough, and consists of a precis of the minutes giving a history of the Society and a representative collection of the queries submitted, with the Society's replies, of recipes received and contributions by members. The Society returned "Mr Maxwell their hearty and sincere thanks for the valuable Performance; desiring he may insert this their Approbation in the *Newes-papers* when he advertises the Book." Maxwell apparently benefited by the sales of the book. Elsewhere in their minutes they state:—"We have heard him speak to most of the different Parts of Husbandry. He has wrote not a little of what has been laid before us, and he merits it to have it said of him that his Knowledge of Soil, and of the different Methods of improving it, is extensive, and his Sentiments just."¹⁵

In the dedication of this volume he writes:—"The Crown names Professors, and gives them Salaries: Which of them can be more useful to the Publick, than a Professor of Agriculture might be? or a General Inspector of Improvements, who should be obliged to report annually the Husbandry of each County, that Errors might be known and rectified." This idea, which he doubtless drew from Columella, whom he quotes on this matter,¹⁶ continued in his mind for many years. He urged the Society to address a memorial to the King.

14 SELECT TRANSACTIONS / Of the Honourable / The Society of Improvers / In the Knowledge of / AGRICULTURE in / SCOTLAND. / Directing the Husbandry of the different Soils for / the most profitable Purposes, and containing / other Directions, Receipts, and Descriptions. / Together with an Account of the Society's Endeavours to promote our MANUFACTURES. [line] Prepared for the Press by Robert Maxwell of *Arkland*, a / Member of the Society, and revised by the Preses and a Committee appointed for that End. / [line] 4 lines quotation from Mem. Soc. and two lines from Columella / [line] Edinburgh: / Printed by Sands, Brymer, Murray and Cochrane. / Sold by Mess. Paton, Symmer and Gordon, Hamilton and Balfour, Sands, Kincaid and Drummond. 1743. / 8vo., pp. xxx. plus 457 plus 1, with plate of the Rotheran plough, 4/- stitched, 5/- calf bound.

¹⁵ *Transactions*, p. 261.

¹⁶ *The Practical Bee-Master*, p. vi.

"You are," he wrote, "a great body of loyal subjects and generally of great Distinction, and I humbly think upon a proper Application to His Majesty you could not fail to have sufficient Influence to get such a Professor or Inspector named or both." Two years later, however, occurred the '45. It took its toll of the Society. Most of its members took the advice of Duncan Forbes and held by the King, but the Duke of Perth, Lords Cromarty, Balmerino and Lovat followed Prince Charlie. The Society, however, continued in existence. Maxwell in 1756 said: "Tho' the Society which flourished for more than twenty years be now declining, by the Death of near all the Founders, except Mr Hope of Rankeilor . . . yet a large Number of benevolent and beneficent Noblemen and Gentlemen have founded another Society called The Edinburgh Society for Encouragement of Arts, Sciences, Manufactures and Agriculture, which is prospering, and I hope will do much good." Whether Maxwell was a member of the Edinburgh Society I do not know,¹⁷ but in 1756 he competed for a premium offered for the best articles "on which a Lease of Lands may be extended whereby the Ground may be laboured to the Advantage of the Tenant and without Prejudice to the master." One of the objects of the Society of Improvers was to promote local societies to undertake similar work. It soon found imitators. Buchan established an Agricultural Society in 1730, Dublin followed suit in 1731, East Lothian in 1736, but it was 1776 before the South-Western counties founded one under the ægis of William Craik, and 1809 before the Stewartry¹⁸ followed its example.

Other affairs had occurred to distract Maxwell's attention from the Society of Improvers. In 1745 he succeeded on his father's death to the estate of Arkland. Whether it embarrassed him we do not know, but things did not go well with him at this time: it is probable that he had not had sufficient time to recover his outlays on the improvements which he had made at Cliftonhall, which was entirely un-

¹⁷ Murray says he was.

¹⁸ Murray, *Lit. Hist.*, p. 176.

enclosed when he entered it. At any rate, at some time prior to May, 1747, he had to surrender the lease, for in the winter of 1746-7 we glean from an "Advertisement"¹⁹ that the erstwhile Lady of Arkland had a shop "betwixt James's and Wardrop's Courts in the North-side of the Lawn-Market of Edinburgh," where Maxwell "will most probably be found or letters may be left for him." As for himself, "Mr Maxwell has been employed by Noblemen and Gentlemen, to survey and plot their Estates or Parts thereof, and to give his Opinion concerning the Improvement of the several soils, and . . . so far as he knows, having given full Satisfaction to his Employers; these are to give notice that he is resolved to serve when called upon for any of these Purposes." He also advertises that "he is often applied to by Gentlemen, to find them out Tenants or skilled labouring Servants, and by Farmers to let them know, where improveable Farms are to be set," and he accordingly offers to receive reports and inquiries and to function as land agency and employment exchange—surely an early instance of these.

Prior to May, 1747, he published the little volume containing the above advertisement. He had not previously written on its subject. It is entitled, "The Practical Bee-Master,"²⁰ and shows Maxwell at his literary best. The author declares that in his work "the Management of Bees . . . is Step by Step, and on all probable Occurrences, better

¹⁹ *Practical Bee-Master*, pp. 7-8.

²⁰ The / *Practical Bee-Master*: / or, A / TREATISE / Wherein the Management of BEES, both in / common Hives, and in the Colony Way, with- / out Killing them for their Honey is, Step by / Step, and on all probable Occurrences, better / and more particularly directed, / than in any Book hitherto published. / [line] / By ROBERT MAXWELL of *Arkland*, a Member of, / and Secretary to, the Honourable, the Society of Improvers in the Knowledge of AGRICULTURE in *Scotland* / [line] / five lines quot from Virgil / [line] / Edinburgh / Printed by Robert Drummond, and Sold by the / Book-sellers in *Edinburgh*, and other Towns; and at / MRS MAXWELL'S Shop, betwixt *James's* and *Wardrop's* Courts, in the *Lawn-Market* of *Edinburgh*, where / the Author may be found, or Letters to him may be directed. MDCCXLVII, Sm. 8vo., viii. plus 138.

and more particularly directed, than in any Book hitherto published." He states that "It is without doubt the Fault of the other Books upon this Subject spend too much of the readers' time; being swelled with the Speculative Part which enhances their Price, and give too few, and too general Directions; both which Errors I have endeavoured to avoid in this small Treatise that it may be more generally useful and become the Property of the meanest Sort, on a small expense."²¹ Although Dr. Joseph Warder, author of "*The True Amazons*," 1693, 1713, 1722, &c., had dissected bees and almost correctly determined the sex of the various types, Maxwell was unable to accept the results of his experiments, for in these days it was still possible to propound an argument in the following manner as Maxwell does to the Rev. John Thorley, who wrote in his *Mellizologia or Female Monarchy*, 1744, that he could not find any males among the bees:—"Does the Clergyman doubt that all living creatures were created male and female? Does he doubt that the Males and Females of all living Creatures were preserved in the Ark? If they were I wish he had told us what has destroyed all Male Bees since." Maxwell, while contending that the chief bee is a king because "that is the most natural kind" of government, does, however, strictly limit the "speculative part," and gives a clear, succinct and detailed account of the husbandry of bees, and though unable to advocate the new "colony" method, which avoided killing the bees when taking the honey, he, with exceptional breadth of mind, quotes three methods in use. He adapted his language, he says, to the meanest capacity, studied to use few words and printed in a small type that his book might be comprised in a few sheets and sold at a low price. He intended it for the poor and unlearned, and the consequence is that it can be read to-day with pleasure in its easy, clear, and simple phrasing, which is not lacking also in quaintness. His claim may be correct that it is the first popular practical manual on the subject,* and this intention again displays the idealist

²¹ p. 63.

* The first English book on bees was Thomas Hill's *A Profitable Instruction*, 1586.

eager to serve mankind. It went into a second edition in 1750. The book is dedicated to his patron, the Earl of Stair, and must have been issued before May, 1747, because on the 9th of that month the victor of Dettingen died. Maxwell's strongest hopes perished with him.

In 1749 he became insolvent, and at the instance of his creditors his ancestral estate was sold on 9th January, 1750, to John Coltart of Arceming for £10,304 Scots. The "Advertisement" above quoted is repeated in the 2nd edition of "The Bee-Master," so presumably he continued the same mode of life. He had also announced there that he intended issuing a second edition of the "Select Transactions," enlarged, and, if successful, to offer "another tract upon the subject of husbandry." This last may be his "Letter to the Clergy of Scotland, concerning the Improvement of their Glebes,"²² in which he presumed to preach the doctrine of pulveration "to the whole Reverend Brethren of the Church of Scotland, even from the Holy Bible."

In the winter of 1756-7 he delivered in Edinburgh a course of lectures on agriculture "at the desire of several Gentlemen." How great the loss of the Earl of Stair was to him and agriculture may be gathered from his remark:—"Had this great and good Man lived a little longer, I know (from what he generously, without asking, said to me, a few Months before his Death) that I would not have been lecturing last Winter at Edinburgh on Agriculture, encouraged by individuals only."²³ He was still thinking of the Professorship of Agriculture, but he did so despairingly:—"There is not, or perhaps never may be in our Time, a College of Husbandry established by Authority." Of the lectures themselves W. A. S. Hewins notes that they were "probably the first of the kind delivered in Great Britain." Two of his lectures he published in 1757, in his next work, "The Practical Husband-

²² *Practical Husbandman*, p. 253.

²³ *Op. cit.*, 241.

man."²⁴ This was an excellent title, but the volume must have been disappointing to his patrons. It consists mainly of a selection from the contents of the "Select Transactions," the additional matter being of the same miscellaneous character. It is, in fact, only the second edition enlarged, which he had promised ten years previously. His chief new proposal is a method by which the farmers who will not yield to reason and relinquish the ways of their forefathers may be bound in their leases to carry out new methods. The methods are described in a most vigorous essay, "Concerning the Regulation and Improvement of a Great Estate."²⁵ He gives a lively sketch of the ordinary progress of a country lad from herd boy to farmer who practises "shameful and destructive husbandry."

A note of querulousness begins, however, to creep in. His high hopes are not to be realised. It comes out in his remarks on the award of the Edinburgh Society for the essay on leases; he animadverts also on the conduct of the S.P.C.K. in breaking its promises, asserting that had they adopted his scheme for growing root-crops they would have prevented the famine of 1756, and he apologises for any "tartness" in his language in view of the importance of his subject and the evident benevolence of his intentions.

This volume appears to be the last of his public activities. He died at Renfrew on 17th May, 1765. From his memoir by Thomas Murray, who, writing in 1832, had probably information from some of his family, we draw our concluding paragraph: "He had been married; his wife was Margaret Montgomery, daughter of Bailie Montgomery, of Edinburgh, but whether she survived her husband we are not told, though

²⁴ The / *Practical Husbandman*: / being a / COLLECTION / of / Miscellaneous Papers / on / HUSBANDRY, &c. [line] / By Robert Maxwell, Esq. / of Arkland / [line] / quotations from Cicero, Columell, and Dodsley on *Agriculture* / [two lines] / Edinburgh, Printed by C. Wright and Company, for the Author: / list of booksellers [six lines] MDCCLVII / 8vo., pp. xii. plus 432 plus 6 and plate of Rotheran plough.

²⁵ *Practical Husbandman*, p. 365.

it is probable he was a widower at the time of his death, as that event took place in the house of one of his daughters. His family consisted of six daughters, of whom Margaret, the eldest, was married to Mr Hamilton of Monkland; Lillias to Mr Wallace of Carzield; Barbara to James King, Esq., collector of cess for the county of Renfrew (in whose house Mr Maxwell died); Catherine to Mr John Parlin, surgeon in Glasgow. His two other daughters died unmarried. His grandson, William Hamilton, Esq., British Consul at Boulogne, is the lineal representative of the family."²⁶

"May," to quote him again, "the Merit of the Dead be always faithfully recorded in History, that Honour and Praise may be paid to their Memories by all succeeding Generations."²⁷

II. William Craik of Arbigland.

I am indebted to Mrs Stewart of Shambellie for showing me the material I have to lay before you on William Craik. It consists of two letters by Helen Craik, his only surviving child, which appeared in *The Farmers' Magazine* for 1811. Her poetical endeavours, friendship with Burns, and part in an obscure tragedy we have been made familiar with by Dr. George Neilson and Provost Arnott. There are contributions also from James Grierson of Dalgoner and Gilbert Burns, "brother to the celebrated Robert Burns," who collected at the editor's request "a large body of information concerning Mr Craik from his numerous friends in the County of Dumfries and Stewartry of Kirkcudbright." These accounts are not very well, nor chronologically, put together, and there is much repetition. For the sake of brevity I propose to weld them all in one with Helen Craik's narrative, distinguishing the sources by captions.* I trust nothing pertinent has been omitted.

²⁶ Murray's *Literary History of Galloway*, 2nd ed., 1832, p. 174.

²⁷ *The Practical Bee-Master*, p. 116.

* H.C. 1 and 2 are by Helen Craik; F.M. is the editor of the *Farmer's Magazine*, who seemingly put together Gilbert Burns's contributions; and J.G., James Grierson.

Letters : Miss Craik to James Grierson, Esq., dated Flimby, 13th April, 1810, and May, 1810.

- H.C. 1. As the sole and last survivor of my name and family, I cannot but feel gratified by your kind and flattering attention to the preservation of my father's memory as an agriculturalist. Accept, then, Sir, my thanks on this occasion. The honour you confer upon him must reflect back upon yourself ; since you alone, of all his once numerous friends and acquaintances, have endeavoured to save from oblivion those exertions for his country's improvement, which, it cannot be denied, laid the first foundation for much subsequent advantage and prosperity.

- I am truly concerned, however, to add, that after a minute examination of every written memorial connected with former days, now in my possession, aided by the utmost efforts of recollection also on the topic you mention scarcely any circumstance worth communicating has proved the result of my labour. What has occurred, nevertheless, is at your
H.C. 2. service—but the fact is, the female part of his family were never permitted to interfere, in the smallest degree, with those occupations and pursuits, which he considered as more particularly his own. The natural consequence was, we were kept in total ignorance of every transaction that came under his prohibited denomination. Nevertheless, some of your questions I feel competent to answer ; and as it seems more the minutiae of what may prove connected with his public than his private life which you wish to obtain, there certainly can be no indelicacy attached to the very obliging solicitude expressed on that subject.

Our family is originally of English extraction. There is a Sir John de Creke buried in the churchyard of Westley Waterless, in Cambridgeshire, who died in the reign of Edward III. ; but our branch came from Creke Castle, situated between Beverley and the city of York, where (though in the ever-changing course of human affairs, some trifling variation in the spelling of the name has taken place) the family still exists.

The first person bearing the appellation,* who was settled in Scotland some time in the sixteenth century, was my father's great-great-grandfather; he held the rank of captain in a regiment quartered in Dumfries, and there married a woman sufficiently endowed with the good things of those days, to be distinguished by the title of "an Heiress."

What this gentleman's son was I know not; but his grandson was grandfather to your deceased acquaintance. He† married the daughter of Adam Napier, the youngest son of the famous Napier of Merchiston, and represented for some time the town of Dumfries, in the Scotch Parliament before the Union. I believe his name was William. He left two sons. Adam,‡ the eldest, was father to mine. He succeeded to the estate of Arbigland. The other, John§ (uncle to my father), was, I think, grandfather to the late Mrs Young of Youngfield, and had Stewarton settled upon him by his father as second son's portion. If I am not mistaken, it was this John Craik of Stewarton who joined with an ancestor of Sir Robert Lawrie's family in purchasing all the land they could possibly get hold of; in consequence of which, a common expression in their neighbourhood was, "God keep us from John Craik and Robert Lawrie!"

Stewarton certainly formed part of the Scotch estate, but I cannot call to mind how my father came to have anything to do with it or its rents; it could not, however, be on his own account.|| His maternal grandfather and grand-

* There were Craiks, however, in Dumfries and Glencairn at the beginning of the 16th century. See Adams's *History of the Douglas Family*, p. 278 *et seq.* Ed.

† William Craik, son of John Craik, bailie of Dumfries, and Isobel Young, was served heir 1st February, 1637; married in 1655 Anne Napier, daughter of Adam Napier, brother to Lord Merchiston; Provost of Dumfries, 1674-8, 1679-80, 1688-90; member of Parliament, 1678-81; acquired Arbigland in 1679. Died 1st April, 1697.

‡ Served heir 31st May, 1699; married 16th February, 1701, Mrs Marion Campbell. Dead by 8th December, 1748.

§ An error for William. He married Mrs Grizzel Wallace of Duchrae, and his grand-daughter, Grizzel, married Thomas Young of Youngfield. He died February, 1727.

|| Stewarton in 1723 belonged to John Young of Gullyhill.

mother were Sir Colin Campbell of Ardkinlass in Argyleshire, and Helen Maxwell, daughter to Sir George Maxwell of Newark. She was first cousin to the celebrated lawyer, Sir George Mackenzie, King's Advocate for Scotland. Of her and her husband, Sir Colin, I possess some interesting historical anecdotes, with which, however, I shall not at present trouble you.

Their daughter Marion (my father's mother) was a woman of very superior abilities, and much beloved by all who knew her; but her life proved a short one. She left only two children, both in early youth—my father, and a daughter who died soon after my grandfather's second marriage, and who, with myself, was named after Lady Campbell. It was the above Sir George Maxwell, who got what was called a Lockerby wipe,* viz., one side of his face laid flat on his shoulder, in an engagement with the Johnstones at that place.

The estate of Arbigland was purchased by my great-great-grandfather† from Lord Southesk in 1679

Adam Craik, my grandfather, and Miss Campbell of Ardkinlass were married in Argyleshire, at Sir Colin Campbell's house, in 1702.‡ My father was born on 26th August, O.S. 1703, at Arbigland Hall, as it was then styled; it stood upon a bank overlooking the sea, not far from where the garden is now placed; and certainly, in point of situation, much surpassed the present mansion. Allowing for the times in which it was built, I understand it was considered as greatly superior to any other gentleman's house in that quarter; but, like its former inhabitants, it has long been levelled with the dust. My father had it pulled down soon after his father's death, and removed the materials to the new dwelling.

By my grandfather Craik's second marriage, 1713, with Miss Aglianby of Nunnery, one of the oldest and most respectable families in Cumberland, he had four sons and

* Usually "Lockerby lick." See Dr A. G. Gibson's spirited ballad (*Folk-Speech of Cumberland and Some Districts Adjacent*, 1869).

† William Craik, d. 1697.

‡ Adams's *Douglas Family of Morton* gives 16th February, 1701.

five daughters; of which number, three of the former, and four of the latter, survived him. John, the eldest, was born at Arbigland; all the others in Flimby, where four of them have likewise died since 1803. The second son of this union, James, was named after the brother of his father's first wife, Sir James Campbell of Ardkinlass—a pretty sure proof of the estimation in which he continued to hold the memory of my father's mother!

F.M. It is highly probable that Mr Craik spent many of his younger years with his maternal friends, the Campbells, at least it is certain that he received a great part of his education at the grammar school of Dumbarton.

H.C. 2. I have heard my father say that before the opera of the "Gentle Shepherd" was finished, he won the first three acts of it in manuscript, at a game of cards, called "three hand ombre," from Allan Ramsay, after having previously got all the poor author's little cash from him. He had been a school-fellow of Mallet, the poet (then pronounced Malloch), but did not much like him. Lord Kaim and he were likewise college companions, and their friendship continued through life. He understood several languages well, and grammatically, viz., Latin, Greek, Hebrew, French, and Italian; and had made some little progress in Spanish. He was a tolerable architect—fond of chemistry—read much on learned subjects—and usually rendered himself master of whatever he set his mind upon.

He was originally intended for the law, but upon my grandfather failing in his promise of sending him to study at Leyden (then the fashionable resort for that purpose)† he renounced the profession, after having made no inconsiderable progress in it, and afterwards settled on a small farm called Maxwellfield, which his father gave up to him, in 1726‡ it was about a mile distant from Arbigland, I mean old Arbigland.

† H.C. 1.

‡ John Maxwell of Munches states that Craik "in his younger days employed his time in grazing of cattle and studying the shapes of the best kinds."

The country was, at this period, so far removed from every idea of real civilisation, that, to permit one's male guests to go sober to bed, was looked upon as the greatest possible failure in hospitality and good manners. My father, who, from his earliest days, wished to take the lead in whatever he engaged with, was by no means behind hand on similar occasions. In hard drinking, hard riding, and every other youthful excess, few could equal his notoriety. I frequently heard him say, that he felt a much older man, in constitution, before he was thirty, than afterwards at seventy and upwards.

In September, 1733, he married my mother, Elizabeth Stewart, only daughter of William Stewart, Esq., of Shambellie, in the parish of Newabbey. He succeeded his father (who died at Arbigland) in 1736,* at which time the estate was only about £173 per annum. They continued, however, at Maxwellfield, where all their children were born, until the present house of Arbigland was habitable, into which the family removed in 1755.

H.C. 1. Of a character and disposition always ardent and solicitous to make himself completely master of whatever he took in hand, he soon became distinguished in the agricultural line, at a period when the very meaning of the word, far less its practical possibility, was scarcely heard of in Scotland. As may be supposed, great were the difficulties he had to encounter. For many succeeding years the indolent obstinacy of the lower class people was almost unconquerable. Amongst other instances of their laziness, I have heard him say, that, upon his first introduction of the mode of dressing the grain at night, which has been thrashed during the day, all the servants in the neighbourhood refused to adopt the measure, and even threatened to destroy the houses of their employers by fire if they continued to insist upon the business. My father speedily perceived that a forcible remedy was required for the evil. He gave them their choice of removing the thrashed grain in the evenings, or becoming inhabitants of Kirkcudbright jail; they pre-

* 1735, H.C. 1.

ferred the former alternative; and open murmurings were no longer heard. He has frequently told me that he had laid out as much money, merely in draining the estate of Arbigland (all of which required it greatly) as would have purchased the whole of it at his father's death.

My father took an active and distinguished part in the great contested election of 1740. I have heard him tell, that, sometime after that event a number of the principal voters in the Stewartry made him a voluntary offer of their services in order to bring him into Parliament as their representative, free of all expense, too, during the time of election; but prudential motives, of a pecuniary nature, induced him to decline the intended honour.

F.M. Owing to these circumstances he procured the friendship of the Duke of Queensberry, the Earl of Selkirk, and Sir George Clerk Maxwell, but his most intimate friend was that uncommon man, Lord Kaimes. His Lordship regularly visited at Arbigland when on the southern circuit.*

Mr Craik, about the year 1750, became a keen disciple of the celebrated Tull. For some years he continued to follow the practice recommended by that author, and he gave a very full trial to the method of drilling and horse-hoeing wheat continually on the same land. At last, like every other person who attempted to follow his system he gave it up; assigning, as a reason, that ordinary servants were too imperfect for executing the several processes which belonged to it, with the care and attention which the system required. He retained, however, every part of the Tullian husbandry that was really useful. He drilled potatoes, turnips and beans—articles that may be better cultivated in the drill than in the broadcast way. He improved rural implements materially, and was the first who introduced the improved plough, worked by two horses, into that part of the country. The drill machine for sowing corn in rows

* The editor of *The Farmer's Magazine* supposes that he very probably assisted Kaimes with his *The Gentleman Farmer*, as he was informed by good authority that he submitted some alterations on his *Elements of Criticism* to him for his opinion.

nine inches asunder was also much improved by him; the amendements being of such merit that the Society of Arts, &c., in London, thought proper, in 1770, to bestow one of their medals upon him, as a mark of their high appreciation. This was the first medal of that celebrated Society which came to Scotland.

After Mr Craik renounced the Tullian system, he gradually became a convert to the modern, and more approved one, of taking culmiferous and leguminous crops alternately. We do not mean to say that he strictly adhered to the alternate system; because his first rule was, not to take above two white crops in succession, which was a good advance toward improvement, at a time when the great majority of cultivators took at least three white crops together, and while many, even in his neighbourhood, cultivated few other articles except bear and oats. The rotation generally prescribed by Mr Craik to his tenants was two successive crops of oats after breaking up from grass; next, a complete summer-fallow, or a horse-hoed green crop; and then a crop of corn, such as they chose, accompanied with grass-seeds, viz., 16 lbs. of clovers and 2 bushels of ryegrass. From a respectable gentleman in the Stewartry we learn that the above was something like the rotation followed by Mr Craik for many years. But, in the latter period of his life, as stated by that gentleman, the opinion of Mr Craik was altogether in favour of a white and green crop, or naked fallow alternately—a rotation to the performance of which one of his tenants was expressly bound. The farm in his own natural possession did not exceed 200 Scotch acres. To the management of it, Mr Craik bestowed the most sedulous attention, not allowing a single weed to remain undestroyed. Every operation was diligently superintended by himself; and so eager was he about harvest work that he generally took his victuals in the field beside the reapers.

His method of consuming turnips was as follows :—With the large roots he fed bullocks in the stall; and with the tops and offal, he reared young stirks or young cattle; which branch of stock was kept at home through the winter months,

instead of being suffered to roam at large, as in former times. He also kept about ten cows, chiefly of the Bakewell kind, whose calves he reared, and afterwards fed for the butcher, when three years of age. His bullocks, when fat, usually weighed 40 stones avoirdupois each. In the early period of his life he was extensively engaged in the trade of taking cattle to the English markets, having in one year, viz., 1748, sent about seventeen hundred Galloway cattle to the southern counties, which, at that time, were purchased at the average price of £2 6s per head.

J.G. In 1777, on his own farm, cattle were taken to fat at 14s per month. Mr Craik gave his tenants 3s per day for each cart he had to carry shells, while the ordinary wages was from 2s to 2s 6d—to teach them, he said, the proper value of their time and labour.

Mr Craik's attention was called to the breed of cattle introduced, and so much recommended by the celebrated Bakewell of Leicestershire. He had one or more of his bulls. The offspring, from their tameness and high condition, had a promising appearance. When he went into their pasture, they not only allowed him to handle them freely, but came up to him to be fondled. Long before this he paid great attention to his cattle, probably Galloways, which he tried in the plough, that some of them were shown in Dumfries by the butcher, before slaughter, for money; and one was so fat and unwieldy that, though it got to Dumfries, it fell down in the street, and the fleshers were obliged to kill it there, two or three hundred yards from the shambles. This was in April, 1764.

Mr Fergus Rae, Dumfries, about the same period, bought a lot of black cattle from Mr Craik at £25 each. The beef of one weighed above 90 stones, 16 oz. per lib. This could not be hung up in the then shambles, so it was killed in the street and hung on a triangle brought from Kelton, the seaport of Dumfries, for that purpose.

Mr Craik was equally successful in rearing horses. I find that, about 1750, he sold one to a gentleman in my neighbourhood for £25, a great price in these days.

F.M. He commonly used the English plough; very probably the one which passes by the name of the Rotherham plough—a plough which furnished the first hint of the one now generally used all over Scotland. When breaking up stiff clay land, he was in the habit of ripping it, before the small plough was admitted. The implement employed as a ripper resembled, in some particulars, a common plough; but different from it in this material point, that it had no sock. There were five coulter inserted, at the distance of four inches from each other, in a piece of timber fixed transversely upon the beam, of sufficient dimensions to allow the coulters to be placed alternately some inches before each other. The implement had a wheel under the beam before the coulters and two wheels behind for its support, and to prevent the coulters going too deep. After going over a field with the ripper, drawn by two horses and two oxen (the horses in front), it was then ploughed across the incisions made by the above implement. A considerable extent of land was enclosed by Mr Craik, who also planted 40 acres with timber trees. His dikes were formed of the soil, having a ditch on each side; sometimes planted with thorns. The height of these dikes was usually $4\frac{1}{2}$ feet; the breadth of the ditches 4 feet, and their depth 3 feet. Though forty years of age when he commenced planter, he lived to see some silver firs of his own planting measure eight feet in circumference. When walking past the largest one, he often pointed it out to his friends, and said, “ Out of that tree my coffin is to be made.”

“ The surest test of improvement is the rent that can be afforded. To save repetition I* confine myself to one farm, which, before Mr Craik began his improvements, paid of rent £35 for 130 acres. The whole being well enclosed—every wet spot made dry by under or upper drains—not a stone left to interrupt the plough—mostly in grass, and full of

* This is a quotation from Andrew Wight's *Present State of Husbandry in Scotland*, 1778-84, 6 vols., whose account of Craik's farming is similar to what we have given, as also is the account in Smith's *Agriculture of Galloway*.

manure—excellent houses, &c.; it is now leased at £150 sterling, but with very pointed instructions to prevent running out the ground."

J.G. Here it may be noticed that Mr Craik, for many years, was in the habit of taking young men as agricultural pupils; and he had them from distant places. This was probably not very common fifty or sixty years ago, in any part of the island, as I have not heard of one in this quarter since. I recollect only one circumstance he told me relating to his apprentices, which was that, by agreement, they were to eat, as well as work, with his servants. But an aged gentleman now tells me, that he has heard the time of apprenticeship was four years and the fee twenty pounds. Mr Craik said, 1782, that, for thirty years the sun never rose while he was in bed.

H.C. 2. In 1764 he accompanied Sir George Clerk (then Mr Clerk) up to London, in order to give their joint evidence to government, on the propriety of adopting the worthy Baronet's judicious advice, in regard to purchasing the Isle of Man from the Duke of Athol, as the most likely means of suppressing the illicit trade of smuggling, then becoming ruinously prevalent on the south-west coast of Scotland. This plan, in spite of Mr Grenville's long opposition, was finally acceded to, and has been attended with the best effects.

F.M. At this time he got acquainted with Dr. Franklin, Dr. Solander, and many other of the London literati, with whom he afterwards corresponded.

H.C. 2. Though the arrangement that prohibited those holding any situation under government (he was inspector-general of the customs, and the oldest officer, at his death, in the south of Scotland) from appearing as voters at elections, rendering his one of no use, yet he continued, as he had done from the year 1740, to be consulted and applied to, in every case of difficulty that occurred at such times; and was generally found to prove a sure and successful auxiliary to that side whose interests he espoused. Through the influence of the late Duke of Queensberry, and his invaluable friend, the deceased Sir George Clerk, he might once have obtained the

situation of a commissioner of customs at Edinburgh; but he was then deeply engaged with his favourite agricultural pursuits, and too partial to a country life, to think of exchanging it for the smoke and confinement of a town residence, even though that town was the metropolis of Scotland.

F.M. It has been alleged that the district in which Mr Craik resided was much benefited by the strenuous exertions made by him in his official capacity to preserve the peace of the country, as by any other of his undertakings. One instance of resolute behaviour, as a Justice of the peace, may be mentioned, in illustration of his personal character.

A notorious ruffian accused of murder and other crimes, being brought before Mr Craik in his capacity of Justice of the peace, he ordered the fellow's hands to be bound, as his conduct was of the most daring and insolent nature. It was easier, however, to give than to execute the order; for the ruffian having drawn a long knife, threatened to stab the first man who approached him. Mr Craik, observing that the constables were terrified by the ruffian's threat, jumped from the seat of Justice, and snatching a rope from one of the constables, first wrenched the knife from the fellow, and then forcibly tied his hands behind him without any assistance whatever. Indeed personal danger was never thought of by Mr Craik.

H.C. 2. I do not know that any particular cause (old age excepted) can be assigned for his deafness; but I have often heard him mention, that in consequence of getting a damp bed, during the election at Kirkcudbright in 1740, a giddiness, or what he called a swimming in his head, was brought on, and occasionally continued to distress him all his life. It is, however, rather an extraordinary fact, that he never had a common headache in the course of his existence, unless after hard drinking, in his earlier days—those days when savage riot was considered as a proof of superior spirit, and brutal intoxication a test of the strongest constitution.

The latter part of his life had long been systematically regular and sober. He was always an early riser; and, though but a bad breakfast man, he usually ate a hearty

dinner; and, after a single dish of tea, and supper on milk and vegetables, retired to bed about ten o'clock. He took no wine, unless when in company, for many years; but upon a slight paralytic attack, a few glasses of port were prescribed, and daily taken.

In May, 1773, the late Earl of Selkirk (whose father, the Honourable Basil Hamilton, had been my father's most intimate and cherished friend), with all the warmth of heart for which he was so remarkable, persuaded him to undergo the terrible operation of cutting for the stone, a family distemper, of which my grandfather Craik died, and with which his son had long been afflicted. His Lordship went to Edinburgh on purpose, in order to prevail with Mr Alexander Wood, then one of the first operators in that line, to undertake the business, and, with great difficulty, engaged him to leave his numerous patients in that quarter of the country for the execution of this important affair at Arbigland. A stone of some size, I forget the weight, was extracted by that gentleman, with his usual success and high professional abilities. Nevertheless, for some hours after the operation, my father's life was supposed in much and immediate danger, and chiefly preserved by taking a copious and first dose of laudanum. Mr Wood had previously pronounced him a bad subject for the instrument, and was averse to the business. But my father's determination was not to be shaken; and the former declared, he never once found him shrink under his hands; and added, "that he had never seen him surpassed for resolution and strength of mind, during a trial so painfully agonizing."

F.M. Mr Craik was the chief instrument of establishing an agricultural society at Dumfries. He was the person who chiefly directed its proceedings, and we observe he was its constant president. This society did not meet after 1781, in which year happened the death of its secretary, Mr George Mackenzie.*

H.C. 2. My father had two sons and four daughters born in

* The Society for the Encouragement of Agriculture within the Counties of Dumfries and Wigton and Stewartry of Kirkcudbright was instituted in the King's Arms tavern on 3rd April, 1776, by

wedlock, of which number I alone survived him. William, one of the former, died in childhood; the other, poor Adam, perished, as you may recollect, with his servant and four sailors in crossing the Channel at Arbigland, in an open boat, to visit his friends in Cumberland. That melancholy, and ever-to-be-regretted event, happened on the 23rd July, 1782. His body came on shore some days afterwards, near a small village called Mowbray, situated between Allanby and Skinbarness, in this county. We were solicitous that the corpse of his faithful servant, who had long been with him, might accompany his master's to Scotland; and the vessel that contained the latter was consequently detained two days on this side, in hopes of his body being found. At length, when expectation had almost ceased to exist, and the sloop just upon the point of sailing, poor Jack's remains came floating

fifteen gentlemen, all practical farmers, and including Adam Craik, younger of Arbigland, and Mr George Mackenzie, its secretary. They invited Craik to be their President; "they could not, with propriety, pay this tribute of respect to any other than yourself, who have been long and justly esteemed, as the parent and patron, of spirited, regular, and elegant improvements in the art of husbandry in this part of Scotland." By the close of their first year they had 67 members, including most of the considerable proprietors in the district, and had collected £174 6s. They issued that year two numbers (bound in one volume) of *Select Transactions* (Dumfries: Printed for the Society by R. Jackson & W. Boyd; 8vo., 2 plus 117 pp), including their "Regulations," "The greatest part suggested by our worthy President," and an essay by four members on the aims and work of such a Society in the first number (69 pp); and in the second a "Memorial, by William Craik of Arbigland, Esq., President of the Society, on the great Advantage of Breeding and Rearing Horned Cattle within the Bounds of the Society, in preference to those arising from the too general culture of Grain Crops" (pp. 19), in which cattle-rearing is advocated as a "pay-rent policy," on the grounds of suitability of soil, climate, demand, accessibleness of markets, and the character and genius of the people. The number also contains "Instructions Intended principally for the Use of The Farmers within the Counties of Dumfries and Wigton and Stewartry of Kirkcudbright, with respect to The Methods of improving the whole Arable Lands within the said Bounds" (pp. 23-107), and a Letter from Mr Robert Ramsay, writer in Dumfries, on "particulars very necessary to be attended to by every Land-holder, previous to his granting Leases" (pp. 108-117).

directly to the spot ! They were both landed at the Carse, about a mile from Arbigland ; and on the same day, conveyed from that place to the churchyard of Kirkbean. A gale of wind, want of proper ballast, and unskilful boatmen, were supposed to have caused this sad event. My dear brother was much beloved by all his particular friends ; but his lot in life was not equal to his worth. He was upwards of forty years of age when we lost him. My poor mother never recovered the shock occasioned by this most distressing accident, and followed him to another and a better world in February, 1787. She died at Arbigland ; as did my father, in February, 1798, in his 95th year. In 1792 he resigned all his property (except a small annuity of about £200, one half of which arose from his salary in the Customhouse) to the person* whom he had previously appointed his successor—the son of his deceased eldest daughter, by John Hamilton, Esq., of Eldershaw.

With my worthy and much respected friends in Cumberland I came to reside in 1792 ; and on me has devolved the severe and melancholy duty of laying their aged heads in the grave ; where the remains of the last of its regretted members (my aunt Barbara) were deposited, in May, 1809, in her ninety-second year.

About £500, received with his first wife, was laid out in the purchase of a small estate here by my grandfather. This little property, not exceeding 200 acres, sold in 1807 for £16,504. It had a fine wood upon it, and is full of coals. By his second marriage-settlement, in failure of his sons having male heirs, this estate was to go past his daughters, and rest with the eldest branch of the family. My uncles all died unmarried. The eldest branch was my father, who had departed this life before any of them did so ; of course, his legal heirs succeeded to the above premises, though both in the female line—being D. Hamilton Craik, in right of my deceased sister, his mother, and myself. Between him and

* Douglas Hamilton Craik (1762-1844), who obviously had no favour in the eyes of Miss Helen.

me, therefore, the above sum of £16,504 was equally shared. Do not, Sir, conclude me an egotist, if I add, that with this money, and the handsome increase made to it by my late ever respected relatives here, I am now, thank God and them, in rather more easy circumstances; and can say, what many richer people cannot say, that I am healthy, happy, and contented. A tolerably strong proof of the former is, that, though now pretty far advanced in life, during upwards of eighteen years spent in Cumberland, it is a well-known fact, that I have not once kept my bed a single hour for indisposition of any description whatever; and yet, in the course of the above period, I have had occasion to sit up through the whole of many an anxious night, by the sick bed of my dying relatives.

It may not, perhaps, be altogether improper to add, that one illegitimate son of my father's survived him.* He was about six years old at the time of my mother's marriage, and always treated by her as if he had been her own child. He was educated in the medical line, and settled in America, where he married a very accomplished and amiable woman, of French extraction, by whom he had a large family. On his first going to that country, he was some years in the regiment commanded by Washington, then a Colonel in the British service, and with whom he formed a friendship that continued uninterrupted through life. In both Marshalls † and Ramsay's history of that great man, honourable mention is made of Dr. Craik, as was also done by General Washington in his will. ‡ Soon after the commencement of the American revolu-

* This may put a quietus finally to the oft-repeated story that Paul Jones was a son of William Craik. Had he been, no doubt he would have been mentioned in the above narrative.

† "To his friend and physician, Doctor Craik, who sat on his bed and took his head in his lap, he said with difficulty, 'Doctor, I am dying and have been dying for a long time, but I am not afraid to die.'"—*Life of Washington*, by John Marshall, 1807, V., 827.

‡ "To my compatriot-in-arms and old and intimate friend, Dr Craik, I give my bureau (or, as the cabinetmakers call it, tambour-secretary) and the circular chair, an appendage of my Study."—*Life of General Washington*, ed. by Rev. C. W. Upham, 1856, II., 375.

tion, the General appointed him "Physician-general to the United States,"[‡] besides paying all possible attention to the interest of his children. But the death of that illustrious man proved a heavy blow to their former fair prospects, his successors having pursued measures decidedly hostile to his former adherents.

I have now, Sir, obeyed your injunction, of noting down all I can recollect from memory, or find marked upon paper. Had I understood, by your first epistle, that any information, except that merely connected with my father's agricultural pursuits, was required, what is now forwarded should then have been at your service. I wish, however, the whole had proved more worthy of sending you. There is, unavoidably, so much said about grandfathers and mothers, that I greatly fear you will find the foregoing statement of facts very confined. Your own language and arrangement of the various articles, will, I doubt not, nevertheless remedy the evil. I will not, therefore, try your patience further on so tedious a subject, but remain,

Sir, your most obedient Servant,

H. CRAIK.*

‡ This is a little inflated. Dr Craik accompanied Washington in an expedition against the French and Indians in 1754, and served as a physician under General Braddock in 1755. In 1777 Washington offered him either the position of Senior Physician and Surgeon or Assistant Director-General of the Hospital of the Continental Army, and he received his commission on June 2nd, 1777. In 1780 we hear of his zeal with regard to the hospital on Rhode Island (*Washington Papers*). After the war Craik settled near Mount Vernon, and became Washington's physician. Died in 1814.

* On page 300 *et seq.* of *The Farmer's Magazine*, 1811, vol. xii., is printed "Directions given by Mr Craik of Arbigland to Mr Peter Gordon, one of his Pupils, anent the Culture and Management of Kelton Lodge Farm, near Castle-Douglas, Galloway, 1773. Communicated by James Grierson, Esq., Dalgomer." In 1811 Mr Peter Gordon was "of Glenstockdale," and handed the papers to Mr Grierson. From them may be gathered Craik's ripe experience. It may be noted that on a farm of 200 acres, one-half in crop or fallow, the other in hay or pasture, the produce was reckoned to be £528; the rent and charges, £406 3s 6d; giving a profit of £121 16s 6d.

**The Plant Colonisation of Merse Lands in the Estuary
of the River Nith.**

By W. L. MORSS, M.Sc.

Abstracted by Dr. W. Semple.

In Scotland the term merse is applied, though not exclusively, to salt-marshes or saltings, plant-clad flats that are submerged by high spring tides and partially by ordinary springs. Those under observation for this work lie at the mouth of the Nith. Within a line from Airds Point on the west and Scar Point to the east, the merse has an area of about three square miles. Beyond this line, the estuary widens out to the Solway with a deep-water channel that at first hugs the western shore. On the east, the Glencaple side, the merse merges into naked flats of mud and sand which are exposed for miles at ebb of spring tides. Owing probably to the channel lying athwart these flats, the flood rushes up the Nith with a bore, whose front wave may be several feet high. Hence every tide churns up the loose mud and carries it on to the inundated merse. That the silting may be rapid in favourable circumstances is shown near Kirkconnell, where mooring bollards are seen along what ninety years ago was a navigable channel, but now is firm grass-land almost at the same level as the old bank.

Within the area under observation, the tidal currents are too strong and the present channel too narrow and wanting in back-waters to permit of emergence of new land. Indeed erosion of the banks is taking place at some points. Since the first observations were made much land has been eroded from the plots at Kirkconnell and South Glencaple.

The merse-lands abut on the river usually in an abrupt eroded escarpment from one to three feet high over mud slopes that dip more or less gently to the low-water channel of the river. The boundary away from the river is almost always defined by a steep bank, the edge of the old 25 foot beach, an extensive flat terrace, some of which is covered by peat moss at Kirkconnell Flow. Part of the Flow has been reclaimed and bears heavy crops. The merse itself, though

frequently under water, is not a bog but moderately firm ground. It is covered with nutritious herbage, which supports a considerable population of cattle and sheep. The writer has been informed by Mr D. T. Blackstock, Flatts of Cargen, that cattle which have not thriven on inland pasture are found to gain tone and fatten when transferred to the merse, and that sheep with a tendency to consumption gain strength to a marked degree. The writer proposes to discuss this phenomenon in another work. Farmers are generally of opinion that the grass, *Glyceria maritima*, is the plant eaten; but observation shows that the animals also eat other plants, particularly Sea Thrift (*Armeria*), though never the flowers of this plant.

The object of this research was to ascertain the succession of plants that had colonised the mud-flats and gradually converted them into merse, and also to study the conditions under which merse plants grow.

Strips of ground traversing the merse from river to raised beach were examined botanically. The flora was found to be so uniform that it was difficult to suggest the order of succession in the occupation of the ground. The absence of bare unoccupied land in the area, with the exception of loose steep mud slopes where none of our indigenous plants could maintain a footing, accounts for this. An attempt to reproduce original conditions by removing the top soil was abandoned. It had been suggested that the plants to appear might indicate the earliest colonists. But the plants that grew up were seedlings of the plants surrounding the patches.

Except on the steep mud slopes, a census of plants did not show a great variation in the number per unit area; but there was a marked difference in the size and vigour of the plants on different plots, which seemed to point to the better adaptation of some plants to the prevailing conditions. The most easily applied criterion of the relative vigour of the plants seemed to be the length of their roots, for, owing to differential cropping by cattle and sheep, stem length would not have been a fair test. Hence a large part of this paper is concerned with the measurement of roots.

Since the salt content of the soil was probably a considerable factor in the control of plant growth, and since common salt is the most abundant salt in sea water, the percentage weight of chloride, calculated as sodium chloride, in specimens of dried soil from each plot was determined. To ascertain the concentration of salt solution that would hurt or inhibit the growth of merse plants, specimens were grown in their native mud in pots, and these were watered regularly by solutions of Tidman's Sea-salt of gradually increasing strengths. Determinations of the osmotic pressure of the plants' cell-sap would have been interesting for this purpose, but lack of facilities stopped the experiments. Observations were also noted on the texture, condition, and aeration of the soil, also on its acidity (Hydrogen ion concentration—pH). The animals that frequented the merse and some that burrowed in the mud were also recorded and suggestions made about their effect on the soil. Four strips of what seemed typical merse, two on each side of the river, were selected—one on the left bank, south of Glencaple, where the estuary begins to open out to the Solway; the second on the other bank directly opposite Glencaple, at Kirkconnell, where the right bank merse is at its broadest, about three-quarters of a mile; a third on the Glencaple side nearly a mile farther up stream; and the fourth and farthest up, on the Crooks Pow, a small tributary on the right bank of the Nith where it begins to be confined to a narrow channel. Each strip or traverse was divided into plots, in each of which conditions seemed fairly uniform.

[The maps, plans, and sections of the original paper are omitted. Also weather reports and tidal information.]

At least one visit was paid to the merse each week from the middle of March till the end of September, 1923, so that each traverse was seen at least once every three weeks. Consequently the seasonal succession of plants was under observation throughout a whole season.

Kirkconnell Traverse.

PLOT I.—This begins opposite Glencaple from low water level with a 70 yards stretch of bare mud, followed by a

10 yards belt occupied by isolated patches of *Glyceria*. Mixed with these are often found decayed leaves, &c., of deciduous trees, grasses, rushes, other phanerogams, and of such brown and green algæ as *Fucus* sp., *Ulva lactuca*, *Enteromorpha compressa*, and *E. intestinalis*. The mud is loose and of light colour.

PLOT II.—Is about 20 yards wide, and, though on the same plane as Plot I. and with similar soil, it is quite distinct, the general appearance being like a recently sown lawn of even growth. A constant height during the season of about $1\frac{1}{2}$ inches is due to continuous grazing. *Glyceria* predominates; only isolated plants of *Armeria*, *Glaux*, *Plantago*, and *Spergularia* occur.

PLOT III.—Here the established merse may be said to commence at a scarp 18 inches high. The plot, quarter of a mile broad, is a fairly level sward thickly and uniformly carpeted with *Glyceria* and *Armeria* on the higher parts, with *Glaux* predominant in a few hollows. The lawn is cut up by creeks and "pans," the latter being pools or bare depressions where pools have dried up. The whole is submerged by high spring tides, while ordinary springs fill all the creeks to the brim and cover the low hollows. *Cochlearia* grows abundantly on the mud of the creeks and *Plantago* on wet places. Cattle and sheep seek this plot in preference to others.

PLOT IV. is lower than III. It is a shallow channel, 40 yards wide, running parallel to the river. Ordinary spring tides sweeping along it cut off III., which is left practically dry, from the rest of the merse. The soil is always wet and sticky, while the vegetation is sparse. The fineness of the mud grains accounts for the greater retention of water, the stickiness of the mud, and the high percentage of salt. *Aster*, *Spergularia*, *Salicornia*, *Triglochin*, and *Cochlearia* flourish; but *Armeria* specimens are poor and few.

PLOT V., separated from IV. by a scarp 18 inches high, covered only by high spring tides, is more thickly clad with vegetation than the foregoing plots, and grasses other than *Glyceria*, *Juncus*, *Leontodon*, &c., mixed with merse plants,

give it the appearance of an inland sward. It is similar to Plot IV. of Crooks Pow and III. North Glencaple, which, however, has a greater variety of plants. It should be noted that, whereas the roots of the grasses penetrate deeper than in other plots, those of *Armeria*, *Plantago*, and specially of *Glaux* have become stunted, due more perhaps to overcrowding by the grass than to diminishing salt percentage.

The landward border of V., being lower than the main sward and being cut across by shallow water courses always full of water and parallel to the bank, is the most marshy part of this merse; moreover, it is much poached by cattle. A similar marshy landward border was observed on other merses, which terminated against a natural boundary. *Triglochin* was found here. The vegetation on the steep, partially clad scarp of the 25 feet beach differs sharply from the sward of V., and also from that of the beach plateau above. Only the foot of the scarp gets salts from sea water, and the vegetation shows none of the characteristics of merse. No seedlings of merse plants appeared on an experimental patch of bared soil on this scarp.

Crooks Pow Traverse.

Of the traverses studied, this is farthest up the river, which is here confined within a narrow channel. Compared with Kirkconnell, the area of merse and of land submerged by high tides is small: it is limited by an artificial levee, which is reached by high springs. Crooks Pow is a fresh water burn with a greater constant flow than that of any of the creeks across Kirkconnell merse, the cause of a decrease in the soil's salt content.

PLOT I.—Twenty yards of soft light brown mud resting on firm blue clay. Isolated plants and clumps of *Glyceria* are established on the landward edge of the steep slope.

PLOT II.—Four yards of the same slope and with similar soil, but quite distinct in having luxuriant *Glyceria* in a compact uniform plat. A few plants of *Aster*, *Cochlearia*, and *Glaux* occur, very fine specimens being seen on a flat patch whose soil is enriched by the crumbling loam of the scarp above it.

PLOT III.—This is an irregular tract separated from II. by a scarp three feet high, bounded on one side by the Pow and on the other partly by the levee, partly by two promontories of higher ground constituting Plot IV. It is a fairly level stretch, 200 yards long. Two creeks flowing into the Pow cut across it. Compared with areas bearing the same kind of plants at Kirkconnell, the soil is wetter, the salt content is less, but the vegetation is more luxuriant, and *Cochlearia* abounds everywhere, being very luxuriant in the creeks.

PLOT IV.—The two promontories of higher ground, about whose bases III. winds. Besides the usual merse plants, *Leontodon*, *Plantago Coronopus*, and grasses other than *Glyceria* occur. On a patch from which turf had been cut for lawns, plants of *Armeria*, *Glaux*, and *Plantago maritima* are appearing. The salt percentage is higher on IV. than on III.

South Glencaple Traverse.

This traverse is on the left bank of the river $1\frac{1}{2}$ miles south of Glencaple. A road runs on the 25 feet beach bounding the merse. A hedge, a few Alders, and some whins line the bank. The sward is less dense than on the other traverses; there is no patch corresponding to the main part of Plot V. Kirkconnell or Plot IV. Crooks Pow; and the soil is generally wetter, especially Plots. VI. and VII; a rushy belt under the raised beach scarp. This resembles the marshy inland border of Kirkconnell merse. No ground features mark the plots of this traverse except the low scarp separating I. from II.

PLOT I.—About 30 yards of sparsely colonised mud, the pioneers being again *Glyceria*, with *Salicornia* some yards to the rear and increasing in number inland. In 1923 the low-water channel was 100 yards from the pioneer plants; but by 1926 the whole of Plots I. and II. with much of III. had been eroded away by the scour of the tides.

PLOT II.—A narrow strip separated from I. by a low scarp. It is richly but not densely clothed with well-grown plants of eight merse species,

PLOT III.—A few inches higher than II., it winds about on each side of one of the main creeks, it is wetter than II., and supports fewer species of plants. The relative percentage of *Glyceria* is smaller.

PLOT IV.—Slightly higher than III., it is not touched by dead neaps but is covered by several tides on each side of springs. A thick bed of *Plantago* on the landward half of the plot is a noticeable feature, especially in September, owing to the great number of brown fruit-stalks. *Plantago* is scarce on III.

PLOT V.—Lower than IV., it is covered by most tides. The set of the tides and the sticky nature of the mud account for the high salinity. The stickiness of the mud makes the measurement of the roots difficult. *Triglochin* is plentiful and luxuriant.

PLOT VI.—A water-logged strip, very marshy, with vegetation similar to V. but sparser, specially *Glyceria*. Mud very sticky and salt content higher than in V.

PLOT VII.—Ten yards of boggy ground bearing reeds, rushes, then a slope up to the road. High tides reach the trees, but fresh water seepage makes the salt content low.

North Glencaple Traverse.

This is about a mile north of Glencaple, and is the narrowest of the four. It is limited by the road. Unlike South Glencaple merse, this is in terraces. From the low-water channel the mud has a steep slope and is in distinct terraces, one of which is of stiff blue clay that underlies the merse at all places but has a broad outcrop here. Loose light brown mud overlies the stiff clay on the bare slopes. Under some conditions there results a quicksand through which the wayfarer sinks till he reaches the stiff stratum. When gullies are filled up flush with the general surface, danger may arise. On the clay terrace, the writer of the paper first noticed the innumerable burrows of the amphipod crustacean *Cocophium longipes* (Linn.), which are found everywhere in the bare mud and "pans" of the merse, and probably play a part in the consolidation and aeration of the merse soil.

PLOT I.—A patch of scattered plants and clumps of *Glyceria maritima* intermingled with *Aster Tripolium* on the inner border of the highest mud terrace.

PLOT II.—Separated from I. by a foot high scarp. *Glyceria* is well established, specially on the seaward border; the landward belt is wetter and has a sparser distribution of plants, which there include *Triglochin* and *Salicornia*.

PLOT III.—Thirty yards of grassy sward separated from II. by a scarp 16 inches high, it is only covered by high spring tides, this accounting for the low salt content and for the appearance of *Leontodon*, *Lotus*, &c., on the plot. Cutting across this plot parallel to road is an artificial ditch, usually containing stagnant but not putrid water of high salt content, and as alkaline as sea water. *Atriplex patula* flourishes in the ditch; *Triglochin* and *Aster* also appear.

PLOT IV.—On a gentle slope from III., it is only overflowed by extraordinary spring tides, and, except for stunted plants of *Armeria*, it shows few merse characteristics.

[A long discussion of the writer's observations in comparison with those of observers of the salt marshes on the Dovey estuary, Wigtown Bay, Holme-on-the-sea, at Blakeney Point, and in Spitzbergen, &c., which the original paper contains, has here been omitted.]

Fauna of the Merse.

The Nith merse supports a considerable population of sheep and cattle; on the Kirkconnell merse about 60 cattle and from 250 to 300 sheep feed regularly during spring, summer, and early autumn. Grazing of the other merses is not so intensive nor so continuous; but even on these, it must have a great influence on the flora, e.g., *Statice*, which is plentiful in the estuary of the Urr and in Orchardton Bay, inlets of the Solway contiguous to the Nith, on merses not so much grazed, was not observed here. Moreover, their excreta must affect appreciably the chemical composition, as their trampling does the physical condition of the soil.

Similar effects on the flora and soil should be caused by the huge flocks of birds that frequent the merse. Geese,

being large in body, many in number, and herbivorous in habit, consume much forage during winter, and their roosting places on the merse are as thickly littered with droppings as a poultry run. The birds that are not vegetarian, attracted by the jetsam of the sea that the tide strands on the merse as well as by the resident crustaceans and other invertebrates, may produce even greater chemical and physical results, for their droppings contain carbonate and some phosphate of lime from the shells and bones of their prey. The writer quotes from Gladstone's *Birds of Dumfriesshire* and *Notes on the Birds of Dumfriesshire* evidence that birds are very numerous on the merse; e.g., In the early part of October, 1881, a flock of Barnacle geese was estimated at 10,000 (p. 251). In October, 1900, there were congregated at least 50,000 lapwings (p. 377). In March, 1914, an enormous flock of starlings, said to have been of many thousands, was seen near Conheath (beside N. Glencaple Traverse). For the following information the writer is indebted to Mr James Wilson, of Glencaple, a well-known authority on the bird life of the district:—

Average number of birds seen daily on the merse during a year:

On Kirkconnell merse, from beginning of October to end of February: Grey Lag Geese, 2000; Ducks, 400 to 500; Peewits, 1000; Curlews, 200; Gulls, 200 to 300; Redshanks, 200 (scattered).

On Glencaple and Caerlaverock meres during January and February: Barnacle Geese, 3000; Duck and Widgeon, 3000; Gulls, 10,000; Peewits, 150; Oyster Catchers, 500; Redshanks, 200; Curlews, 200; Golden Plover, 100; Dunlin, 500; Cormorants, 100.

On Kirkconnell merse in March: Grey Lag Geese, 2000; Ducks, 400 to 500; Peewits, 500; Curlews, 100; Redshanks, 100; Gulls, 150. In April—Geese, 2000; Gulls, 200; Curlews, 100; other species, 100. In May—All species including Sheldrake, 200. In June, first three weeks—as for May; fourth week—Gulls, 200; other species, 100. In July, first two weeks—Gulls, 500; last two weeks, Gulls, 100;

other species, 200. In August—Gulls, 1000; Curlews, Red-shanks, &c., 500. (The abstractor wishes to record in addition that large flocks of Pigeons feed on the seeds of *Cochlearia*.)

Probably more important than the vertebrate fauna are the invertebrate animals that burrow in the soil, or are stranded as the tide recedes; while of these, the microscopic are presumably of most consequence. Vegetable organisms naturally associated are the bacteria (nitro- and thio-) of the soil, and the diatoms in the plankton of the sea. Chief among the burrowers was the crustacean, *Cocophium longipes*, found everywhere on bare mud flats and slopes, also in most "pans" either alive or dead. Polychaete annelid worms, or at least their burrows, occur in similar habitats; but except for traces of old burrows not under the sward. This is discussed in relation to aeration and consolidation of the soil. The visible creatures jettisoned by the tide were small crustaceans and molluscs. On one occasion large stretches of merse were carpeted with little crabs or their carapaces, about a dozen to the square inch. On another, each *Salicornia* plant on the mud bank opposite Kippford was being browsed by a score of tiny whelks, which on the death of these annuals would be buried in the soft mud. Their compeers neaped on sward-clad merse die an earlier death and give their carbonate of lime shells for the improvement of the soil. "Pans" are often swarming with shrimps and small flounders, which in summer die when the "pans" dry up, or when evaporation has concentrated the salt solution too much.

Aeration of the Soil.

The rising of air bubbles from the sides of creeks as the tide rises is of common occurrence, but is not so apparent from the merse proper. If, however, one rows over the Kippford merse on a calm day, he sees sporadic zones of bubbling; and when an oar is pushed into the sod or bare mud, great bursts of gas are liberated, not foul smelling like gas from a marsh. The merse mud, unless contaminated with sewage, or poached by cattle, is not putrid. Neither was the gas due

to photosynthesis. It gives proof of the porosity of merse soil and of its penetration by much air. Visible pores were observed in digging roots for measurement. Many were evidently spaces left by roots and stems that had decayed. The root-stocks of *Armeria* and *Plantago* often extended down to great depths, upward growth of the stems having kept pace with progressive rise of the ground by silting. When the old root-stock dies, the external rind persists while the softer tissues decay, leaving a tubular space to serve as an air conduit. The original visible air channels are the burrows of the crustacean and sea-worms already mentioned. The surface soil of shallow "pans" has been observed pitted by innumerable tiny openings of *Cocophium* burrows as if pricked all over by pins, and at each a silvery air bell. Though living burrowers were not found under turf far from creek or "pan" margins, it is certain that the burrows persist till they are occupied by roots or rhizomes. The track of burrows, and indeed of all tubes through merse soil, even the tracks of living roots, were conspicuous by rusty red colouring. The difference from the surrounding soil is most marked where the blue-grey sub-soil is penetrated. By these conduits, oxygen, whether as gas or dissolved in water, diffused and oxidised the ferrous sulphide (product of thio-bacteria) to ferric oxide—further proof of aeration. Once the plant is established, oxygen produced as by-product of photosynthesis diffuses through the plants' own channels to the roots. The iron rust seems to consolidate the tubes, for they can be isolated entire by washing. This was first noticed on the bank opposite Kippford, where gentle currents wash away loose mud, leaving the more coherent tubes as domed pillars projecting above the surface. At first mucus was supposed to be the agent of agglutination; but heating the tubes did not carbonise the material, nor was the empyreumatic odour of decomposing protein apparent. Of as great or even greater import are the minute spaces between adjacent particles of clay—the larger the particles, the greater the interspaces and the less the amount of salts and of water absorbed on the surfaces, consequently also the greater the

air spaces in the soil when water drains off. Sea water, largely perhaps owing to its calcium salts, clots suspended clay into larger aggregates and causes rapid sedimentation of silt. It probably causes similar flocculation in the merse soil, rendering it more porous and, when dry, more friable. Calcium carbonate from carapaces of crustaceans and shells of molluscs must augment this reaction. Leaching out of the salts by seepage of fresh water will antagonise it. Poaching by cattle will puddle the clay and render it impervious. To sum up, when the ebbing tide uncovers the merse, the water table slowly subsides and sucks air behind into the pores: every flood tide, whether or not it submerges the merse, will expel some of the air, which thus is renewed twice a day. The cohesion of the burrows helps to consolidate the mud till plants become established and complete its stabilisation.

Earthworms, of course, are absent from the merse and all land inundated by storm spring tides. A local observer states that one such tide six feet higher than the highest spring tides killed a young plantation and drowned hundreds of rabbits on the high sandy merse near Southerness. The earthworms came up in millions and died. Gulls fed on the carcasses for weeks. Since then, some twenty years ago, only coarse grass grows in places that previously bore good crops of corn.

Hydrogen Ion Concentration in Merse Soil.

Hydrogen ion concentration, pH., gives a measure of the acidity or alkalinity of a solution. Agricultural "sourness" of soil, though frequently associated with chemical acidity, is a more complex concept. The numbers used to measure pH. may be stated without explanation. Neutrality of pure water is expressed by pH. 7.0; numbers decreasing from pH. 7.0 indicate increasing acidity; numbers increasing from pH. 7.0 indicate increasing alkalinity. pH. 1.0=decinormal acid = 1 gm. of hydrogen ions in 10 litres of solution; pH. 7.0=1 gm. of H. ions in 10,000,000 litres. Dumfries tap water was almost neutral, pH. 7.2 to 7.3. Nith water was very slightly alkaline, pH. 7.2 to 7.4, during ordinary or low flow; slightly acid, pH. 6.8, in spate.

Water coming in from the Solway at full spring tide was distinctly alkaline, pH. 8.5. Opposite the merses water in the channel from half to ebb tide varied between pH. 8.2 and 7.4.

The pH. of the soil and of the "pan" water was determined under varying conditions of weather and tide for the plots of three of the traverses and also for other localities for comparison. But since the method employed—Colorimetric with B.D.H. Universal Indicator—is not of rigid precision, and since the factors causing slightly diverse results for the same plot at different times are rather complex, no stress can meantime be laid on small differences, but only on broad features.

KIRKCONNELL.—"Pans" on all plots, except landward border of V.—pH. 8.0 to 8.5; muddy creek through landward border of V.—pH. 6.6 (after neaps), 7.0 (after springs); soil on all plots, except inner border of V. and scarp of raised beach—pH. 7.8 to 8.3; scarp of raised beach, "sour" pasture on the plateau, peaty soil in fir wood at edge of Kirkconnell Flow—6.4 to 6.6; peat and ditches of Kirkconnell Flow—4.0.

SOUTH GLENCAPLE.—"Pans" on all plots except VII.—pH. 7.8 to 8.5; soil of all plots except VII.—pH. 7.8 to 8.0; Plot VII. (rush patch and raised beach scarp)—pH. 6.4 to 6.5 (after neaps), 7.2 (after springs).

NORTH GLENCAPLE.—"Pan" of I.—pH. 7.8 (salt); ditch across III.—pH. 8.5 (very salt: 4.2 per cent. of chlorides as Common Salt: sea water contains 3.5 per cent. of total salts); soil of all plots, except IV.—pH. 7.6 to 7.8; Plot IV.—pH. 6.8 (?).

MAVISGROVE.—Here is a patch of merse on the Nith $3\frac{1}{2}$ miles by river above Glencaple, unenclosed by levee. It might almost be called carse, but it is submerged by high spring tides. River banks and part of merse covered with compact turf—pH. 7.4; ridge of dark humus with whins, &c.—pH. 6.5 to 6.8; marsh with reeds, rushes, horse-tails, *Oenanthe*, *Caltha*, &c., fed by large field drain, mud black and foul, submerged by previous tide, but as the river was in

spate the water would be fresh—pH. 6.2, the same at fourth tide after neaps—pH. 6.3; above drain from arable field on 25 feet terrace—pH. 6.0 (after heavy rains), 5.8 (after dry weather); soil of above field—pH. 6.2.

KIPPFORD.—Merse on the estuary of the Urr. Water in channel—pH. 7.4 (low tide springs), 8.5 (high tide springs); "pans"—pH. 8.0 to 8.5; soil—upper slope of bare mud flats, clothed with green algæ and with isolated plants of *Armeria*, *Plantago*, *Glyceria*—pH. 8.0; terrace above, with compact turf of *Glyceria*—pH. 7.8; broad water-logged depression with *Plantago*, *Triglochin*, *Aster*, *Statice*, but little *Glyceria*—pH. 7.2; high terrace inland from last with *Glyceria* most abundant—pH. 7.6; slope along base of levee, separated from former plot by a long series of "composite pans" and in places by marshy ground bearing reeds, the slope itself bearing luxuriant *Glyceria* turf, submerged by high spring tides, seepage from arable field—pH. 6.8.

From the pH. figures the following observations and deductions may be recorded:—(1) The soil of salt merse is on the alkaline side of neutral. The merse is more of the nature of a fen than of a fresh water marsh, and the soil is quite unlike that of a peat moss. (2) With stagnant fresh water the reaction is on the acid side. (3) With fresh water, where, as on the bank of the Nith at Mavisgrove, oxygen is sucked down after water rapidly sinking in, the reaction is slightly alkaline. (4) Even where the merse is sometimes submerged by salt or brackish water, if seepage of fresh water prevails, if the water be stagnant, if the soil be black with humus, or if oxygen be not sucked down, the reaction tends to be acid. (5) Even where the merse is waterlogged, if it be frequently submerged by the tide, the reaction remains alkaline. (6) *Glyceria* seems to tolerate a wide range of hydrogen ion concentration: it grows luxuriantly at Kippford at pH. 6.8 to 7.8, and it was found from pH. 6.5 to 8.5. Prof. W. R. G. Atkins states in *Nature*, cviii. 80, that *Armeria maritima* tolerates pH. 6.8 to 8.2; that Gorse is usually on acid soils pH. 5.4 to 6.8. As indicating variation of pH. with conditions, his statement, that photosynthesis by marine algæ in

rock pools may lower acidity by 0.25 through consumption of carbonic acid, may be noted. He states that in water foul with rotting sea weed, acidity increased to pH. 6.4; but in the salt ditch at N. Glencaple, containing autumn leaves, pH. was 8.5; this water, however, was not foul.

Prof. T. G. B. Osborn writes of the halophytic vegetation at Port Wakefield in arid South Australia that the soil of all zones except the most landward have pH. approximating that of the sea, pH. 8.6; the landward zone had pH. 7.4, associated with a decrease of salt and lime : on the Nith and Urr meres the landward zone was acid, but in them seepage was a factor.

The results of experiments intended to reproduce natural conditions by growing samples of merse turf in pots were not unequivocal enough to merit publication in detail, but a few will be mentioned. Acid soil (with its plants) watered for a month with physiologically normal saline (NaCl 0.9 per cent.) seemed to tend towards neutrality, e.g., one experiment—pH. 6.6 changed to 7.0 : this may have been due to aeration or to the salt causing more rapid subsidence of acid particles from suspension. A wedge of acid turf loose in the pot to increase aeration was watered with neutral water, and changed from pH. 6.8 to 7.8, but leaching of acid might cause this. When there was no drainage and air was excluded as much as possible by using a jam jar instead of a flower pot, neutral water being used, the acidity of acid soil increased, e.g. (most favourable experiment), pH. 6.5 to 5.5.

Salt Percentages.

The salt percentage of a sample of soil from various plots depends on :—

(1) The amplitude of the preceding tide. Dead neaps create little movement of water in the estuary, and the flow of water in the river makes it fresh. The ebb of springs sweeps out river water, while the flowing spring tide pours Solway water far up the river and all over the merse.

(2) Height of the plot above low water level. Low plots covered by all tides will be affected by the fresher water of neaps, and of the first of flood and last of ebb ; whereas higher plots though seldom immersed should be bathed by salter

water. The set of the currents and the bearing of creeks will modify these factors.

(3) The resultant of (1) and (2)—the interval elapsed since plot was last under water. This should influence the concentration of soil solution but not the salt percentage of the soil sample.

(4) Weather since last submergence of the plot. Heavy rainfall leaches out salts from the soil and brings down the river in spate. Hot, dry summer weather diminishes the volume of the river and by evaporation concentrates soil solution.

(5) Proximity to the river, creeks, and ditches facilitating deep as well as superficial drainage.

(6) Slope of the ground facilitating surface drainage. Level ground tends to be waterlogged, and as a rule to have a high salt content where not leached by seepage of fresh water.

(7) Density of herbage. Vegetation retards the recession of water from the surface, and gives the salt water more time to sink in.

(8) Nature of the mud. The smaller the particles, the greater the absorption of water and of salts, and in consequence the more waterlogged is the soil and the greater the salt percentage of the sample; also the harder does it cake when dry.

(9) Distance up river from the open sea. Naturally the saltiness of the water that inundates the merse tends to diminish the farther up river they are.

The Vegetation.

Glyceria maritima (Sea Manna Grass).—This plant is predominant on most of the merse, and is the pioneer at all four traverses studied. Isolated plants and clumps advance many yards ahead of other species on these mud slopes. Only at South Glencaple does *Salicornia* intermingle, and there distinctly to the rear. On Glen Isle mud flat (Urr estuary) and at Orchardton Bay positions are reversed. Judged by percentage of plants per unit area, *Glyceria* flourishes best at K., III.; C.P., II. and III.; S.G., IV.; N.G., I. and II. As

a rule its roots go deeper as salinity increases, though it is sparse on waterlogged plots with high salinity; this may be due to poor aeration and to "sourness" of the dark subsoil. It, however, tolerates a wide range of pH., and low salinity: it was luxuriant at pH. 6.8, and it seems to grow well on inland lawns laid with sea turf. It grew excellently in pots out of doors exposed to ordinary rainfall. Grown in pots and watered with salt solutions of increasing strengths, the toleration of salt was greater than that of *Armeria* and *Glaux*.

Armeria maritima or *vulgaris* (Thrift, Sea Pink, Cushion Pink, &c.).—In contrast to *Glyceria*, this plant roots deeper with decreasing salinity, although on higher patches of merse sward with an inland facies, it is sparse and the roots are short, being probably choked by more robust rivals. It fares badly on low waterlogged plots with high salt content. In pots, when 4.42 per cent. of salt was in the soil, *Armeria* died, while *Glyceria* continued to flourish. (Total salts in sea water, 3.5.) It stands low salinity in gardens and on mountains up to 3800 feet in the Highlands.

Glaux maritima (Sea Milkwort, Black Saltwort).—*Glaux* seems to flourish best with high salinity, but a deep soft moist soil is as important a factor in producing good specimens. In a hollow of C.P. III., with the low salt percentage of 0.07, it had roots seven inches long, but the soil was soft when moist, powdery when dry. Like *Armeria*, it is choked on the *Leontodon* plot. In pots, it stood salt better than *Armeria* but not so well as *Glyceria*.

Plantago maritima (Sea Plantain).—Some of the factors controlling its growth agree with those for *Armeria*, but its condition is excellent in salt waterlogged ground, where *Armeria* presents a sorry appearance. It died, however, in pots when only 2.3 per cent. of salt was present. An interesting feature, worth further investigation, is the abundance of *Plantago* on S.G. IV., and its great scarcity on the next plot, S.G. III., though there is little difference in appearance, only a slight difference in salinity and exactly the same pH. This species occurs in hill burns of Perthshire up to 1800 feet.

Salicornia herbacea (Glasswort, Marsh Samphire).—At none of the four Nith traverses is it a pioneer; at South Glen-cable it appears among the pioneer *Glyceria* plants, but not in the front. The best specimens were found in a hollow of S.G. IV.; salt 0.33 per cent., pH. 7.8. It was not thriving at K. IV., waterlogged clay; salt 1.33 per cent., pH. 8.3.

Suaeda maritima (Seablite).—Not found as a pioneer on mud flats in any traverse. Fine plants occur alongside *Salicornia* in the hollow of S.G. IV.

Cochlearia officinalis (Scurvy-grass, Spoonwort).—This crucifer, though growing well under natural conditions in soil with a high salt content, died early when the soil in the pot contained only 2.3 per cent. of salt. It seems to prefer the deep soft mud on the steep banks of creeks, perhaps for shade, or perhaps it thus escapes being browsed by cattle. This plant or its sub-species, *montana*, is found in Dumfriesshire up to 2800 feet, and in the Highlands to 4000 feet. It is found far north in all arctic areas.

Aster Tripolium (Sea Starwort, Sharewort).—This composite appears to be better adapted than *Cochlearia* for growth in heavy waterlogged soils, but otherwise their requirements seem to be similar.

Spergularia marina (?) (*Buda* sp., *Lepigonum* sp.), Sandwort-Spurrey.—Almost confined to loose, deep, wet mud of high salinity. In pots, it was thriving and in bloom when most of the other halophytes were dying or dead. It showed no signs of succumbing to 4.42 per cent. of salt in the soil. The species of *Spergularia* are very variable.

Triglochin maritimum (Sea Arrow-grass).—Thrives best in heavy, salt waterlogged soils, and is not found on any of the higher better drained plots. It was thriving in a ditch containing 4.21 per cent. of salt.

Summary and Conclusion.

From the foregoing observations, determinations, and deductions, a picture of the history of the merse may be drawn.

(1) By silting, submarine shoals become mud flats exposed at low tide. These are inhabited by cockles, lobworms,

crustaceans, green algæ, and by a micro-fauna and -flora in teeming profusion, which by their exuviae and burrows help to consolidate the loose mud and quicksands. In the sheltered estuary of the Urr extensive banks are still at this stage, and the accumulation of shell sand on the beaches of little bays gives evidence of the profusion of cockles in the banks. The sheltered part of the Nith estuary is already filled with old-established merse at the final stages.

(2) Sedimentation gradually, but now less rapidly, raises the level till the flat is not covered by dead neaps and the green mantle of algæ becomes conspicuous, as again seen on the Urr along the line of mooring posts on Glen Isle bank opposite Kippford. Up to this stage consolidation has progressed as before; but now cockles will starve and lobworms be dwarfed. Their burrows, however, concreted with ferric oxide or otherwise, persist as pipes to fix the mud and aerate the soil. The crustaceans continue active in their work.

(3) *Salicornia* may now appear and maintain a grip where current and wave do not wash away the mobile mud. Being an annual plant of small size, its individual effect is neither great nor certain of recurrence in succeeding years; but a compact patch intercepts silt and flotsam of the tide; and on their death the stems and roots add to the soil humus, fibrous binding material and air-conducting pipes. Again one needs to quit the Nith to find a good example of this stage. Glen Isle bank provides one. Lobworms and crustaceans continue their subterranean work of fixing, mixing, and aerating the soil.

(4) When submergence is only by intermediate tides, *Glyceria* creeps down among the *Salicornia*, and chiefly by its stoloniferous habit proves itself a most efficient instrument in stabilising the merse. Its deal stolons, too, buried in accretions of fresh silt, provide more efficiently than *Salicornia*, humus, binding material and air conduits.

(5) *Armeria*, *Aster*, *Cochlearia*, *Plantago*, &c., get a footing when the mud is firm enough. Under the "closed" vegetation, worms and crustaceans cease to burrow; they remain in "pans" or under bare or partly clad hollows. Old

root-stocks of *Plantago*, *Armeria*, &c., stolons of *Glyceria*, and old burrows still act as air tubes for renewal of oxygen at every tide. Upward growth of the plants keeps pace with sedimentation and the browsing animals by cropping short the dense vegetation give the sward a lawn-like appearance. The soil is enriched and improved by the droppings of cattle and birds and in other ways already discussed. At this and all preceding stages the soil reaction is like that of the sea, distinctly alkaline.

(6) At this stage, when the level is such that only high spring tides cover it, *Salicornia*, *Suaeda*, and *Spergularia* are choked out, while *Glaux* and *Armeria* are curbed by more robust rivals. *Glyceria* is still dominant, but invaders from the land are appearing. The merse at this stage is in a labile state, seemingly slight variations of level, drainage, salinity, aeration, soil texture, ph., and probably other factors being associated with marked changes in the vegetation. At this stage, too, "pans" tend to enlarge their bounds to coalesce and form "composite pans." A suggested cause of this erosion of their margins is that between long intervals of water renewal in summer, evaporation concentrates the salt solution to a point which none of the merse plants can survive.

(7) When the merse level has been raised above all but storm spring tides, leaching by rain and seepage cause the clay to deflocculate and lose its porosity and friability. The consequent lack of aeration is apt to turn the soil "sour." Occasional submersion in salt water prevents colonisation by earthworms. In absence of artificial drainage and liming, the ground is liable to become a swamp, and if the climate is favourable, a peat moss. Great crops, however, are grown after lime and drainage.

KIRKCONNELL TRAVERSE.

(Plants and length of their roots in inches.)

PLOT I.		PLOT II.		PLOT III.		PLOT IV.		PLOT V.*	
Glyceria	... 10	Glyceria	... 10	Glyceria	... 15	Glyceria	... 15	Glyceria†	... 24
		Armeria	... 8	Armeria	... 18½	Armeria	... 3½	Armeria†	... 7½
		Plantago	Maritima	Plantago	Maritima	Plantago	Maritima	Plantago	Maritima
		Glaux	... 14½	Glaux	... 4½	Glaux	... 7	Glaux	... 7½
		Spargularia	... 15	Cochlearia	...	Spargularia	...	Leontodon	... 2½
					?	Salicornia	...	Juncus	... 3
						Triglochin	...	pressus	... 24
						Aster	...		...

† And other grasses
‡ With twisted roots

Salt %	.. 0.33	Salt %	... 0.38	Salt %	... 0.26	Salt %	... 1.33	Salt %	... 0.13
Loose mud of light colour		Soil as in I.		Firm mud, pulverises when dry.		Dark sodden sticky mud, which dries hard.		Mud which approximates to ordinary humus soil in colour and texture.	

* A small creek on landward edge of V. has Salinity 0.53 per cent. Triglochin grows well on its banks. A mossy bank on V., 50 yds. from the 25 ft. beach, and roughly parallel to it has Salinity 0.07, and in addition to mosses, bears plants like *Bellis perennis* and *Lotus corniculatus*. The steep sloping bank at the edge of the 25 ft. beach is occupied by trees and by ordinary plants, such as *Holcus lanatus*, *Lolium perenne*, *Ranunculus acris*, *Lotus corniculatus*, *Cerastium vulgatum*, *Carduus arvensis*, *Ulex Europaeus*, &c.

CROOKS POW TRAVERSE.

PLOT I.		PLOT II.		PLOT III.		PLOT IV.		CREEK.	
Glyceria	... 6	Glyceria	... 17	Glyceria	... 15	Glyceria*	... 20		
		Armeria	... 11½	Armeria	... 22	Armeria	... 10		
		Plantago	Maritima	Plantago	Maritima	Plantago	Coronopus		
		Glaux	... 5½	Glaux	... 6½	Glaux	... 10		
		Cochlearia	... 4	Cochlearia	... 4½		...		
		Aster	... 6½	Aster	... 7		...		
						Leontodon	...	Cochlearia	... 7
								Aster	... 7
						* And other grasses			

Salt %	... 0.09	Salt %	... 0.1	Salt %	... 0.11	Salt %	... 0.14	Salt %	... 0.11
4 in. of light brown mud covering firm blue mud. Upper mud pulverises finely when dry		As in I., but upper mud dries harder		Mud very firm. Upper mud dries like II.		Mud dries very hard		Mud dries hard	

SOUTH GLENCAPLE TRAVERSE.

PLOT I.		PLOT II.		PLOT III.		PLOT IV.		PLOT V.	
Glyceria	... 8	Glyceria	... 15	Glyceria	... 18	Glyceria	... 22½	—	—
—	—	Armeria	... 13	Armeria	... 9	Armeria	... 9½	—	—
—	—	Plantago	... 24	—	—	Plantago	... 13½	Plantago	... 9
—	—	—	—	Glaux	... 9	Glaux	... 6	—	—
—	—	Cochlearia	... 4	—	—	Cochlearia	... 3½	—	—
—	—	Aster	... 8½	Aster	... 9	Aster	... 4	—	—
Salicornia	... 4½	Salicornia	... 1½	Salicornia	... 2½	Salicornia	... 6	Triglochin	... 5½
—	—	Suaeda	... 3	Suaeda	... 3	—	—	—	—
—	—	Spergularia	... 12	—	—	Spergularia†	... 17	—	—
Salt % a	... 0.24	Salt % a	... 0.27	Salt % a	... 0.23	Salt % a	... 0.59	Salt % a	... 0.55
Salt % b	... 0.42	Salt % b	... 0.33	Salt % b	... 0.39	Salt % b	... 0.54	Salt % b	... 0.77
Mud loose and of light colour		Soil as in I.		Soil as in I. and II.		Mud dries hard		Mud very wet and sticky. It dries harder than IV.	

* In a hollow.

† On edge of a "pan."

‡ Specimen taken when tides diminishing after springs.

§ Specimen taken when tides increasing after neaps.

PLOT VI.—Seaward border of rushy patch near 25 ft. beach. Plants as in V. Soil water-logged. Mud dries very hard.

Salt per cent.—a 1.24; b 0.94.

PLOT VII.—Landward border of rushy patch contiguous to foot of 25 ft. beach-scars. Plants—*Juncus maritimus*; *J. articulatus*-lam-procarpus; *J. compressus*; *J. communis*; *Ranunculus flammula*; *Phragmites communis*; *Oenanthe* sp., &c. Soil gritty. Salt per cent., b 0.13.

NORTH GLENCAPLE TRAVERSE.

PLOT I.		PLOT II.		PLOT III.		DITCH IN III.		PLOT IV.	
Glyceria	6 to 16	Glyceria	... 16	Glyceria	... 16	—	—	Scabiosa succisa	...
—	—	Armeria	... 11	Armeria	16 to 30	—	—	Centaura nigra	...
—	—	Plantago	... 9	Plantago	... 19	—	—	Potentilla auserina	...
—	—	Glaux	... 7	Glaux	... 4	—	—	Ranunculus acris	...
Aster	... 5½	—	—	—	—	Aster	... 4	Carduus arvensis	...
—	—	Cochlearia	... 4	Plantago coro-	...	—	—	Holcus lanatus	...
—	—	Spergularia	... 5	nopus	... 4	—	—	Agropyrum repens	...
—	—	Triglochin	... 8	Agropyrum repens	...	Triglochin	...	Etc.	...
—	—	Salicornia	... 2	Lotus corniculatus	...	—	—	—	...
—	—	—	...	Trifolium repens	...	—	—	—	...
Salt %*	... 0.53	Salt %	... 0.56	Salt %*	... 0.07	Salt %*	... 4.21	Salt %*	... 0.1

* Samples for analysis taken on 18th August when tides were decreasing from springs.

Rainfall Records for the South-Western Counties for the Year 1925.

SUPPLIED BY THE METEOROLOGICAL OFFICE, EDINBURGH.

DUMFRIESSHIRE.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL
Ruthwell, Comlongon Castle ..	2.04	4.38	.74	3.34	3.63	.23	1.31	3.32	2.32	4.08	1.57	3.16	31.62
Dumfries, Orichton Royal Inst. ..	3.34	4.61	.73	4.19	4.75	.27	1.63	4.30	2.46	4.06	1.63	3.14	36.32
Amisfield, Glene ..	3.53	4.41	.82	4.11	5.57	.29	1.32	4.03	2.56	4.43	1.91	3.42	39.50
Moniaive, Glencrosh ..	5.63	6.29	1.38	6.40	6.79	.38	3.04	3.99	3.14	5.75	2.01	6.48	50.28
Durisdale, Maxwellton House ..	5.54	5.54	1.20	4.06	6.14	.38	2.22	4.12	2.35	5.52	2.01	4.69	43.87
Durisdale, Drumlanrig Gtchs. ..	5.66	5.33	1.21	5.62	6.55	.31	2.32	3.36	2.34	5.65	1.81	5.50	45.66
Dalton, Whitecroft ..	3.49	5.00	1.40	4.64	7.01	.38	2.11	6.17	3.42	4.41	1.96	4.14	43.13
" Kirkwood ..	3.67	4.96	1.24	4.53	7.01	.50	2.72	6.13	3.62	5.19	2.03	4.25	46.00
Ecclefechan, Burnfoot ..	3.50	5.35	1.09	4.10	6.99	.33	2.41	5.58	3.32	5.36	1.64	3.95	43.62
Lockerbie, Casdenilk ..	2.45	4.50	.80	4.10	6.45	.15	1.25	4.70	2.90	5.05	1.55	3.65	37.55
Lochnaben, Thornbank ..	3.78	5.26	1.11	4.99	5.61	.51	1.98	5.16	3.13	5.14	2.32	3.29	42.18
Canonbie, Byreburnfoot ..	5.00	6.25	1.75	4.75	7.75	.25	1.50	5.50	3.25	5.00	1.13	4.50	45.63
" Irvine House ..	5.01	6.76	1.34	5.67	7.30	.46	1.96	6.19	4.20	5.20	1.33	4.60	50.22
Lanholm, Broomholm ..	4.53	8.15	1.82	5.57	7.25	.37	1.87	6.36	4.29	5.16	1.34	4.55	51.36
" Drove Road ..	5.86	5.71	1.82	5.70	5.02	.58	2.23	6.83	4.69	4.58	1.64	5.21	55.92
" Ewes, Sandy Haugh ..	5.92	1.72	1.63	6.16	7.81	.91	2.70	6.12	4.59	5.35	1.80	5.55	56.21
Eskdalemuir Observatory ..	6.92	6.00	2.31	7.32	9.30	1.19	2.51	6.54	3.78	6.48	2.04	5.76	60.95

RAINFALL RECORDS FOR THE SOUTH-WESTERN COUNTIES 185

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL
WIGTOWN.													
Loch Ryan Lighthouse	2.80	4.57	.91	1.56	3.73	.36	1.95	1.97	3.44	3.48	1.38	1.37	27.52
Mull of Galloway	2.02	2.58	.75	2.05	2.18	.11	.55	1.96	2.93	2.93	1.15	3.03	21.38
Logan House	3.26	4.03	1.18	2.75	3.93	.39	2.73	2.03	4.09	3.66	2.57	4.07	35.29
Killeanring Lighthouse	1.30	4.37	.48	4.31	3.05	.55	1.10	2.35	3.15	3.95	1.35	3.91	29.87
Corsewall	4.36	4.17	1.93	3.06	6.35	.60	1.50	2.81	6.43	4.86	3.80	4.07	43.94
Port-William (Monreith)	3.20	4.78	1.29	3.16	4.30	.43	2.57	3.20	3.27	3.88	2.47	4.57	37.03
Stoneykirk (Ardwell House)	3.08	4.14	1.38	2.88	3.70	.42	2.51	1.79	4.66	3.49	2.57	4.08	34.70
Glenluce (Ladyburn)	4.34	5.78	1.86	4.07	4.80	.53	3.25	3.25	4.53	4.98	2.93	4.84	44.70
New Luce (Public School)	2.76	3.83	1.25	2.60	4.73	.36	2.12	3.76	3.28	3.75	2.63	4.60	35.67
Whithorn (Physgill)	2.78	4.22	1.21	2.68	5.14	.35	2.24	4.01	3.68	4.09	2.64	4.70	37.64
" (Glasserton)	4.64	5.49	1.92	4.48	5.95	.59	2.96	3.16	3.93	5.76	2.27	5.59	46.49
Kirkcubbin (Craigshaw)	3.13	4.75	1.04	3.32	4.81	.39	1.95	3.58	2.66	4.18	1.41	4.47	35.59
KIRKCUDBRIGHTSHIRE.													
Borgue (Knockbren)	4.50	5.22	1.43	3.51	4.40	.19	2.29	4.54	3.40	4.76	1.75	4.44	40.43
Palnure (Bargaly)	2.75	3.83	1.05	2.65	5.56	.21	1.43	3.19	2.20	4.58	2.31	3.64	33.10
Little Ross Lighthouse	5.21	6.10	1.38	5.97	6.84	.23	1.88	6.00	3.12	7.07	1.83	5.05	50.08
Mossdale (Hensol)	6.85	8.32	1.71	6.60	6.69	.26	3.16	4.82	3.94	7.61	1.85	6.87	58.08
New-Galloway (Glenlee Park)	6.22	7.79	1.50	6.08	6.79	.25	3.24	4.72	3.82	7.63	1.88	5.57	55.49
Dalry (Glendaroch)	6.57	7.01	.89	4.28	5.71	.30	1.50	4.40	3.98	6.71	1.63	4.18	47.16
" (Garroch)	7.56	10.48	2.14	7.99	7.03	.49	2.15	4.00	4.10	7.63	1.89	5.57	61.03
" (Forrest Lodge)	9.90	10.83	3.48	8.20	8.73	.47	2.66	4.70	5.59	9.78	2.47	8.48	75.59
Carphairn (Shiel)	7.44	7.04	1.50	6.98	7.90	.23	2.88	4.15	4.26	7.74	2.59	6.13	58.84
Auchencraigh (Knockgray)	4.45	6.18	1.47	4.66	7.50	.36	2.09	5.07	3.75	5.67	2.32	4.91	48.34
Dalbeattie (-outhwick House)	3.94	5.51	1.42	5.07	5.18	.29	1.83	4.93	3.25	5.53	2.39	4.46	47.29
" (Kirkcubbin)	4.67	6.04	1.22	5.08	6.63	.28	2.37	5.00	3.95	4.99	1.79	3.87	43.88
" (Drumstinchall)	4.21	4.95	1.14	5.08	7.14	.27	2.30	4.49	2.60	5.01	2.68	3.82	43.30
" (Richorn Wood)	4.42	5.73	.78	4.76	6.35	.17	2.49	4.94	3.31	5.99	1.95	4.78	48.96
Kirkpatrick-Durham (Glenlair)	4.44	7.00	1.17	4.96	7.18	.23	2.36	5.51	3.12	6.00	2.08	4.47	47.02
Dumfries (Cargen)	4.44	6.11	1.14	4.84	6.21	.22	2.04	6.53	2.91	5.36	2.21	3.85	47.84
Lochnut (Dumfries W. W.)	4.06	6.13	1.02	5.68	6.59	.32	2.13	6.36	2.64	5.36	2.21	3.85	47.84
Dumfries (Linduden House)	4.06	5.03	1.00	4.89	5.21	.35	2.19	5.04	2.93	5.31	1.72	3.74	40.35
" (Jardington)	4.10	5.36	.98	4.55	5.12	.34	2.26	5.22	2.28	5.00	1.75	3.74	40.88

FIELD MEETINGS.

27th MAY, 1926.

Lochwood and Kinnelhead.

Some thirty took part in this meeting and, favoured with a beautiful day, the hawthorns and brooms at their fullest blossoming, the wide prospects of Upper Annandale seen while climbing Beattock Hill at their best, and the moorlands beyond, windswept and sunsplashed, it will long remain in the memories of the participants as one of the most delightful, as it was one of the most venturesome, excursions that have been made by the Society.

The first objective was Lochwood Tower, where Mr R. C. Reid read a paper on its history and described it and its adjacent Mote hill. Thereafter Mr William Waugh, Palaceknowe, acted as guide and took the company to "The Castle" at Kinnelhead. This ruinous structure displays unique features, the natural rock formation having been adapted and utilised by the builders. The ruins stand at the debouchement of a narrow cleuch on the north-west shoulder of Peat Hill and, apparently, have been enclosed by a dyke making a considerable rectangular courtyard in which there is a natural spring. Particularly on the west side of the cleuch the rocks rise sharply, their natural formation tending to be huge shelving blocks, and these have been ingeniously utilised both in situ and by removal for the structure. The principal remains, which consist of three chambers, are the outermost from the cleuch, though the most massive are the innermost, some of the stones being over a ton in weight, and in which there are no traces of mortar building. The west side of the valley forms the western wall of the whole structure, that of the two inner chambers being sheer blocks of rock, while that of the outer has a built face where necessary to correct the natural inequalities of the line. A transverse rock formation has been utilised for the construction of the outer chamber, a vaulted roof having been built across from rockface to rockface. There has been at least one

storey above this vault. The other chambers are more fragmentary, only portions of the transverse walls, a few feet in height, remaining. These make the central chamber the broadest and the inner chamber the narrowest of the three. There is a built opening from the central to the inner, but none to the outer chamber. The whole eastern wall has gone. The entire structure measures 50 feet by 23 feet 2 inches. The walls are four feet thick. The outer vaulted chamber looks somewhat like a chapel, and this suggestion is heightened by a small, slightly incised cross ($10\frac{1}{2}$ inches high by $3\frac{1}{4}$ across the arms) being cut on the Southern rock face of the central chamber, but it is hardly likely that it is other than a comparatively recent carving. The structure does not conform to the usual Border Tower type of defence, and if it was such it had an original and ingenious architect.

On the return journey the company visited Beattock Hill, not only to see the fort there, but for the magnificent view, in which Mr Waugh pointed out the main features.

The company were generously entertained to tea at Burrance by Mr and Mrs Ferguson, to whom a vote of thanks was conveyed on the motion of Mr T. A. Halliday.

Lochwood Tower.

By R. C. REID, Esq.

History of Lochwood.

Unlike many other sites in our district, the interest of Lochwood lies not so much in its few visible remains as in its historical associations and picturesque surroundings. Of the four ancient and ennobled families of Dumfriesshire, three of them—the Maxwells, the Douglasses, and the Murrays—have each handed down to us either a modernised historic residence or else a noble ruin, well kept and comparatively intact. Only the family of Johnstone, with achievements just as great, a lineage just as ancient, and a history just as romantic, have allowed the ancient home of their forebears to fall to pieces in neglect and decay. Forsaken finally in 1710 and probably then dismantled, it must

have been pillaged for building material, and time, weather and negligence have completed the havoc. Yet this crumbling ruin has a story, and the site on which it stands can take us back to the dawn of Scottish History. The family that owns it takes its name from the parish in which Lochwood stands. But the name is far older than the parish, because it must have been a placename before a parish ever existed here. The derivation is obvious—the town or steading of John. Sir William Fraser, in his magnificent *Annandale Book*, suggests that the first known forebear of the family was one John without a surname, who must have received, about 1170, a grant of Lochwood from the first Bruce, Lord of Annandale, so that this John gave his name to the lands of John's toun. This certainly is an attractive theory and one not easy to refute. Yet, in accepting it, some hesitation may be justifiable. In the first place, the John of 1170 can hardly be aught but a Norman. He attests or is a party to important documents. His son Gilbert was known first as Gilbert, son of John, and later, about 1214, as Sir Gilbert de Jonistune. Both father and son attest documents in company with other important men of their day who are known to have been Normans. John must therefore have been a Norman. Now, the Normans invented surnames, and when (as in the majority of cases) these were territorial designations they were almost always taken from the lands they held. They did not give their name *to* lands, but derived that surname *from* their lands. Thus, a Norman called Ivo was granted by Bruce the lands of Kirkpatrick, and thereafter figures as Ivo de Kirkpatrick. Instances could be multiplied. Further, the derivation of Johnston is Anglian, which suggests that some Angle in the centuries prior to the Norman advent may have settled here, hence the placename, in which case it was the merest chance that a Norman John in a later age should derive his surname from the Anglian placename.

A Norman Mote.

But it does not do, even for an antiquary, to dogmatise on such matters. The Angle—if he ever existed—has left no trace behind him. Fortunately, it is far otherwise with

the Norman. As soon as he took possession his first thought was to make sure of his own security, and in conformity with the practice of his race he erected a Norman Mote, which still dominates this site. Not content with the invariable ditch, rampart and palisade about its foot and another palisade on its summit, he devised a second rampart and palisade half way up its steep sides and an unusual entrance on the south-east, where an intruder would be enfiladed on all sides. The Mote itself is apparently a natural mound artificially adapted. The level summit is certainly artificial. On the top he built his wooden tower. That, of course, disappeared six centuries ago. But we know what it must have looked like, for at that very time Arnold Count of Guisnes was building the Mote of Ardres in Picardy, and as his descendant owned the barony of Durisdeer in Dumfriesshire, it is therefore all the more interesting to learn from his contemporary chronicler* how it was built. "Arnold built on the mote a wooden house. The first storey was on the surface of the ground, where was the cellar, the granary and domestic utensils. In the storey above was the common living room of the residents, the great chamber where the Lord and his wife slept. In the inner part of it was a certain private room where . . . they used to have a fire. In the upper storey were garret rooms, the sons sleeping on the one side, the daughters on the other."

Very similar must have been the wooden tower on Lochwood Mote. The retainers dwelt outside the Mote in an enclosed bailey, which cannot now be defined. Here it must be presumed the descendants of the Norman John dwelt till in the middle of the fifteenth century, when it was supplanted by a stone tower.

But all that time, certainly down to 1413, though the owners of Lochwood figure in documents and chronicles, yet no consecutive account can be written of the family. It is impossible to form a pedigree based on sufficient evidence. A Johnston certainly followed Wallace, but we cannot be sure he owned Lochwood. What happened to Lochwood when

* Lambert of Ardres, writing circa 1194.

Dumfriesshire was overrun by the English after the battle of Duplin (1332), or whilst Annandale was an English province under the overlordship of the Percies—we cannot tell, but we know that its owner fought doughtily and successfully on the Water of Solway in 1378 and was a Warden of the Western March.* Thereafter the family, whose descent can clearly be traced from this Warden, were in every fight. His son Adam was at the successful battle of Lochmabenstane, 1448. His grandson fought at Arkinholme in 1455, and figured at the siege of Threave Castle that year, and as late as 1484 performed feats of valour at the running fight that ended on Kirtle's bank.

It was probably in the life of this Laird, John Johnstoun of that Ilk (1454-93), that the Tower of Lochwood was built.

Annandale an English Province.

It may be asked, where did his predecessors live? Sir William Fraser, who could not recognise this Mote when he saw it and whose knowledge of mediæval architecture was but slight, assumes that they dwelt at Lochwood, though he was frankly puzzled to find no earlier documentary reference to it than 1513.† The author of the *History of the Johnstones* takes a very contrary view. She places the Johnstone home in Eskdale, and asserts, without offering any proof, that in 1334 Lochwood was possessed by the Carliles. Yet a few pages further on she declares, equally without proof, that it belonged to Carruthers of Mouswald. It would be an easy but thankless task, by quoting similar conflicting statements from this work, to disprove the trustworthiness of its author; yet there is something in her views which makes one hesitate to accept Sir William Fraser's assumption.

The truth of the matter is that from 1332 to 1383 Annandale was an English province. The Johnstones clung to the Scottish connection as far as is known, and must have had to retire from Annandale. The Carlyles, on the other hand, are known to have accepted the English domination, and may have been rewarded with the Johnstone lands. Even after

* Wyntoun, Bk. II., p. 311.

† He accepts the family tradition of a fourteenth century origin.

the capture of Lochmaben Castle (1383) by Douglas, conditions in Annandale were chaotic. Though he had taken and destroyed the castle Douglas did not even become Lord of Annandale till 1409. Thereafter there must have been some semblance of order. Yet as late as 1486 there was litigation between Carlyle and Johnston concerning the lands of Locherwoode.* Fraser, indeed, says that Lochwood is referred to as the residence of John Johnstone in 1476, though he does not give his authority. This at least is in keeping with what its architecture suggests—a mid-fifteenth century date. It will be asked—How do we know that? The answer is to be found in the fact that the tower had no entrance on the ground floor—a definite arrangement common in the fifteenth but unusual in the sixteenth century. The tower, which follows the main features of a Border tower, is “L” shaped, with a vaulted basement. The basement was divided into two parts, beneath one of which is a dungeon, a cheerful pit measuring 21 feet by 5½. Communication between basement and upper floors was by a newel stair in the short wing. There is nothing to indicate where the entrance was. It must have been on the first floor, probably at the newel stair.

History of the Tower.

Originally approached by a wooden ladder, it must later have had a stone stair ascent. This tower, standing in the corner of a courtyard, was the original stone stronghold of the Johnstones. At a later date outbuildings were erected inside the courtyard on the eastern side, the whole enceinte forming a barnekin. The tower has had a chequered history in keeping with the turbulent career of its owners. It was captured by the English in 1547 in circumstances which are already well known. But its description must be referred to—“a fair large tower with a barnekin, hall, kitchen and stables all within the barnekin”—one can identify it all still. The tower was captured more by accident than calculated ruse. Before dawn a dozen men slipped over the barnekin

* The reference may be to Locharwoods, near Comlongon, which certainly was Carlyle property.

wall and occupied the outbuildings, securing the women there. At dawn a woman in the tower opened the iron yett and wooden outer door of the tower to call in the others. The ambush rushed forward and seized the wooden door. The woman in her fright had not closed the yett, and the tower was won. Within the English found it well stocked with salted beef, malt, barley, oatmeal, butter and cheese.

The English held it till shortly before the Laird was released from his English prison in 1550. Before departure they burnt it, whilst the Laird's brother, Johnstone of Warnphray, aided and abetted them—for which he had to pay dearly afterwards. Johnstone valued his destroyed plenishings at £1500 Scots—perhaps an exaggerated figure—and lost 1000 head of nowt and three flocks of sheep. But the tower was soon restored, only to be surrendered to the Regent Murray in 1569. In 1585 it was burnt again by the Maxwells, the conflagration including the family jewels and charter chest.* Eight years later Johnstone had his revenge at Dryfesands, and the burnt and blackened tower of Lochwood, once more repaired, was grimly decorated with the head and right arm of the slain Lord Maxwell affixed to its walls.

Thereafter the tower of Lochwood has a more peaceful story. Thither in April, 1608, must have been brought the corpse of its murdered chieftain to be buried at Johnstone Kirk.

It must not be thought that Lochwood was the only residence of the family. They had several other towers, such as Newbie, where the later ennobled members of the family were in frequent residence. But Lochwood was still maintained as their principal seat. Here Sarah Countess of Wigtown made her will in April, 1628. Here in 1640 James Lord Johnstone of Lochwood, fearing the gathering storm of Kirk versus King, also made his testament, though he was to live for thirteen more years. To this period can be assigned what is undoubtedly the lay-out of a garden on the west of the tower. In the centre of it is a curious mound on which grow four aged gean trees. It has been surrounded

* Some doubt may be expressed as to this, for the estate titles are intact back to 1509.

by a ditch, and has all the appearance of a miniature mote. It will be recalled that this Society noticed a similar mound in Logan gardens. Perhaps this may have been a fancy of the designers of old-world gardens. Lochwood was still inhabited in 1693, for that October William Earl of Annandale, in a letter from there, mentions that he had been in residence for two months.* It was accidentally burnt in 1710,† and must have been abandoned.

Such has been the story of Lochwood as a site. It is really inseparable from the stirring and romantic annals of the family who have owned it so long—annals well known and bulking largely in local history—to which these remarks are but a small contribution for a better understanding of this site.

Johnstone of Kinnelhead.

By R. C. REID, Esq.

It is not often that one ventures to express views antagonistic to the Historical Monuments Commission, but in the case of Kinnelhead even the Commission, in favouring an ecclesiastical origin, speaks in uncertain tones. This cross, though of a design familiar to the fourteenth and fifteenth centuries,‡ may well be the handiwork of modern times. Indeed, the shepherd informs me that his summer lodger had cleaned it up with a penknife—perhaps adding thereby a small feature not present in the cross as figured by the Commission. If this cross is disregarded, then I think we have here remains in many respects identical with what we saw at Lochwood, but more ruinous and more megalithic in appearance. There is nothing at Lochwood to compare with the enormous slabs of stone work which we see here. On the other hand, we have at both places a vaulted basement—of peculiar and most unusual length at Kinnelhead—placed at a corner of a rectangular courtyard, round the interior of which are the remains of buildings.

* Raehills Papers, p. 61 (*Hist. MSS. Com.*).

† *Annandale Book*, Vol. I., ccxxxiv. *The New Statistical Account* says it was finally forsaken in 1725, not mentioning a fire.

‡ *C. and W. A. and H. Soc. Trans.*, N.S., VII., 166.

At Lochwood we described those features as a peel tower with barnekin surround containing outbuildings, and I can see no justification for describing Kinnelhead in any other terms. That, of course, is disregarding the cross. If the cross be taken into serious consideration we have as a possible alternative a church or ecclesiastical structure unknown to history, having a barrel vaulted roof with a suspicion of a superstructure or upper storey, to which, having in view the surrounding features, the Commission can supply no analogue.

Johnstone of Kinnelhead.

Whatever may be thought of the ruins at Kinnelhead, it seems most probable that they were occupied at the close of the sixteenth century by a branch of the Johnstone family. The principal difficulty in tracing the various hands through which these lands passed is caused by the fact that they did not all lie in one parish or barony. Part of them might have lain in the barony of Torthorwald, for in 1529 it is mentioned as part of a £42 land belonging to the Lords Carlyle.* This part, which was probably called Wester Kinnelhead, was life-rented by Dame Elizabeth Carlile, who assigned her life-rent of Cogries, Swynefute, Kinnelhead, etc., in 1612 to Robert Johnstone of Raecleuch.†

It is recorded, too, that John Johnstone in Glenkill, whose position in the pedigree of the clan has not been definitely assigned, renounced in favour of his chief in May, 1568, his lands of Kinnelhead and Holmshaw.‡

Another part of Kinnelhead lay in the extinct parish of Drumgrie, and was therefore held by the family of Charteris as lords of the barony of Amisfield. Yet another fragment belonged to Hamilton of Ellerschaw. All this we learn from proceedings taken by John Charteris of Amisfield to eject the tenants in 1608.§ The tenants were Andro Johnstone and his uncle, David Johnstone, in Kinnelhead. Andro is described as grandson and heir to the late Andro

* *R.M.S.*, 1513-16, 868, along with Cogries and Holmesshaw.

† *Reg. of Deeds*, vol. 292.

‡ *Annandale Book*, I., lxvi.

§ *Acts and Decrees*, vol. 228.

Johnstone, "called Mariounbanks" (Marjorybanks), and both uncle and nephew were descended from Gavin Johnstone in the Kirkton of Kirkpatrick-Juxta, ancestor of the Beirholm family.* In the absence of decisive proof the elder Andrew may be identified with a son of Gavin in Kirkton who bore that name, and of his descendants his son, David Johnstone in Kinnelhead, was by far the best known. David's holding in Kinnelhead can only have been that of a "kindlie tenant," a form of tenure in those days held by the whole family, hence his nephew Andro's interest.

In his tenancy David must have flourished. He is not known to have been a burghess of any burgh, yet he seems to have carried on an active business as a merchant as a very lucrative adjunct to his prosperity as a farmer. The Register of Deeds is full of records of his financial dealings.† In 1597 he had a huge sheep deal with his "cousin," James Johnstone of Brackensyde, who gave him in return a bond for £2407.‡ That David should deal in sheep is not surprising in view of the altitude of Kinnelhead, but it is remarkable to find him horse dealing in blood stock. Yet in 1602 he sold to William Carmichael of Pedden a gray horse for the huge sum of 300 merks—or approximately £100 Scots.§ Now we know what was the current price of horseflesh at that time, for the Crown had just been replenishing the Royal stables. Of all the horses bought by the King the best price was £60—"ane chestnut nagg for ye Prince, £45." Royal coach horses cost £20 apiece, a horse presented by the King to the Lord Advocate cost £23, whilst a nag for a page only £11. Even a "gray stone ambling nagg" bought by the King as a present for the royal house of Spain, only cost the King £22.|| David's horse must therefore have been something exceptional, and we can only conclude that it must have been sold for racing purposes. It is difficult to believe that David can have bred blood stock at this remote altitude.

* Adams, *Douglas of Morton*, p. 272 *et sequa*.

† See Vols. 160, 168, 170, and 181.

‡ *Reg. of Deeds*, vol. 143.

§ *Reg. of Deeds*, vol. 87.

|| *Household Accounts*, 1604.

The horse may, of course, have been a lucky purchase, and perhaps David may have been what we would now term an habitu   of the Turf. But, perchance, there is a simpler explanation; for in 1612 one Robert Somervall brought an action against David Johnstone, son of the late Andro Johnstone of Kirkton, called "David in Kinnelfield," for the "theftuous spoliation of ane black meir" from the lands of Cragoburne on 17 August, 1610.* So David, in spite of his prosperity as farmer, dealer and merchant, could never escape his Johnstone blood. Indeed, only the year before (1611) he was prosecuting other members of that clan for stealing his cattle.† That same year he acquired for 4000 merks from his cousin, Gavin Johnstone, burgess of Edinburgh,‡ the sheep lands of Dryfeheid, and took a seven years' tack of Pedwane and Glengonner from Robert Earl of Lothian for the huge yearly rent of £750.§ Sheep rearing was clearly a thriving occupation at that date, for that same year, in spite of the above outlays, he was able to lend Dame Margaret Scott, Lady Johnstone and Applegarth, £2000.||

David Johnstone was dead by 9th November, 1612, when his executors began to take over his estate and put things in order.** This must have proved a big task from the number of entries recorded in the *Register of Deeds*, but was readily dealt with by the practised hands of his cousin, Archibald Johnstone, merchant in Edinburgh, and his son James (of the Warrieston family). David left several sons, of whom Samuel Johnstone seems to have been the eldest. The latter came of age in 1625,†† and the following year gave a discharge to his father's executors, "being now 22 years of age."‡‡ Little is known of him save that in 1627 he parted

* *Acts and Decrees*, vol. 266.

† *Ibid.*, vol. 262.

‡ Son of James Johnstone of Brackensyde (*Reg. of Deeds*, vol. 184, 29th June, 1611).

§ *Reg. of Deeds*, vol. 182, 4th March, 1611.

|| *Ibid.*, vol. 198, 25th July, 1612.

** *Ibid.*, vol. 203 *et sequa*.

†† *Ibid.*, vol. 385.

‡‡ *Ibid.*, vol. 388.

with the Dryfeheid lands to Joseph Johnstone, son of the executor Archibald.*

In addition to Samuel, David had three natural sons, James, who in 1611 gave a bond to an Edinburgh burgess, and David Johnstone in Broomhills, who with Thomas Johnstone, the other natural son, witnessed it.† It is also almost certain that there was another son, William Johnstone, though he is not described as son of David. Both William and Thomas met violent deaths, William being slain in 1619 by William Johnstone of Kellobank and his two sons. His daughter Jean at once sought justice. The case came before the Justice Eyre on 20th June, 1620, when Jean withdrew from the pursuit, perhaps because adequate compensation was offered. But on behalf of the Crown the case was adjourned to the next Justice Eyre. The "assisters of the persute" were Thomas Johnstone of Beirholm, then the head of the family, James Johnstone of Erschag, and Robert Johnstone, callit of Mossop, whose place in the family pedigree has not yet been definitely ascertained.‡ He was probably a brother of David.

Thomas met an equally tragic fate on 30th December, 1618, at the hands of Hew Johnstone, apparent of Newton, though William Johnstone of Kellobank seems to have had a hand as well in the slaughter. The murder never came to the official cognisance of the Justice Eyre, for the families concerned, probably at the instigation of the Chief, came to a mutual arrangement. The document was drawn up at Lochwood on 13th April, 1620, Hugh Johnstone agreeing to pay £1000 Scots to the widow, Margaret Armstrong, and her children, "in name of kinbute assythement and full satisfactioun for the cruel and unnatural slaughter of Thomas Johnstone in Kinnelheid." In return letters of slains were issued by Thomas Johnstone of Beirholm on behalf of the widow in favour of Newton, William Johnstone of Kellobanks alone

* *Acts and Decrees*, vol. 450, p. 211, and *Gen. Reg. Sas.*, vol. 23.

† *Reg. of Deeds*, vol. 198, 10th September, 1612.

‡ *Pitcairn*, I., 489.

being excepted. On the other hand, Andro Johnstone of Marjorybanks was excepted on the side of the pursuers.*

This last unusual exception must have been dictated by the fact that Andro, too, had pled guilty of murder, having slain Robert Johnstone of Bigorties, a notorious ruffian who may well have deserved his end, but who unfortunately had left a widow and a whole crowd of bairns. The relict naturally raised an outcry, and at the moment Andro was under a cloud and probably in hiding. That December (1618), however, he got over the difficulty and dried the widow's tears by paying 300 merks by way of assythemment.† This settlement had not been effected at the time of the murder of Thomas of Kinnelheid, and Andro therefore, being still a murderer at large, could scarcely have been a party to a legal document, and so was specifically excepted until he had satisfied the very lenient requirements of early seventeenth century law in Scotland.

It may be observed that all these murders were by Johnstones of Johnstones and settlement was effected by the mediation of the Chief. Had the murdered men not been Johnstones it is improbable that the widows would have received any compensation unless they were supported by some very potent influences. But the episodes display a deplorable condition of society, and may well give rise to the exclamation—how these Johnstones loved one another!

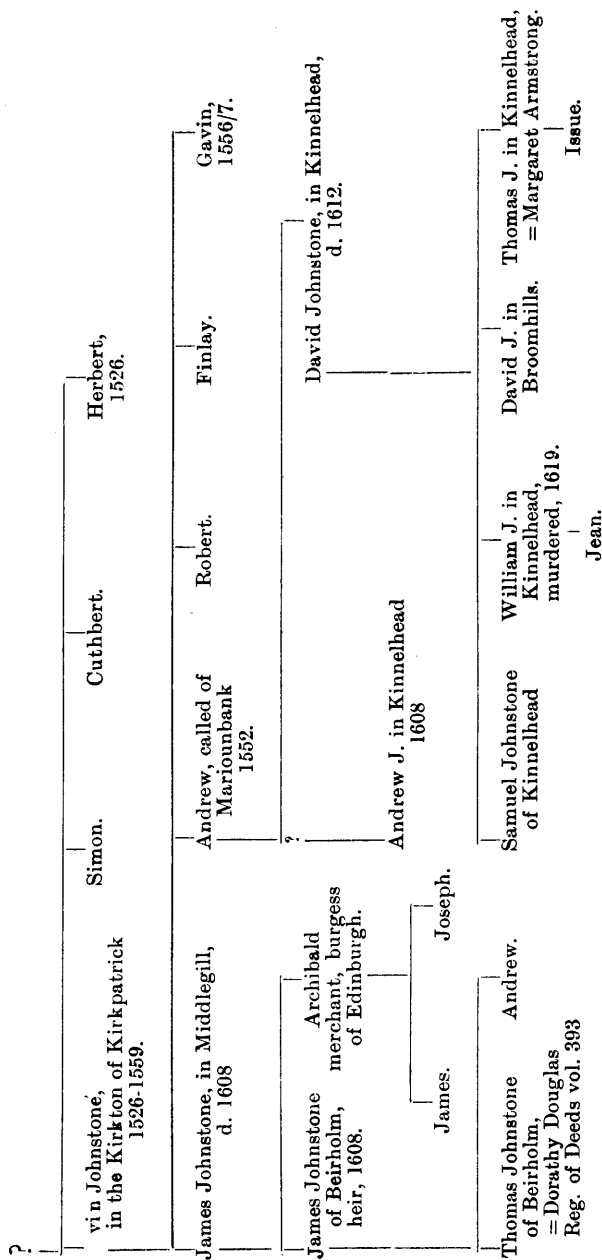
The family cannot long have retained Kinnelhead. Samuel may have died early, for Thomas Johnstone of Beirholm, the head of the family, seems to have got possession, from whom it was acquired by the first Earl of Annandale.‡ It was then described as Easter Kinnelheid.

* *Reg. of Deeds*, vol. 347, 10th October, 1623. The letters were issued by Beirholm, Andrew his brother, and James Johnstone of Eirshag.

† *Reg. of Deeds*, vol. 328, 14th October, 1622. The widow was Janet Johnstone, and the children, Bessie, Janet, Marion, and Grizzel. James Johnstone of that Ilk was a witness.

‡ *Annandale Book*, I., ccviii.

Johnstone of Kirkton, Beirholm and Kinnelhead.



17th JUNE, 1926.

Borgue and Girthon.

Over fifty members drawn from Dumfries and various parts of the Stewartry assembled at Ashfield, Twynholm, for this meeting. The first point of interest visited was the Mote of Borland of Borgue, where the Secretary dealt generally with the origin and purpose of such structures.

Barmagachen Mote and Farm.

A similar erection, the Mote of Barmagachen, was next visited, and Mr R. C. Reid pointed out an exceptional feature which differentiates it from the others—a small trench running round the edge of the summit, which seemed to indicate a double palisade. If so it was a unique feature. He also dealt with the adjacent farm building of Barmagachen. When we first hear of it the property is an outlying part of the Barony of Craichlaw in Wigtownshire, belonging to the heiresses named Keith, one of whom, Margaret, married a John Mure in 1459. It remained in the Mure family until 1511, when it was sold to William M'Clellane of Bomby, forebear of the Lords Kirkcudbright. In the transaction a tower (turris) is mentioned which does not now exist, unless it is incorporated in the present house. Bomby granted the lands to his nephew, Thomas M'Clellane of Barmagachin, the last of whose descendants died in 1737, when the property passed in marriage to the Lockharts.

The Borg.

The Borg at Castle Haven was the next stopping place, and Mr W. A. F. Hepburn, Education Officer for the Stewartry, lucidly described its salient features and in which respects it resembled and differed from the brochs in the north and west of Scotland. The Borg possessed distinctive features, and while it was said that this was the home of a sea-roving people and the name was Norse, he was inclined to the belief that it was of Celtic origin from its resemblance to certain structures in Ireland.

In the discussion that followed Mr R. C. Reid emphasised the differences between a broch, such as Moussa,

and this structure. A broch, which was a structure peculiar to Scotland, was always built on a single definite design. It was (1) circular; (2) bottle shaped with a definite batter; (3) was dry stone built; (4) was invariably proportioned within a few feet of a definite diameter—30 feet; (5) had only one entrance, narrow and low; (6) its inter-mural chambers in several tiers connected with the interior courtyard by stepping-stones, stairs, or sometimes by passages within the walls; (7) it was situated either in a defensive position in a cultivated strath often at a ford crossing, or else on a cliff or promontory as a place of refuge; (8) finally, its design, its situation and surroundings clearly indicate that it was built by the inhabitants of the district mainly as a defence against an enemy coming from the sea.

This structure, on the other hand, is not circular, has no batter, has a diameter greatly in excess of the largest known broch,* has apparently only one storey, and has two entrances, one double the width of the usual broch entrance and of unknown height. Only in its structure of undressed, uncemented stones, its intra-mural chambers and perhaps its outer walls, does it comply with the design of a broch. Indeed, its second entrance, or rather exit to the sea, definitely stamps it as a structure with a distinctly different object. It has been built as a defence against an enemy—not coming from the sea but from the land. The narrow rock-girt haven at the sea exit with its fine sandy bottom lends added significance. It was constructed by a seafaring people—a people who had reason to fear the inhabitants of this part of Gallo-way—strangers who were so familiar with the structure of a broch as to embody many of its features in this building, and who arranged a convenient bolt hole in case of a hurried exit. Historically only two people can qualify to answer this hypothesis, so far as our knowledge goes—the Irish Scots and the Norse. The Irish Scots had no such structures in Ireland, and though their Scottish home was in Argyll, no such structures are known there. The innumerable remains of their strongholds, such as Dunadd in Argyll, bear no resem-

* The broch of Edinshall, Berwickshire.

blance to this structure. Though there are strong grounds for thinking that their influence was predominant in Galloway in the eighth century,* yet there are no valid grounds for thinking that they would introduce here a type of stronghold not known in Argyll or Ireland. They may have known what a broch looked like, but there is no evidence to show that they ever occupied or used one. They were a seafaring people, for about the year 400 Niall of the Nine Hostages was ravaging Britain and Gaul, being slain at the mouth of the Loire.† But there is nothing known to associate him with brochs.

On the other hand, there is definite historical data to show that the brochs, though long anterior to the Norse, were at times used by them. The *Orkneyinga Saga* states that in A.D. 1155 Erlend, a Norseman, ran off with the widow of the Earl of Athol to the broch of Moussa, where his honeymoon was rudely interrupted by her son, Harald Earl of Orkney, who besieged them there in vain, and the *Saga* of Egil Skalagrímson records a Norse occupation of the same broch 250 years earlier.‡ Norse burials of the Pagan Norse period, terminating in the eleventh century, have been found in ruined brochs in Caithness, in which county no less than 150 brochs have been identified.§ It is also known from the *Orkneyinga Saga* that in 1158 Earl Harald every summer went to the Caithness forests to hunt reindeer, and excavations have brought to light the antlers of reindeers in brochs there.|| So there is abundant historical proof that the Norse were familiar with brochs. It may be pointed out that nothing akin to a broch is known in Norway, and that there is no reason for thinking that the Norse ever built one anywhere.

But this cannot finally dispose of an hypothesis of a

* *D. and G. Transactions*, 1923-4, p. 131 *et sequa*.

† *Celtic Scotland*, III., 115.

‡ *The Orkneyinga Saga* (Edin., 1873), p. exi., and ch. 92.

§ These burials are usually in the mound, created by a destruction of a broch and the consequent growth of vegetation. Such a burial implies ignorance of the true meaning of the mound.

|| At Kintradwell (*Orkneyinga Saga*, Edin., 1873, p. 182).

Norse origin for this site. Like all adventurers in foreign climes, the Norse, whilst adhering to their ancestral methods, had to modify them to meet the requirements of their new surroundings. In Norway they always used wood for their structures because it was abundant and their stone was very bad for building. Even their churches were wooden. But when they colonised Greenland they found no wood but plenty good stone. In consequence they built there churches of stone which, though deserted centuries ago, can still be seen. If the Norse were responsible for this site they may well have found the immediate vicinity just as devoid of timber as it is to-day, and have had to use the stone material so ready to hand. In erecting a structure of such novel materials they would almost necessarily have adopted important features of the best stone-built defences known to them, of which class of defensive work the broch was pre-eminent, as Erlend had found in 1155.*

The theory of a Norse origin, or for that matter of any origin, must presume that this site has been reconstructed at the excavation exactly as it originally stood, of which we have no certainty. If it can be attributed to the Norse, it must belong to the second of the three periods of Norse settlement, which are divided into (1) the period of flying raids in summer, (2) the period when the raiders began to winter in Scotland and required a strong defence for their "long ships" on the shore, and (3) the time when they began to peacefully penetrate as sheep farmers towards the uplands. But whatever theory a visit to Castle Haven may evoke, there is not enough evidence for a definite conclusion.

Mr T. A. Halliday and the Secretary continued the discussion, which terminated with a vote of thanks to Mr Hepburn.

Plunton Castle and Girthon Kirk were visited, and the papers which follow were read. The company concluded a long and fruitful day with tea at the Angel Hotel, Gatehouse.

* The broch, of course, was called by the Norse Moseyarborg—the borg of Mousa. Tradition stoutly asserts that the structure at Castlehaven has always been called "The Borg." It stands in Borgue parish—itsself a Norse placename.

Plunton Castle.

By R. C. REID, Esq.

The Castle of Plunton, or as it used to be called, Plunton-Lennox, is a sixteenth century structure, following the usual architectural design with which we are familiar in a Border Tower. But it has some external points of interest which differentiate it from other towers of its class. Its site is suggestive of an earlier structure. Situated near the end of a triangular spit of land that is surrounded on either side by wet, marshy land, it is cut off on the north side from the rest of the ridge on which it stands by a deep and wide ravine which may well be artificial. It must therefore have been a place of strength. Indeed, the arrangement is so reminiscent of fortified sites of earlier dates, such as Buittle and Enoch, both thirteenth century, or Morton, fifteenth century, that it is difficult to believe that the ravine on the north is a natural feature.* If there was an earlier structure at Plunton no vestiges of it remain, nor is there any record of it. If the ravine was artificial, it was probably once spanned by a bridge, of which there are no indications. All that can be said is that the ravine does not look natural, and that if artificial it is a very unusual adjunct to a sixteenth century tower, which relied on its own strength and barnkin surround. That there was once such a barnkin is indicated by the foundations to the south and west, where may have been the stables and outhouses. A courtyard undoubtedly lay to the west, for where it joined the tower at its north-west angle are still to be seen protruding from this building the "tusks" that bound the wall to the tower. The courtyard or barnkin wall must have been nine feet high.

The tower is of the usual L shape, with the newel staircase in the short wing. The vaulted basement has been divided into two compartments, one opening from the stair-foot, the other opening direct into the courtyard—a somewhat unusual feature, which, however, in no way detracted from

* The reference to a "castrum" by the mill of Pluntoun may perhaps denote this site. But it belonged to the M'Ghies in 1512 (*R.M.S.*, 1424/1513, 3776).

the defensive strength of the tower as it merely gave access to an isolated vaulted room. The first floor opened direct from the stair and formed a single large room with fireplace in the west wall. It must have served as hall and dining-room. The floor above, which was carried on joists, was divided into two rooms, each with a fireplace in the gable. Above that again was the attic floor with three corner doors leading to angle turrets, which must have added a dignity and importance to the edifice. The walls are nowhere more than 3 feet 6 inches thick. To the east of the tower is a level space once enclosed which may have been the pleasure garden.

Who built this tower, and what is known of the history of the lands of Pluntoun? To the first of these questions an answer can be given with some degree of certainty, but the second one involves many points of difficulty. The lands of Pluntoun consisted of a substantial holding of 18 merklands lying in the parish of Kirkandrews, which was incorporated finally in Borgue in 1657. From the time of Bannockburn to the fall of the Douglasses in 1450 is the darkest period in the history of Galloway. Practically no light filters through to illuminate the story of Kirkandrews at that time. But with the fall of the Douglasses Galloway at once reverted to the Crown, whose officials took possession of it and the results of whose administration—in part at least—remain to us. Pluntoun then emerges from darkness and it is possible to follow its history. The original estate of 18 merklands appears to have been divided into two moieties or halves each of nine merklands — known as Pluntoun-Makkee and King's-Pluntoun, the former because it belonged to the M'Kie or M'Ghie family,* the latter because it reverted into the hands

* M'Kerlie states, with every degree of probability, that this M'Gie family was related to the M'Ghies of Balmaghie. They first appear in 1484 when William Makgee of Pluntoun resigned Pluntoun Makgee, Craglunzeane, and Barley, with the mills of Pluntoun and Barley, for new infeftment in favour of (1) himself and heirs male, (2) his brother Gilbert and his heirs male, (3) Alexander (? another brother), etc., (4) his brother Andrew, etc., (5) Gilbert, son of above William (*R.M.S.*, 1424/1513, 1595). In 1498 Gilbert Makgill (sic)

of the Crown on the forfeiture of the Douglasses. It is with the latter moiety only which we are concerned to-day.

Directly after the forfeiture this moiety consisting of a nine merklands appears as in the hands of a family named Shaw. By 1456 the proprietor was dead, and three years later John Shaw, probably his son, was infeft by the Crown.* His composition to the Crown, which was substantial, was remitted by the King to the Queen.† Shaw, however, had only been infeft to make a valid title, for he at once resigned his half of Pluntoun as well as half of the lands of Kirkandrews, which the King united into the barony of Kirkandrews and granted to the Queen.‡ The Queen, of course, did not take actual possession. Instead she feued it to William Lord Monypenny, a Court favourite and Royal Ambassador. On his death his widow repudiated the lease, which was taken over by Adam Mure, who was Chamberlain of Galloway. In 1483 Pluntoun was let to Mr William Lennox of Calie, thus commencing the long association of that family with this site.||

The family of Lennox is one of the very few who can substantiate the proud claim of descent from the ancient Celtic nobility of Scotland. That nobility consisted of the seven earls and the lesser thanage, and was speedily supplanted by the Norman baronage. Duncan, eighth and last of the old

had sasine (*Ex. R.*, xi., 462), being succeeded by James Makke in 1505 (*Ex. R.*, xii., 462), the last named in 1511 alienated the lands without Crown consent, and they were therefore granted to the Rector of Dalry (*R.M.S.*, 1424/1513, 3605). He, however, recovered them, and transferred them by sale to Michael Makgarmory. The lands are described as the nine merkland of Pluntoun and the one merkland of Blakmark. The Mill of Pluntoun was excepted as being held by William M'Clellane of Bomby (*ibid.*, 3776). In 1521 Makgarmory sold the above lands to Thomas M'Clelland of Bomby (*R.M.S.*, 1513/46, 213), whose descendant, Robert Lord Kirkeudbright, in 1635 sold the nine merklands of Pluntoun, called Pluntoun M'Ghie, in the parish of Kirkandrews, to John, eldest son of the late Andrew Carsane, merchant, burgess of Kirkeudbright (*R.M.S.*, 1634/-51, 351).

* *Ex. R.*, vi., 546.

† *Ibid.*, 547.

‡ *R.M.S.*, 1424/1513, 694.

§ *Ex. R.*, ix., 583, and x., 125.

|| *Ex. R.*, ix., 591.

Celtic Earls of Lennox, was sent to the scaffold in 1425, not, as far as we know, for any treason or crime, but solely because his daughter had married Murdoch Duke of Albany, who had incurred James I.'s hatred, and who shared the Earl's fate. Duncan left only three daughters but several natural sons, the youngest of whom, Donald, is believed to have married Elizabeth Stewart, heiress of Sir John Stewart of Girthon, and thereafter figured as Donald Lennox of Cally. Round the person of this Donald has raged a century old battle, for he was the keystone of the claim to the Lennox peerage made by his heir male, William Lennox of Woodhead, in 1768 and 1813. Donald, of course, had nothing to do with Pluntoun, such as his descendant, Mr William Lennox of Cally, had. The latter was a lawyer with a University degree, embued with the true spirit of the merchant adventurer, and a decided weakness for litigation. Indeed, almost all we know of him is derived from the meagre records of the Acts of the Lords of Session of his day. He even pursued one debtor into France, where judgment was given against him by James Disome, licentiate in Law, acting for the great Admiral of France, at the marble table in the Palace in Paris. Some of his financial affairs with foreigners led to litigation as to whether the amount should be paid in French francs, French crowns, or Scots money. The proceedings show that French francs "were worth in Scots money penny for penny," but that a crown of gold was worth 13/- Scots. So you will see that the problem of calculating foreign exchange rates was just as difficult in 1493 as to-day. The currency of both nations, owing to constant wars, was much debased.*

All his speculations did not, however, turn out successfully, and he was just as often the defendant as the pursuer. But in spite of that he may be said to have laid the financial foundations of his family. About 1480 he began to acquire lands near Callie. He took short Crown leases of Knockaffrick and Kerewaloch,† followed by Cluny in 1505.‡ That year he must also have secured a lease of Pluntoun and at

* *A.D.C.*, p. 202, and *Acta Auditorum*, p. 181.

† *Ex. R.*, ix., 581.

‡ *Ex. R.*, xiii., 602.

once entered into one of his periods of financial depression. For in 1510 he was five years in arrears with the fairs, and was distrained on for 200 merks, his lands of Barley and its mill being appraised and sold to Adam Earl of Bothwell, seven years being allowed for redemption.* It is doubtful if he was allowed to retain his lease of Pluntoun—at any rate in 1534 it was feued by the Crown to William Ramsay of Balmain,† whose son David in 1553 sold the nine merkland of Pluntoun to Thomas Lennox in Pluntoun for 540 merks ‡.

Thomas Lennox, who thus acquired King's Pluntoun and may well have been a grandson of the litigious Mr William Lennox of Calie,§ is described as in Pluntoun. Prior to purchase he had therefore been a tenant there—not a tenant of the Castle, which can scarcely have existed then, but an agricultural tenant living in what we would think was little better than a wooden shack. He was succeeded by his son, Andrew, who married in 1575 his distant cousin, Janet, daughter of William Lennox of Cally,|| third of that name.¶ This marriage must have greatly improved Andrew's position, socially and financially, and to him this tower must be attributed. There is no record of it prior to his ownership. On the death of his wife, he obtained a new charter of confirmation in 1597/8 entailing his estate—the nine merklands of Pluntoun with the mansion house (*cum mansione*) to be held on the same conditions as Ramsay of Balmain had held the moiety of Kirkandrews, of which Pluntoun was a part. Thereafter the estate was known as Pluntoun Lennox.

So between the dates 1575 and 1597 we must place the date of this building—a date which agrees with the expressed opinion of an architectural expert—"From the style of the building and of the details remaining, its date cannot be placed earlier than the middle of the sixteenth century."**

* *R.M.S.*, 1424/1513, 3453.

† *R.M.S.*, 1513/46, 1380.

‡ *R.M.S.*, 1546/80, 857. The "*cuniculariis ejusdem*" were excepted. Does this mean that there had been mining operations?

§ M'Kerlie, iii., 198.

|| *R.M.S.*, 1546/80, 2422. M'Kerlie, quoting an unknown source, makes Andrew a natural son.

¶ M'Kerlie, iii., 198.

** *Hist. Monuments Commission's Report*, p. 40.

Girthon Kirk.

By R. C. REID, Esq.

This ruin is of architectural interest because it shows quite clearly the transition from Roman to Presbyterian—the adaptation of a pre-Reformation church to post-Reformation usage. It has been suggested* that because of its design and general resemblance to the church at Anwoth, they must both date from the same period—1627. That is the date inscribed over the door of Anwoth, of which there is no architectural evidence that it is pre-Reformation. But at Girthon we have indisputable evidence that the edifice was in use before the Reformation. For we have here a piscina of remarkable design which experts assign to the sixteenth century. A simple oblong in plan, the church had the altar in old days at the eastern end. It was probably entered by the central doorway on the south side, but obviously the reconstructor has been at work, and it is difficult to speak with certainty. At any rate the doors with rounded outer arch heads in the eastern and western walls are of later construction. No good Catholic would have a door at the east end. These must be Post-Reformation alterations, probably made when a gallery was placed at the east end. This gallery was entered by an outside staircase at the eastern end of the north wall through a plain square-headed doorway. This staircase has now disappeared, though indications of it can still be seen against the wall. Where the gallery was erected the eastern gable must have been reconstructed, the usual eastern window disappearing in favour of two windows with semi-circular exterior arch heads and segmental arches on the interior, to provide light to the gallery.

Such was the transformation that took place in this church after the Reformation. We do not know who founded the church or presented it to the Bishops of Galloway, who were the patrons of the living. The name of only one vicar has come down to us—Schir Robert Mure, who witnessed a deed in 1574,† and only one episode in connec-

* *Hist. Monuments Commission*, p. 20.

† *R.M.S.*, 1546/80, 2393.

tion with it is known. In 1508 William Lennox, younger of Calie, had to find surety for oppression to Thomas M'Ghie, whom he had assaulted—or in the language of the criminal proceedings, “coming upon him in warlike manner.” He had even besieged him within this church in 1504—though that does not seem to have been regarded so seriously as the burning of his woods and the poaching of his salmon in the Fleet in prohibited times.†

Girthon Kirk and Parish.

By Rev. JOHN STEWART, Minister of Girthon.

About two miles south of Gatehouse, either by way of Cally Avenue, the Temple and Barrhill, or up the Kirkcudbright road down past the Palace Yard of Enrick and along the Long Stretch, on a small eminence in the Kirkyard, stand grim and gaunt the four roofless walls of the Old Kirk of Girthon. That it was a Roman Catholic place of worship is certain, but when or for whom it was built history is silent. In J. S. Fleming's *Cardoness Castle* mention is made that on the 23rd of June, 1480, the Vicar of Cally, Maister William Lennox, had a lawsuit with James M'Culloch, and that the court ordered the latter “to pay 6 cwt. of bere (barley) of the measure of Galloway for wrongous occupation of the lands of Marybute and Maryton, and to be published as a redding of marches.” This William Lennox was also the Laird of Cally, and old Cally House, now in ruins near the western and lower end of the lake, is supposed to have been built during his time for his greater comfort and convenience. Is it not likely, then, that during his vicarship he gave orders to build a new kirk for his better ordering of public worship and increased accommodation of the parishioners? There is a tradition that this was the third kirk which was erected on this site. This is likely enough. No trace or record of an ancient kirk in any other part of the parish has been found. There was a kirk in 1300 A.D. In that year Edward the First of England invaded Scotland and made an

† Pitcairn, i., 54.

incursion into Galloway. During his several days' sojourn in the parish he worshipped there and offered his oblation of 7s 6d at the altar of Girthon to win the favour of the saints on behalf of his great and difficult undertaking. He also fined the inhabitants of the toun of Flete for deficient weights, and Henry for unfair practices at the mill of the Laick. The site of the mill of the Laick can still be pointed out, being near Garneymire, on the Boreland-Rainton road, but where was the toun of Flete? Gatehouse is comparatively modern—it had only one house in 1760—and there is no knowledge or tradition that a former town existed on its site. For centuries the great proportion of the people resided in the lower quarters of the parish, and the town may very well have been where the present clachan of Girthon is, taking the suffix Flete as being the distinguishing natural phenomenon for the purpose of location. If so, the kirk associated in history with the Hammer of Scotland would be near at hand and on the knoll in the centre of the old kirkyard of Girthon. Probably it was the second erected on the site, displacing a kirk built when David the First of Scotland (died 1153), the sore saint to the Crown, divided the country into parishes and lairds felt it to be their duty to provide religious ordinances for the betterment of the people who dwelt on their land and over whom it was given them to rule.

The "Killing Times."

Girthon Old Kirk possesses some interesting features. In addition to the architectural features described by Mr Reid, there is the large tomb in which the former Lairds of Cally and Broughton, the Lennoxes and Murrays, were laid to rest. The Lennoxes were a numerous and powerful family in Galloway towards the end of the sixteenth century and for the greater part of the seventeenth century. In addition to the family at Cally, there were Lennoxes at Drumwall, Drumruck, Tannifad, Disdow, Plunton, etc., all having a common ancestry. In Rutherford's time many of them came under his influence and were strong Covenant men. During the "killing time" one of those, Robert of

Irelandton, and formerly of Drumruck, was shot for conscience's sake and adherence to the Covenants, National and Solemn, by Grier of Lag, at a conventicle on Kirkconnel Moor. His remains were conveyed to the family burying ground at Girthon Kirk and interred there. The entrance to the tomb is from the outside of the kirk and is marked by a small stone with a carved shield in the east wall with its central round-headed doorway surmounted by a corresponding window on either side. Near the entrance and against the wall there is a slab $2\frac{1}{2}$ feet high, 2 feet wide, and 3 inches thick to his memory. It bears the following inscription in capital letters: "Within this tomb lyes the corps of Robert Lennox, some time in Irelandtoun, who was shot to death by Grier of Lag in the paroch of Tounkland for his adherence to Scotland's Reformation Covenants National and Solemn League, 1685." The slab is the work of Robert Paterson, better known to the world at large as "Old Mortality." He belonged to a severe and devoted Presbyterian sect called the Cameronians, and from 1758 to 1801 he wandered all over the country, especially Ayrshire, Dumfriesshire and Galloway, erecting and repairing monuments or stones to the memory of the martyred Covenanters.

In the south wall on the outside of the kirk there is a slab to the memory of Mr Patrick Johnstone, who was ordained to the parish in 1699, the preacher on the occasion being Mr Telfer, of Rerrick ghost fame. The stone is a fine piece of workmanship, but is marred by a human head being coloured black. I have learned since I came to Girthon that this was the work of some sacrilegious persons in the parish. This Patrick Johnstone was the founder of the Carnsalloch Johnstones of Dumfries. About 300 yards further down the parish are the ruins of an old farmhouse called Lagganorie. As if the duties on the farm were not enough for the inmates they played the parts of "mine hosts" to the numerous couples who came from far and near to seek the services of Mr John M'Naught, the minister of Girthon, in order to marry. Indeed, the manse in his time was a veritable Gretna Green. Proclamations were dispensed with, a few questions were put to the contracting parties, papers were signed, and the

company adjourned to Lagganorie, where the honeymoon was spent. For this breach of the law of the Church and other things, Mr M'Naught was deposed from the ministry, in spite of the efforts of Walter Scott, a young advocate, afterwards Sir Walter Scott, to save him. There is a throughstone by the side of the church commemorating Mr Robert Gordon, who was minister of Girthon in the early years of the nineteenth century. Girthon parish is a parish of great length, being 16 miles long, and extending to near the royal burgh of New-Galloway. Its breadth is from two to seven miles. A minister had some physical exercise to do to visit his parishioners, but Mr Gordon was equal to the occasion. He was a great walker, and to sustain himself in doing this work he carried his flask and soaked his bread in whisky. In this respect he was of great assistance to one of his parishioners, Thomas Murray, the author of *The Literary History of Galloway*, and friend of Thomas Carlyle. Walking from Edinburgh University to Girthon was some undertaking, especially when funds were low. When Thomas Murray reached Moffat he only possessed 1s 8d. It is on record that he bargained in a third-rate inn for refreshment and a bed for a shilling, and that he went out and bought a twopenny loaf and got a glass of spirits, with which he soaked it for provender for the next day's journey. The church ceased to be a place of worship in 1817. By this year Gatehouse had a population of nearly 2000 inhabitants, owing to cotton mills and other industries being established in the town; and to suit the convenience of the majority of the members of the congregation a new church was built there. The first minister was Mr Robert Jeffrey, who was a powerful preacher, but notwithstanding got into trouble with the Laird of Cally because he rebuked him for shooting across his lands on the Fast Day. One of his best sermons was delivered at Auchencloy, in the northern end of the parish, to the memory of the Covenanters who were shot for their adherence to the Scottish Covenants. One day when there was a vacancy at Crossmichael parish and he had to supply the pulpit, he prayed for Queen Caroline, as was his custom, but the Kirk Session objected. However, he

appealed to the Presbytery, and the Session of Crossmichael had to erase the record from their minutes. Another minister of Girthon was Mr George Murray, who afterwards became the laird of Troquain, and also minister of Balmaclellan. He was a great lover of nature, and his poems appeal to every lover of Galloway. "Helen, the Welsh Harper," appeals particularly to everyone. Train, the Galloway antiquary, communicated the facts on which this poem is based to Sir Walter Scott, in view of a new edition of "Redgauntlet." The story of Helen is romantic and tragic. She was in Egypt with her husband, who was a soldier, and they were drafted to Ireland after his service was completed. Living there for some years and making their living by playing the harp, making hose, baskets, etc., they had the natural desire to return to their native Wales, and crossed over to Scotland from Ireland to return thither. Their journey lay through Galloway, and when passing through they sought shelter at Twynholm Mill. The shelter was refused, and they sought refuge in a gravel pit near by. A heavy storm of thunder and lightning came on, and man, woman, and children were all buried alive, the poor ass which accompanied their wanderings being left alone to tell the tale. A tomb to their memory is erected in Twynholm parish, the funds for which were provided by local ministers. I could continue the story of Girthon parish much longer, but I feel that the time allotted to me is exhausted.

On the motion of Mr Shirley, a hearty vote of thanks was accorded to Mr Stewart, and a similar compliment was paid to Mr Reid for his various papers.

24th JULY, 1926.

North-West Cumberland and Holm Cultram.

This excursion proved not only enjoyable but of exceptional interest. The whole of the district through which the visitors travelled revealed two features, the impression left in both cases by invading nations, those of imperial Rome and

of Scotland. The Roman occupation of this area, which was defended on the north by the line of the wall terminating at Bowness, reveals itself to-day not only by the vestiges of the wall and adjacent camps, but in almost every ancient building, ecclesiastical or domestic, and even in the dykes of the fields, in the shape of dressed Roman stones, while altars and other inscribed and carved fragments are frequently found. The Scottish influence, on the other hand, is to be seen in the fortified churches and mansion-houses and at Holm Cultram, a Scottish foundation which possessed most of the district.

Despite the inclement weather, the party numbered over forty, and its members received more consideration than those who remained at home, experiencing only one shower after the weather cleared about eleven o'clock. The first stop was made at Burgh-by-Sands, where the chief object of interest is the fortified church. The Rev. H. Frankland gave a short account of its history and explained its architectural features. The church was originally Norman, and has a fine Norman doorway partially restored. Reconstructed for defensive purposes, it consisted of two strongly built towers at either end of a short nave. One of these towers is not noticeable externally, but contains a vestry on the first floor. The other remains much in the condition in which it was erected. Both of these towers—and this is a feature of these fortified churches—are entered by a narrow doorway, originally defended by iron gates, from the nave itself, while a "squint" is provided so that any intruder into the church might be seen from above. About one and a half miles from Burgh-by-Sands on the marsh is a monument to Edward I., "the Hammer of the Scots," who died there. His body lay for one night at Burgh-by-Sands before being taken on its long journey to Westminster.

The next stoppage was at Dykesfield, where Mr G. W. Shirley pointed out that it was there the Vallum of the Roman Wall ended, a little behind the house that is now occupied by Bishop M'Innes, the Bishop in Jerusalem of the Anglian Order. Burgh marsh was afterwards crossed and a brief stop made at Drumburgh. The site of a Roman fort, and

an example of a fortified mansion-house, Drumburgh Castle, were seen. This latter building originated about 1307, when "licence to crenellate" was given to Richard le Broun, one of the same family well known in Galloway as the Browns of Carsluith and continuing to Abbot Gilbert Brown, the last abbot of Sweetheart. Nothing of this original building, however, remains, and little, if any, of the pretty pile erected by Thomas Lord Dacre, who died in 1525. This was described in 1539 as "a house of convenience and strength, neither castle nor strength." Probably what is seen to-day is the same, rebuilt by J. Lowther in 1681. A Roman altar decorates the handsome outside doorway of the first floor.

Proceeding to Bowness, the company stopped at a field within a mile or so of that town, where a portion of the Roman Wall is exceptionally prominent, and where an adjacent drain has been cut through the wall, exposing some of the chiselled stones which faced it on either side. Here Mr Shirley gave a brief account of the main features of the Roman Wall, and of the history of that remarkable series of engineering works. At Bowness the company were met by the rector, Mr Mitton, and his wife, and were shown the church and given a description of its principal features and a short account of its history. The beautiful Norman font attracted much attention, as did the two bells, one of which is dated 1616. They are alleged to have been stolen from Middlebie and Dalton. This church also is to a certain extent fortified; at least it is heavily buttressed.

At Newton Arlosh the company were met by the Rev. W. Baxter, M.A., vicar of Holm Cultram, whose keen interest and pleasure in showing the archæological features of his district delighted the visitors. Newton Arlosh also possesses a remarkable fortified church, consisting of a strong tower and a short nave. This tower again was entered by a narrow gateway from the nave, which may also have been defended by a portcullis, as was suggested by the Rev. Mr Bell, incumbent of Newton Arlosh. The church fell into ruins and remained as such for about 200 years, being reconstructed and added to for modern convenience by an extension of its northern side shortly before the war. From

Newton Arlosh Mr Baxter conducted the party to Raby Cote, a delightful example of an ancient farm steading adapted to a modern residence. A lengthy plinth bears an inscription, set in upside down, which was taken from Holm Cultram. Several other handsome carved stones can be seen set into the walls. Raby Cote, Mr Baxter suggested, was an offshoot following more extensive cultivation of the land from one of the "Granges" of Holm Cultram, the site of which he pointed out. This "grange" belonged to a family connected with one of the abbots, Abbot Chamber, of Holm Cultram. Four monuments in the porch at Holm Cultram commemorate members of the Raby Cote family.

Holm Cultram, the principal objective of the excursion, was now reached, and although only one-third of the nave of the church remains, aisles, transepts, tower, and choir having all disappeared, it was agreed that it was well worth the visit. Holm Cultram was a Scottish foundation from Melrose in the days when Cumberland was still a part of Scotland. It was thus it came to possess so many lands in that kingdom, particularly of interest to the visitors being those in Colvend and Kirkgunzeon. Within a porch erected originally in 1507 by Abbot Chamber, is a magnificent Norman doorway. Six of the original nine arches of the nave remain, and support a fine timbered roof, which Mr Baxter said was the best collection of original timber work in the North of England. Mr Baxter pointed out and explained the significance of certain excavations that had been made within recent years. These determined the position of the tower and extent of the sacrarium. The tower itself fell in 1600, and the chancel was destroyed by an accidental fire in 1604. In 1703 the church had nine bays, but alterations in the eighteenth century included the renewal of the north and south aisles and the shortening of the church to its present dimensions. Faintly only from the present remains can be imagined the original extent and magnificence of Holm Cultram. Mr Baxter described the various monumental remains housed in the porch, including among them a stone slab said to have covered the grave of the Earl of Carrick, father of Robert the Bruce, who was certainly

buried there. There is also a fine portion of the memorial tomb of the Abbot Chamber, in which he is depicted seated, fully robed, with mitre on his head and pastoral staff in his hand, while on each side of him are monks with missals, chanting their service of praise. The guide also pointed out an ancient pair of bells, the smaller of which is dated 1465. This bell escaped the general spoliation of Church goods in 1538, and again the confiscation of 1553, the fall of the tower in 1600, and the fire in 1604, a remarkable history. Before leaving the village the visitors were privileged to see through a portion of the domestic building, the infirmary of the monastery. This contained the residence of the last abbot, Gawain Borrodaile, who is said, in 1538, to have resided in the "seekman's" house.

After tea at Wigton, the company proceeded to the Roman Camp at Old Carlisle. This may possibly be the unidentified camp known as Petrianæ. It presents an elevated site on a river bank, fortified by a series of deep ditches. It has not been ploughed nor excavated, and its hummocky condition gives promise of a rich field for future excavation. Here Mr R. C. Reid read a paper in which he had gathered all the information available on the camp. It was suggested that as Carlisle proper lay for long ruinous and was restored, it was from here that the new inhabitants were drawn, and thus the name of Old Carlisle was ascribed to it.

An enjoyable drive home completed an interesting and instructive day's outing.

11TH SEPTEMBER, 1926.

Kirkmabreck Parish.

This field meeting, suggested by Mr Adam Birrell, Creetown, was probably the best attended that the society has held, about 85 people gathering from Dumfries, Creetown, Newton-Stewart, Castle-Douglas, Kirkcudbright, and Stranraer. At Kirkcubright House, Mr Reid read the following paper :—

Kirkdale Parish and the Norman Intrusion.

By R. C. REID, Esq.

Kirkclaugh Cross.

You have been brought to the Kirkclaugh Cross because it is a convenient spot at which to address you on the early history of the now extinct parish of Kirkdale. The cross itself is figured in Mr W. G. Collingwood's valuable paper on the *Early Crosses of Galloway*, and is ascribed by that authority to the early 12th century. Its front bears an incised cross of primitive design, the outline of which has clearly been drawn with a ruler. At one place at the head of the shaft the ruler has obviously slipped before the artist has recovered control of his cutting implement. The lower half of the front of the slab is covered with a wretched imitation of interlaced work—so debased as to be scarcely recognisable when compared with the fine Anglian work which the artist was striving to copy—and with what Mr Collingwood describes as an apology for cable-edging. An even cruder cross is incised on the back. It is clear from the workmanship that the worker was familiar with his models—the Anglian crosses at Whithorn and the surrounding district—but was incapable of giving effect to it. Once the Anglian suzerainty of Galloway was gone, the art which it had brought with it disappeared. By the eleventh century Galloway was a dependency of Argyll, and half-a-century later was a Norse dominion of the Earls of Orkney. Such being the political conditions, we need not be surprised that the fine sculpturing of the Anglian school of Whithorn became a lost art, capable only of debased imitations like this cross.

Kirkclaugh Mote.

This stone has not stood here always. It was removed in January, 1898, from within a few yards of the outer rampart of the Kirkclaugh Mote, where an inscribed stone now stands commemorating the event. Now I want to dwell briefly on the significance of the association of this cross and the mote. The mote, we know, is a Norman structure, a place of residence and defence for a family of that nation who had been

encouraged to settle here by the native Lords of Galloway. They were a warrior race, and in Galloway must have been regarded as foreigners and favourites. Their advent must have been viewed by the natives with suspicion and a veiled hostility that later was to break out into bloody retaliation. Consequently they took no risks; and their residences were therefore constructed according to the best methods of defence known to them. Elsewhere in places where they may not have been viewed with such hostility they may have modified their mote and preferred structures which we call moated granges. But in Galloway we only have the Norman mote.

The Norman Intrusion.

These Normans brought with them all the wonderful characteristics of their race. These they applied to the conditions as they found them in Scotland, with immediate results. Nowhere did their great organising powers have greater scope. They found most chaotic conditions and established order. To a land which can have had little or no system of government they gave feudalism which, though capable of being an instrument of grinding tyranny, may well have been the only effective method of restoring and maintaining law and order. To a country devoid of a system of taxation, equitable or otherwise, they gave the doubtful blessing of a system of centralised taxation, the principles of which remain substantially unchanged to the present day.

The Normans and the Celtic Church.

Nor did their organising powers omit the Church. They found the old Celtic Church fallen into degenerate ways. The fervour for religion so renowned in the days of its early fame had grown cold; discipline had been relaxed. Civil war and raiding Norse had destroyed all sense of security, arrested the growth of the Christian spirit, slain many of its exponents and destroyed the churches. Church property had been annexed to lay hands, and the degeneration so clearly depicted in the workmanship of this cross must have strangled the very lifeblood of the

Church itself. King Malcolm's grandfather was Abbot of Dunkeld, so was Malcolm's son, a mere boy. Malcolm himself could not read or write, and was one of the most ruthless, untamed and primevally ferocious characters known to Scottish history. Marriage of clergy was a recognised custom. The Church had no hierarchy, and was without a vestige of organisation. Parishes in the modern sense did not exist, and such rural churches as there were cannot have developed far beyond the condition of primitive missions.* It was not without a struggle, without bitter re-creation and open hostility that the Normans organised the remnants of the Celtic Church. Exactly by what steps this was effected we do not know, but of the method by which parishes came into existence all over the land we have some inkling.

Parishes and Parish Churches.

The Normans were a devout people. That may seem a strange saying, since we know what atrocities they were capable of. But the religious standard of the twelfth century

* The early Celtic Church was purely monastic. Professor Watson writes (*per. lit.*, 19/8/26):—"Its activities emanated from monasteries, which were absolutely independent of each other, except in so far as a daughter monastery owed obedience to the parent monastery. They had no fixed 'sphere of influence.' The Abbot, say of Iona, could send his monks to Galloway, or Aberdeenshire, if he thought fit. When such a monk proposed to found a church in new territory, he had to get leave of the Lord of the district, which was accompanied by a grant of land made after the formula, 'To God and to Colum Cille [as permanent head of Iona] and [possibly] to the Abbot Adamnan and to the cleric on the spot (say, Cormac).' The church founded on that land would be known as Colum Cille's or Adamnan's or as Cormac's church. That is to say, the designation of the church was not official, but popular. Such a church would not be served by one cleric. There would be a little community or *familia*, a miniature monastery, not necessarily small, however. There was no organised ecclesiastical district with limits like a modern parish, any more than the parent monastery had limits like a Roman Bishopric. When later dioceses were delimited on the change from the monastic Celtic system, the bishop would proceed to divide his diocese into parishes." It was a great change, and in Galloway cannot have occurred before the somewhat shadowy Bishopric of Gilla-Aldan, 1133-1154.

was totally different from our own. Christianity had but little influence upon daily conduct. Nevertheless they were devout according to their lights. Each of them had a private chapel served by a priest, who acted as confessor. In their castles of stone these chapels were within the walls. But in the earlier motes, where space was very limited and often cramped, the chapel must have been just outside the fosse. Of necessity it was consecrated ground, so there the Norman would bury his dead. This stone is therefore a memorial erected by the early Norman occupants of the mote to one of their dead, and it must have stood beside their chapel. The chapel, like the buildings on the mote, must have been of wood, for when this cross was removed the ground within a radius of some fifteen feet around it was dug in vain for further finds. Once firmly established here the Norman, egged on no doubt by his priest, and without doubt influenced by the reforming zeal of Queen Margaret at the Court, followed the practice already adopted in England. His chapel was sufficient for his needs, but not for all the natives and inhabitants of his lordship. So in due course the chapel was enlarged or rebuilt, formally dedicated in honour of some saint, and the labours of the private confessor were increased so as to include the spiritual welfare and needs of the whole lordship.* Thus the modern parish

* Once parishes were delimited, any further development of them, any foundation that might tend to imperil them as fixed ecclesiastical units was vigorously opposed by the mediæval church. An instance occurred in 1161-5 in the parish of Wetheral (Cumberland). Within the parish was the manor of Corkeby, owned by the de Corkeby family, who established a chapel primarily for themselves within the curtilage of Corkeby. Apparently the inhabitants of the manor for convenience began to make as much use of it as their regular church. In other words, it was developing into an unauthorised parish church. This was not only irregular, but, what was worse, a financial loss to the monastery, who did not receive the offerings, worth 13d each Sunday, or the oblation of the Lord of the Manor on Festivals. The monks had to take strong ecclesiastical measures to enforce these rights, and their agreement with the Lord of the Manor, giving them charge of the key of the chapel and safeguarding their pecuniary interests, is still on record. (*Register of Wetheral*, p. 98.)

came into being, its bounds being those of the original lordship.

I do not know of any instance in Galloway where this evolution from private chapel to parish church is definitely recorded, but elsewhere we have instances that illustrate the process. Perhaps the best known case is the parish of Ednam, near Kelso. Early in the twelfth century* King Edgar of Scotland granted to a Normanised Angle—one Thor, surnamed Longus (*i.e.*, the tall one)—the lands of Ednam, then called Ednaham (the home on the river Eden). These lands were then unoccupied or waste lands, *desertam* is the adjective used in the charter, and Thor must have been in much the same position as a modern settler on a back block in Australia. At Ednam, then, Thor made his clearing. "With the King's help"—so he declares in his charter—"but with my own money and people, I have made my settlement on it and built a church in honour of St. Cuthbert"—and he adds with justifiable pride—"from the foundations have I built it." So Thor had settled there and cultivated the land and prospered. He may have had at first a private chapel, of which we have no record. At any rate he built this church for the use of himself and the inhabitants of his extensive manor and endowed it with the usual ploughgate of land and a tenth of the produce of his manor. It is significant that the bounds of his manor in the early twelfth century are the parochial boundaries of the present day. At a later date Thor presented the church and ploughgate to the monks of Coldingham.† In some such manner must the Norman dweller in the mote have founded Kirkdale parish church and dedicated it to St. Michael.‡ For some reason unknown to us they built it on the hillside far from the mote—unlike Minnygaff, where the Norman either must (from similar evidence of sculptured crosses) have had within a few yards of his fosse a private chapel, which was to develop into a parish church on the same site.

* 1098-1107 is the probable date.

† See the Coldingham Charters in Raine's *North Durham*.

‡ Chalmers's *Caledonia*, V., 333.

Kil and Kirk.

That Kirkdale was a Norman and not Celtic formation we know from other indirect evidence. It is probable—though the argument should not be stressed—that the prefix “Kirk” denotes a Norman or perhaps Anglian foundation, while the prefix “Kil” may indicate a foundation of the old Celtic or Gaelic-speaking Church. Kirkmahoe, we know from its re-dedication, was a re-foundation by the Norman Comyns, Lords of Dalswinton. Its original name may have been Kilmaho, just as within that parish there is an ancient chapel site called Kilblaen. Further, in one of those rare cases where we have clear evidence of a Celtic foundation the prefix is “Kil.” The parish of Kilconquhar, in Fife, belonged to the old Celtic Earls of Fife. No Norman or Angle is likely to have founded it. Rather the Celtic Earls, following the newly-introduced ecclesiastical system, must have turned an old Celtic community church into a parish church. In 1177 Duncan Earl of Fife granted the church of Kilconquhar and its lands to the Nuns of North Berwick. Had the change been made by a Norman, Kilconquhar might now be known as Kirkconquhar, just as a burn in Peeblesshire, once known on record as Kilburn, is now called the Kirkburn.* Similarly a chapel site dedicated to St. Bridget hard by to Kirkdale was once called Kilbride, but is now Kirkbride.†

There is no reason to think that Kirkdale was ever called Kildale, though we have been told that Kirkmabreck was once called Kilmabreck, and therefore an ancient Celtic community church centuries before the coming of the Norman.‡

* Similarly, Kirkmichael, an old parish in the Black Isle, Ross-shire, is still spoken of in Gaelic as Cill-Mhicheil. It also seems fairly certain that Kirklebride (Dumfriesshire) stands for Kirk-kil-bride. In this last case the Celtic “Kil” has not been displaced by Kirk as the result of translation, but has been superimposed on the Kil.

† M^cKerlie, iv., 276.

‡ Generally speaking, we may say that when the prefix Kirk is followed by the name of a Celtic saint, the presumption is that the commemoration is Celtic, and that “Kirk” has displaced an earlier “Kil.”

If so it was only right that when Kirkdale and Kirkmabreck were amalgamated in 1636 the combined parish should be called by the name of what may be the infinitely older ecclesiastical site of the two—so old that it may reach back to the early days of Iona.

This cross is therefore not only a memorial to a dead occupant of the Norman mote, but is also a symbol of the days when the Celtic Church was being re-invigorated and re-organised by Norman influence, when the old order was giving place to the new. So we may regard it as a milestone in the progress of Scottish ecclesiastical history.

The Owners of Kirkdale.

There remains to me only to say a few words on the Norman family who erected this cross. The Normans invented surnames, and their practice was to derive their surname from their lands. Thus the descendants of Thor surnamed Longus of the twelfth century can probably be identified with the family of de Ednam of the thirteenth century. So we would expect that the Normans of Kirkdale mote* would call themselves de Kirkdale. The first reference we have to such a family is in the year 1296, when Michael de Kirkdale served as a juror on an inquest relating to the lands of the de Zouche in Girthon. Apart from a few obviously

* It is now known as Kirkelaugh Mote, presumably owing to its proximity to that house. But it must formerly have been the Mote of Kirkdale. Kirkelaugh is purely a modern place-name, having no connection with a kirk. It is a corruption of Kirreelaugh, which means a stony division of land. It is not an ancient place-name, as the earliest reference to it that I can find is in 1567, where there occurs James Murray in Kirreelaugh (Thomas Anderson, *MS. Protocol Bk.*, No. 28). It was in old times owned by the M'Cullochs of Myrtoun, who resigned it in 1617 in favour of Robert M'Culloch, merchant, burgess of Kirkeudbright, perhaps a younger son (*R.M.S.*, 1609/20, 1618). On the right bank of the Kirkdale Burn, where it runs into the sea, is a curious formation known locally as a mote. It is not inventoried as such by the Historical Monuments Commission, and careful examination by a skilled geologist reveals its origin to be a natural formation. There are no traces of a fosse round it. In recent times it has been rendered accessible by a path, and used as a summer's day resort by the owner of Kirkdale House.

Celtic jurors—as the names Cuthbert Macgilgwyn and Patrick M'Gilbochyn imply—the other jurors have names of a Norman ring.* Of these, four, *i.e.*, Gilbert de Suthayk (Southwick), Adam de Colwenne, Richard de Twynham, Ralph de Campania, are known to have been of Norman extraction, whose forebears can be traced back to Cumberland or further south. Moreover, a Norman mote is to be found on the Scottish lands which each of them owned. We must therefore conclude that the ancestors of Michael de Kirkdale are to be sought for south of the Solway. Thereafter there is silence for over a century, till in 1428 another member of the family appears on the stage of history, in the person of Nicolas de Kirkdale, who still owned the family estate. Nicolas was a courtier and held a minor Court appointment, being Clerk of the Spices. Nicholas held this Court appointment for at least three years,† but did not die until 1449. He cannot, therefore, have lived to see the fall of the Douglasses and the annexation of the Lordship of Galloway to the Crown. His death probably saved his estate from forfeiture, for he might have been tempted to take up arms in the cause of his feudal superior. In 1456 the Abbot of Dundrennan, who was collecting the Crown dues in Galloway, accounted for £4 to the Exchequer, being the fermes of Kirkdale and Broach, in the hands of the King for five years and of the Earl of Douglas for two for non-recovery of sasine by the heirs.‡ We do not know who were the heirs, but as the family name died out with Nicolas, they may have been daughters. The heirs obtained sasine the following year (1457).§ Thereafter the lands passed to the Vaus family, John Waus being infeft in 1503 in Kirkdale and Broatch.|| The next year the lands were in the possession of Duncan Murray.** He was a burgher of Whithorn, and probably a member of the house of Broughton,†† and sold in 1532 the 4

* Bain, II., 824.

† *Ex. R.*, III., xcvi.

‡ *Ex. R.*, VI., 262.

§ *Ex. R.*, VI., 347.

|| *Ex. R.*, XII., 714, 715, but see M'Kerlie, IV., 249.

** *Ex. R.*, XII., 715.

†† *R.M.S.*, 1513/46, 330, 490, and 1241.

merklands of Kirkdale and the 2 merklands of Broatch to Alexander Hannay, to whose descendants the property still belongs. The patronage of the church must have remained in the hands of the de Kirkdale family, but on the death of Nicolas may have been acquired by the Crown.

The Rectors of Kirkdale.

In 1497 John Richardson was rector, witnessing a charter at Irvine.* He was succeeded by Robert Furd, who was dead by July, 1505, when the Crown presented Richard Aikenheid to the rectory.† He was the last rector, for in November, 1508, the Crown granted the church and its patronage to Whithorn Priory.‡ As an ecclesiastical unit Kirkdale never recovered from the Reformation. The first minister of Kirkmabreck acted as reader there till 1590, when he is believed to have been appointed to Kirkdale, remaining there four years and having no successor.§ He was probably an absentee minister, for we know that in 1592 the glebe and manse of Kirkdale were occupied by William Carnoquhen, a blacksmith plying his trade.|| The church became ruinous till scarce a stone remains.

Thus were the piety and provision of the Norman brought to nought by the disciples of Knox.

After the address the cup and ring-marked stones built into the walls of the stable were inspected, and the company then went to Kirkdale House, where Mr D. P. Maclagan, W.S., secretary of the Society of Antiquaries of Scotland, most hospitably entertained them to lunch. Mr Hugh S. Gladstone, president, voiced the thanks of the society to Mr Maclagan. The following paper was read before leaving Kirkdale House :—

* *R.M.S.*, 1424/1513, 2485.

† *Caledonia*, V., 333.

‡ *R.M.S.*, 1424/1513, 3268.

§ *Scott's Fasti*, II., 739.

|| *R.M.S.*, 1580/93, 2258.

Dirk Hatteraick's Cave.

By A. M'CORMICK.

I have often been asked by visitors who have searched along the Ravenshall shore, whether there really is such a cave as that known as "Dirk Hatteraick's Cave." The situation of the cave is indicated at No. 298 of the Fifth Report and Inventory of Monuments and Constructions in Galloway, Vol II. for Kirkcudbrightshire—"Some 250 yards to the east of the mouth of the Kirkdale Burn, in the high bank above the shore and some 35 feet up, is visible a small aperture giving access to the cave believed to be that immortalised by Scott in 'Guy Mannering.' So narrow is the aperture that a full-grown man can only with difficulty squeeze himself sideways between the opposing rock faces, and the entrance is further rendered difficult by the steep talus of soil and stone filling the lower part of the chasm, and down which an intruder has to 'slither' to reach the floor of the cave some 14 feet below. The cave is some 33 feet in length, with a narrow projection extending some 10 feet farther, and has an average floor width of from 4 to 5 feet, diminishing as it rises upwards. Along the left wall from the entrance are tiers of small rectangular recesses, resembling pigeon nests in a dovecot, but believed to have been formed for the storage of bottles of spirits by the smugglers. In rear of this arrangement of bins or nests there is a small inner recess. The dimensions of the 'nests' are about 10 inches by 6 inches. In its present condition it would have been impossible to convey any object larger than a very small keg or bottle through the entrance, but a fall of earth some years ago has partially filled the entrance." My friend, the late Mr Alexander Waugh, author of *Galloway Glimpses*, has recorded in that book perhaps the best description of the cave, but time does not permit me to read it to you. In Sir Walter Scott's additional note on Galwegian localities and personages, which have been supposed to be alluded to in the novel, he refers to Dirk Hatteraick and his cave thus:—"An old English proverb says that 'more know Tom Fool than Tom Fool knows,' and the influence of the adage seems to extend

to works composed under the influence of an idle or foolish planet. Many corresponding circumstances are detected by readers of which the author did not suspect the existence. The prototype of Dirk Hatteraick is considered as having been a Dutch skipper called Yawkins. This man was well known on the coast of Galloway and Dumfriesshire as sole proprietor and master of a buckkar, or smuggling lugger, called the Black Prince. The Black Prince used to discharge her cargo at Luce, Balcarry and elsewhere on the coast; but her owner's favourite landing places were at the entrance of the Dee and the Cree, near the old castle of Rueberry, about six miles below Kirkcudbright. There is a cave of large dimensions in the vicinity of Rueberry which, from its being frequently used by Yawkins and his supposed connection with the smugglers on the shore, is now called Dirk Hatteraick's cave." But the striking resemblance between Sir Walter Scott's description of the scenery in "Guy Mannering" and the scenery in the neighbourhood of Ravenshall is not disposed of by Sir Walter's glib accusation against Galwegians of "assigning to airy nothings a local habitation and a name." I have elsewhere discussed generally the question of the Galwegian localities and personages in "Guy Mannering," but now I merely desire to locate the situation of Dirk Hatteraick's Cave. Whether by accident or through having heard Captain or Mrs Tom Scott describe this particular cave, or having read accounts of it from Joseph Train, Sir Walter's references to Dirk Hatteraick's Cave indicate a cave somewhere on the eastern shore of Wigtown Bay and near to Ellangowan, the highest tower of which "is a gude landmark as far as Ramsay in Man and the Point of Ayr," and any other sites which may be claimed to have that honour should conform to these two conditions. I give the following quotations from "Guy Mannering" to justify my contention:—

"And what," said Brown to the boatman, "is the name of that fine cape that stretches into the sea, with its sloping banks and hillock of wood, and forms the right side of the bay?"

"Warroch Point," answered the lad.

"And that old castle, my friend, with the modern house situated just beneath it. It seems at this distance a very large building."

"That's the Auld Place, sir, and that's the New Place below it. We'll land you there, if you like."

"I should like it of all things. I must visit that ruin before I continue my journey."

"Ay, it's a queer auld bit," said the fisherman; "and the highest tower is a gude landmark as far as Ramsay in Man and the Point of Ayr. There was muckle fighting about the place langsyne."

"And so ye see, sir, there was a King's sloop down in Wigtown Bay, and Frank Kennedy, he behoved to have her up to chase Dirk Hatteraick's lugger—ye'll mind Dirk Hatteraick, Deacon. I daresay ye may have dealt wi' him—(the Deacon gave a sort of acquiescent nod and humph). He was a daring chield, and he fought his ship till she blew up like peelings off ingans; and Frank Kennedy, he had been the first man to board, and he was flung like a quarter of a mile off and fell into the water below the rock at Warroch Point, that they ca' the Gauger's Loup to this day."

One would almost infer from that quotation that the Gauger had been flung from the lugger into the sea, but we gather from the next quotation that in his hour of victory over Dirk he had encountered Meg Merrilees, who had probably been lying in wait for him and sent him to his doom.

"So, sir, Meg grippet him and clodded him like a stane from the sling ower the craigs of Warroch Head, where he was found that evening, but what became of the bebe, frankly I cannot say. . . ."

"But even the feelings of selfish apprehension for a time superseded, as Glossin passed the spot where Kennedy's body had been found. It was marked by the fragment of a rock which had been precipitated from the cliff above, either with the body or after it. . . ."

"Stifling, therefore, his feelings, he crept forward to the cave, which was so near the spot where the body was found that the smugglers might have heard from their hiding-place the various conjectures of the bystanders concerning the

fate of their victim. But nothing could be more completely concealed than the entrance to their asylum. The opening, not larger than that of a fox-earth, lay in the face of the cliff directly behind a large black rock, or rather upright stone, which served at once to conceal it from strangers and as a mark to point out its situation to those who used it as a place of retreat. The space between the stone and the cliff was exceedingly narrow, and being heaped with sand and other rubbish, the most minute search would not have discovered the mouth of the cavern without removing those substances which the tide had drifted before it. For the purpose of further concealment, it was usual with the contraband traders who frequented this haunt, after they had entered, to stuff the mouth with withered seaweed, loosely piled together as if carried there by the waves. Dirk Hatteraick had not forgotten this precaution."

The wood in the vicinity of the cave is called Warroch Wood, and the bold headland at Warroch Point is known as "The Gauger's Loup." It would be absurd, however, to claim that Dirk Hatteraick confined his smuggling operations to this particular cave, nor do I consider that Sir Walter Scott slavishly described Barholm Castle. The conclusion I arrived at elsewhere when considering the question generally is as follows:—

"Keeping in view, then, the aptness of Scott's descriptions of the Ravenshall locality and to the Galloway gypsies, and the sources from which that information is supposed to have been derived, is it unreasonable to conclude that Guy Mannering is the outcome of a composite knowledge of (first) what Sir Walter may have known from personal acquaintance with the Yetholm gypsies—Madge Gordon, from whom the portrait of 'Meg Merrilees's' avowed prototype, Jean Gordon, was partially drawn, amongst the number—and with Caerlaverock Castle; and of (second) what he may have learned from Joseph Train and the M'Culloch family of the Galloway gypsies—Billy and Flora Marshall amongst the number—and of Barholm Castle and 'Dirk Hatteraick's Cave,' and the other Galwegian localities around Ravenshall?"

I must conclude with a note of warning to visitors who wish to enter this cave. Major Stewart once had a narrow escape in the mouth of Dirk Hatteraick's Cave. He had been at Ravenshall with a picnic party. He had got down into the cave with some difficulty. As he was a very heavy gentleman, avoirdupois had accelerated his descent, but hindered his ascent. He stuck in the mouth of the cave. Some of his friends who were standing at the mouth of the cave tried to pull him out, but they failed, and they were all quite exhausted when a boy—one of the picnic party—who had been asked to run to the nearest house for help and to bring a rope noticed, as he ran down the brae, a fishing boat passing along, and he succeeded in giving the alarm. As the fisherman drew in to the shore the boy excitedly explained to him the predicament in which the Major was fixed, and asked him to bring a rope. He did so and hurried to the spot. He managed to get the rope under the Major's arms and, slipping the other end round his own body, he asked the others who were still holding by the Major's arms to give a steady pull. The fisherman's heels caught a stone and down the brae he tumbled, and with that extra jerk up popped the Major. As he gazed down the brae at the fisherman lying on his back he panted out: "Thank you, Adam [Birrell]. Through your opportune 'birreling' down that brae you drew me out of the jaws of death—like the cork out of a beer bottle!"

Thanks were given to Mr M'Cormick on the motion of the Secretary, and the company proceeded to Barholm Tower.

Barholm Tower.

By A. S. MORTON, Esq.

After describing the tower Mr Morton commented upon some uncommon features.

"At the entrance door they had the moulding and segmental shaped arched hood, which were perhaps not remarkable, but the cabled hood moulding terminating with a knot

at each end and the grotesque animal figure near the centre of the archway and the two masks, one on each side, were certainly peculiar and difficult to explain. The two staircase windows in the north wall of the wing had also uncommon features. The one on the first floor level consisted of a square-headed lintel with a shallow sinking cut in two semi-circular arches, and the window immediately above it was formed also of a single stone, and attention was drawn to its unusual shape. On the east wall at the ravine, above the window lighting the first floor, were several corbels, but their use was not now very apparent. The opening appeared to have been originally a doorway converted at a later date into a window. This raised an interesting question, for doorways entered from the first floor level belonged to an earlier period than was usually assigned to Barholm Castle, and, along with other certain features, suggested that the castle or part of it might be older than was generally thought."

He then read the following paper upon its history :—

Barholm belonged to the M'Cullochs from early in the sixteenth century, but it was not possible to say who built the castle. It did not appear to have played any prominent part in the history of Galloway, but its owners took an active interest in local and even national movements. The castle and the lands immediately around it were now included in Kirkdale estate, and the name " Barholm " had been transferred to the modern mansion near Creetown, still held by representatives of the M'Cullochs of Barholm. They had sprung from one of the oldest Galloway families—the M'Cullochs of Myrton, Wigtownshire, whose branches spread far and wide and entwined themselves with many families throughout the Province.

The first mention of the name of M'Culloch in connection with the lands of Barholm was in a contract dated 1st November, 1528, anent the redeeming of the " Five pound land of Barholm " entered into between Thomas M'Clelland of Gelston and David M'Culloch, who appears to have been the younger son of David, second son of James M'Culloch of Cardoness; and then in a Charter dated 22nd July, 1565, John M'Culloch is styled as of Barholm.

In those good old days bitter feuds occasionally existed between neighbouring families, and men sometimes took the law into their own hands. The M'Cullochs of Barholm could not avoid being entangled in these embroilments. On 17th April, 1578, James M'Culloch of Barholm was slain by John Broon of Carsluith, who seems to have fled from justice, as he did not attend for his trial and his sureties were forfeited. In the middle of the next century Harry M'Culloch, younger of Barholm, was mixed up in an outrage committed on the widow of Cardoness. Her two sons, William and Alexander Gordon, alleged that Sir Alexander M'Culloch of Myrton had formed a design to possess himself of Cardoness and bought sundry pleas, debts, comprisings and factories of the estate, and used all means to get himself intruded therein. On 19th August, 1664, he went with a party consisting of his two sons, Godfrey and John, and Harry M'Culloch, younger of Barholm, and others, all armed with swords and pistols, to Bussabiel, broke into the house and attacked the old lady. In October, 1665, the same persons committed a similar outrage, and in March the following year they were at it again, and it was alleged that Lady Cardoness died as a result of their treatment of her. The accused were tried by the Privy Council, but there seemed some difficulty as to their decision. They first appeared as condemning the accused parties to fine and imprisonment, then next day gave an opposite verdict, and yet, in April of the following year, we hear of Godfrey M'Culloch as still being under threat of punishment for this offence. The name Godfrey, it may be mentioned in passing, was an hereditary name in the M'Culloch family and was derived from Godfroi de Bouillon, King of Jerusalem, under whom a M'Culloch fought in one of the Crusades. This feud with the Gordons had a tragic end in 1690. Sir Godfrey M'Culloch went to Bussabiel and asked to see William Gordon, and when Gordon appeared M'Culloch shot him in the thigh and he died in a few hours. M'Culloch fled abroad to escape justice, but returned in a few years. One Sunday worshippers in a church at Edinburgh were startled by the cry, "Steek the door! There's a murderer in the kirk." It was from a Galloway

man who recognised M'Culloch. The latter was brought to trial and executed on 25th March, 1697. Tradition told of other feuds, but time would not permit of these being dealt with. The M'Cullochs of Barholm were zealous supporters of the principles of the Reformation, and when John Knox found the times too hot for him in Edinburgh he fled to Ayrshire, and then he came to Galloway and, about 1566, sought safety in Barholm Castle. His signature was for many years to be seen on the wall of a small arched apartment or bedroom at the head of the staircase.

The caves of Barholm often afforded a retreat for the persecuted Covenanters, and Barbour, in his *Unique Traditions*, specially refers to three caves—the Cove of Barholm, the Kaa's Cave, and the Whig's Hole. The minister of Kirkmabreck often sent food to some of the persecuted hiding in these caves. When the Act of Indemnity was passed in 1662, although it was headed "The King's Free Pardon," it narrated that the King, being desirous that all animosities and differences should be buried in oblivion, had resolved to grant a general Act of Indemnity and Pardon, but had thought to burden his pardon to some whose guiltiness had rendered them obnoxious to the laws and had placed their lives and fortunes at His Majesty's disposal with payment of some small sums. What these small sums were may be understood when it is stated that they amounted to over £84,000. Major M'Culloch of Barholm was fined £800. He was one of those taken prisoner at Rullion Green and was sentenced to be executed with several other Galloway men at Edinburgh on 7th December, 1666. He has been described as a most reverend looking old gentleman, but this did not help him anything in the eyes of his enemies. The heads of Major M'Culloch, John Gordon and Robert Gordon were commanded to be sent to Kirkcudbright for exposure on the principal gates of that burgh, and the right arms of M'Culloch and other Galloway men were sent to the Magistrates of Lanark to be fixed upon the public parts of that town, being the place where they took the Covenant with uplifted hands, as is the custom in Scotland. Before proceeding to the scaffold the condemned men signed a joint testimony which

is given in *Naphtali*, published in 1693. It is signed by ten of those who were executed, the first signature being that of John M'Culloch of Barholm. Anyone found in possession of this book, *Naphtali*, was liable to a fine of £10,000, but he had a copy of it with him in case any present would like to be found in possession of it. The Barholm estate was, of course, forfeited, and continued in forfeiture till the Revolution. On August 3rd, 1676, Henry M'Culloch of Barholm was among those ordered to be denounced for harbouring, resetting and speaking with inter-communed persons. He commanded the Galloway troops at Bothwell Bridge, 22nd June, 1679, where they gave a good account of themselves, notwithstanding the result. He escaped capture, but was tried in absence and, with many others, ordered to be executed when apprehended. The sentence, however, was never carried out.

Mr Morton then referred to the whole district around the castle as being rich in historic, literary and romantic associations, and claimed that of all the castles suggested as being the Ellangowan of "Guy Mannering," Barholm best answered the description. He concluded with an interesting quotation from the metrical romance, *The Briar of Threave and Lily of Barholm*.

In conveying to Mr Morton the thanks of the meeting, the Rev. Dr J. King Hewison remarked that "he did not think the people of Galloway realised the fact that Ayrshire, Dumfriesshire, Kirkcudbrightshire and Wigtownshire had been responsible for the finest principles of freedom brought to this country. There was the history of Galloway men led by Wallace and Bruce, and Galloway as the retreat of the famous Bruce during his unfortunate days. Then they came to the time of the Covenant, so beautifully described by Mr Morton, to whom he might convey the appreciation of a large number of readers. Galloway, he thought, did not fully appreciate what had been done by the M'Cullochs, M'Clellands and Gordons in years gone by. They might not have been there that day had it not been for the bravery of those families, for they did much to bring peace to the country."

The company then proceeded across country to Cairn-holy, where the legend of King Galdus was dealt with by Mr R. C. Reid.

The Legend of King Galdus.

By R. C. REID, Esq.

Who was King Galdus? Did he lie buried here? These are questions which no one visiting this spot can fail to ask themselves, yet they are questions which have never been answered, though the story of King Galdus and his tomb is repeated with fluctuating variations by every guide book. It is the duty of all Antiquarian Societies to examine such stories, to sift the fact from the legendary, to weigh the evidence and ascertain the truth. That is what we shall attempt to-day. It is not tampering with a venerable and prized tradition nor exploding a cherished belief. For a tradition is a human memory, venerable with age and sacred in that it embodies something of the truth. It is something that should be regarded with respect and dealt with tenderly, for it is as old as the surrounding hills. But King Galdus is not a treasured tradition—he is a brazen legend. But first let us take the legend, then trace it to its source. The legend, when stripped of the accretions of time and the halting explanations of modern writers, is brief—namely, that King Galdus was interred on this spot. With this has been combined a totally different story of another age which may well be a tradition embodying a substratum of truth. It is to the effect that on the adjoining moor of Glenquicken a battle was fought between Scots and English wherein the Scots were defeated and their general slain, whereupon the Bishop of Whithorn assumed command, but was driven seawards by the English, who slew him and buried him here.* A specific date is given to the Bishop's story, 1150; but with it we are not concerned to-day. Who, then, was King Galdus—that valiant warrior who fought the Romans and drove them from Galloway, and after an eventful reign of 35 years died peacefully in his bed to the dismay of his sorrowing people, who

* *New Statistical Account.*

decided to commemorate his greatness by calling their country Galloway after him? Surely with such an important potentate there should be no doubt as to where he was buried. Yet two spots within his erstwhile kingdom claim to be his tomb, Cairnholy and Torhousemuir in Wigtown. Curiously enough, the neighbourhood of both sites is associated with a tradition of a fighting bishop perishing on a field of battle.* Yet nearly a thousand years must separate the era of Galdus from the Bishop. It is obvious that King Galdus cannot have been buried in both places. From the earliest times traitors and other undesirables have been dismembered by their foes. But Galdus died in his bed. We must therefore ignore the claims of Torhousemuir and deal only with Cairnholy. Now we may search in vain through the early chronicles of our country, or of any other country, for a reference to Galdus. Every scrap of manuscript relating to the history of our country prior to the compilation of Fordun's *Chronicle* has been collected and published by the Government in a volume entitled *Chronicles of the Picts and Scots*. It contains no reference to Galdus. At the end of the fourteenth century Fordun compiled the first formal History of Scotland. As an historian Fordun was far in advance of his age, having travelled on foot through England, Scotland and Ireland, collating chronicles and collecting information. When every allowance has been made, Fordun was wonderfully accurate—but he tells us nothing about Galdus. Andrew Wyntoun, Canon of St. Andrews, who cannot have known of Fordun's *Chronicle*,† about 1420 wrote his *Orygynale Chronykill of Scotland*, but makes no reference to King Galdus. Prior to Hector Boethius, no writer records any such king as Galdus. Even John Major, contemporary of Boethius, had never heard of Galdus, and gives the same list of kings as Fordun does—a list which carried the official national imprimatur as having been promulgated before the three Estates of the Realm assembled for the coronation of King Alexander III. in 1249.‡ John Major wrote his *Chronicle* in 1521, yet in 1526, five years

* M'Kerlie, I., 345.

† *Chronicles of Picts and Scots*, pref. ix.

‡ Innes, *Essay on the Ancient Inhabitants of Scotland*, p. 142.

later, Boethius published his *History of Scotland* and introduced King Galdus for the first time to a bewildered world.

Hector Boethius, who was born at Dundee, was a Master of Arts at the University of Paris, and was induced by Bishop Elphinstone to go to Aberdeen when that Bishop founded the University there. He became Principal there, and was the first in Scotland to restore the Latin tongue to its purity. In the Dedication of his *History* he states that his object was to place the brave actions of the Scots in a *brighter* light in contrast to the former barbarous writers of Scots history, who had buried it in oblivion. Certainly Boethius made history brighter reading. He tells us quite a lot about what happened at the monastery of Ycolm Kill 160 years before that monastery was founded. Ptolemy, the geographer, he transforms into a King of Egypt; half-a-dozen of Fordun's kings he omits, though we have definite historical and textual record of their existence. In their place he inserts a dozen kings, some never heard of before or since, others imported from foreign countries and put into kilts. Thus, as we know by name of only one native chieftain who fought against the Romans, Boethius decided to provide some more, and did not hesitate to ransack the history of England and Gaul for suitable material. He unblushingly annexed and incorporated in his *History of Scotland* such well-known historical personages as Caractacus, King of the Silures in Southern England, and the warlike Carausius, who for the first and, I trust, last time figure as Kings of Scotland. Even that old friend of our childhood, now commemorated on Westminster Bridge, Boadicea, Queen of the Iceni, is made to drive her chariot across the stage of Scottish history. Truly, Boethius succeeded in his object in rendering our history *brighter* to the reader.

Amongst the inventions of Boethius is a king whom he calls Corbredus Galdus, or Galdus son of Corbred—another mythical king—and, according to Boethius, a nephew of Caractacus, and so first cousin to Boadicea. Galdus appears in the usual heroic mould—

“Curtas and kynd, rycht circumspect and wyss.”*

* Line 10,135 of Stewart's rhyming edition of *Boece*.

He is pictured as a great reformer, allowing no wrong to go unpunished, and vainly attempting to abolish the practice of *mercheta mulierum*. Early in his reign he is made to have raised the impossible host of 50,000 to repel the Romans. The time-honoured myth of a great eagle having been seen flying all day over the Roman Army is recounted, and the usual bombastic orison is placed in the mouth of Galdus, who, however, suffers defeat, but though severely wounded in the face, escapes on a fleet horse. Twelve thousand Scots, "rycht bellicose and bald," are slain. His wound kept him in bed for a year, but that did not prevent him coming south through Kyle, carried in his litter, with his host to defend the Border against the Romans, and when he went back to Argyll leaving 5000 men to garrison it. The following year Agricola appears on the scene, and Galdus reached the zenith of his renown. The Pictish King having been slain, Galdus is crowned with acclaim King of Picts and Scots. He brings 10,000 allies from Ireland, and secures the assistance of a great army of Danes. Then follows a description of the battle of Mons Graupius, though Boethius avoids all names that can be recognised, and Galdus appears even greater in defeat than in victory. Twenty thousand Scots and Danes are slain against 12,000 Romans, and Galdus commands the survivors to sing all night to drown the lamentations of the dying. After the departure of Agricola, Galdus has continuous success against the aggressors, finally vanquishing them at the Wood of Caledon and ejecting them from Pictland and Scotland. The conqueror then took up his residence at Epiake, the principal city of Scotland, where he died A.D. 131. A most precious sepulchre was raised to him, on which were engraved his victories. "Mony huge pillaris war raisit about his sepulchre to testify to his precellent virtue and glory of chivalry."*

That in epitome is the story of King Galdus as invented by Boethius. From beginning to end it is a pure fabrication. Dr Johnson's opinion was that the credulity of Boethius may be excused in an age when all men were credu-

* Bellenden's translation, Bk. IV., ch. 21.

lous. But credulity is one thing and fabrication another. Yet Boethius was a scholar with a European reputation and a friend of Erasmus. In 1494 he took his degree as Master of Arts in Paris, and to-day, more than 400 years later, we can crown him as Master of Fiction. It is obvious that Boethius had a copy of Tacitus' *Life of Agricola* before him, yet he nowhere ventures to identify Galdus with the chieftain Galgacus mentioned by Tacitus. That enormity was left to the practised hand of George Buchanan, who saw no reason to hesitate where Boethius held back. But even Buchanan, who followed faithfully in the steps of Boethius, felt compelled to omit much of the fabulous narration of the latter. So Buchanan only preserves the framework of the story of Galdus, who, he says, was "no less illustrious among his enemies than dear to his friends."* No reference is made to his place of burial or his sepulchre. On neither Boethius nor Buchanan can reliance be placed. Both wrote what they called history—but with different motives—one to make bright reading, the other for filthy lucre. A grammarian of distinction, a poet of real merit, the most learned critic of his times, and a pedagogue to Royalty itself, Buchanan's critical faculties were entirely dominated by self-interest. As long as Mary Queen of Scots was on the throne he was in receipt of honours and emoluments, and sang her effusive praises. But once his Royal Mistress was in prison he turned all the vitriolic powers of his pen against her in order to earn a pension of £100 from her enemies. At the christening of the Royal infant Buchanan wrote of the Queen:—"The lustre of her virtue is so bright that it attracts to her the hearts of all whose breasts are influenced by virtue." Yet scarce two years later, when the Queen was a deposed captive, he wrote his *Detection*, an atrocious narration of the Queen's lewd behaviour with Bothwell during the four months immediately preceding the christening ceremony. For this he received the lucrative posts of Director of Chancery and Keeper of the Privy Seal. He certainly believed in the Machiavelian principle—*Calumniare fortiter*

* Book IV., ch. 21.

semper, aliquid adhaerebit—which may be translated—“Throw mud as hard as you can, for some will always stick.” As a politician he may have been a success, but as a historian he can only be regarded as worthless.

The rest of the development of the legend of King Galdus can be told in a few words. Holinshed,* an English chronicler who apparently had never been in Scotland, whilst slavishly following Boethius, placed Epiake in Galloway. But it was left to a local poet to bury King Galdus here.† In 1662 Patrick Hannay of Kirkdale published a now very scarce volume of poems which attracted some attention. The admirers of his Muse, in accordance with the custom of the day, sent him complimentary epistles, also in verse. Amongst these epistles was one from a Mr John Marshall containing this couplet:—

“Thy ancestors were ever worthy found
Else Galdus' grave had graced no Hannay's ground.”

Appended is a marginal note—“King Galdus, who so bravely fought with the Romans, lies buried in the lands of Patrick Hannay of Kirkdale.” Here, then, appears for the first time the statement of burial at this site. It is instructive to see how the legend grew. Galdus was invented by Boethius, was identified with Galgacus by Buchanan, located in Galloway by Holinshed, and buried here by John Marshall. Principal, grammarian, chronicler and poetaster have all had a hand at his creation until King Galdus is almost believed in in the countryside.

The Chambered Cairn.

As Camden says, “there are everywhere so many forgers that hardly the true can be known from the false,” so it is necessary to call in archæology to correct the historians. What does archæology tell us of this site? It declares without hesitation that it is a stone age burial, many thousand years older than the Romans. As seen to-day it

* A contemporary of Buchanan, who died circa 1580.

† Sir Andrew Agnes, in his *Description of the Shire of Wigtown* (Macfarlane MSS.), compiled before 1672, mentions the tomb of King Galdus at Wigtown, the first reference to that site which I have found.

is only the core of what was once a huge cairn of stones. Circular in shape, this huge heap of stones must have at one time completely covered the remains of the tomb which we now see. Round the outer edge of this cairn we would expect, from analogous constructions, to have found a number of upright slabs, inclining inwards, partly or wholly buried by the stones of the cairn. All these have disappeared for building purposes. Andrew Symson, who flourished at the end of the seventeenth century, states that the small stones were all removed by the country people for building dykes.* What is left consists of the chamber of the tomb, the passage and the portals. Facing eastwards is a high squarish pillar, obviously one side of the portal. The other stone can hardly be the other pillar of the portal. They are too close together to permit entry. The small stone may have been a lintel. Within the portal is the passage, 8 ft. long, leading to the chamber. Two of the stones here have been displaced. The chamber itself is 5 ft. by 3 ft. by 4 ft. high, and is covered by a single colossal slab as a table stone for the cap—a feature which has caused this chambered cairn to be described as “of the dolmen type.” It is doubtful whether the top slab is in its original position, as several of the supporting stones forming the sides of the chamber have been removed. It is possible that this cairn may have had more than one chamber, for Symson says that a “furlong south-east of the Kirk of Kirkdale lay a great cairn, with 5 or 6 stones erected, besides which high stones 5 or 6 tombs were discovered made of thin whinstone.” To-day there is only evidence of one tomb. Chambered cairns of this type are to be met with of all sizes—one in County Meath being 70 feet high, over 300 feet in diameter, and covered with trees. In Ireland they are associated sometimes with Ogham inscriptions. In the Channel Islands there is evidence that these tombs were used by successive generations for many ages.†

Popular fancy has in the past associated these megalithic remains with Druidical rites, describing the capstones as

* Jewitt's *Grave Mounds and their Contents*.

† Macfarlane, II., 67.

"altars" and affirming that where, as in this case, one end of the capstone is lower than the other it had been so constructed that the blood of the victim might run off in that direction. But it is just as fanciful to associate the Druids as King Galdus with this site. There is no evidence that the Druids had a hold in Scotland.

These chambered cairns are the earliest sepulchral constructions known in Scotland, and archæology cannot yet venture to give them a precise date. Early Neolithic man, as the Oban caves attest, lived in Scotland ages before the builders of these chambered cairns, but he was a cave dweller, a hunter, a nomad and a most unsociable person. Centuries had to elapse before the gregarious instinct developed, before he lived in village settlements. These cairns imply a definite civilisation, village communities, knowledge of agriculture, the keeping of cattle, the growing of harvests. There is evidence of an active trade and, above all, most peaceful conditions; for though personal and communal quarrels must have been numerous, it is difficult to believe that anything in the nature of serious war was possible when only a stone hammer was available. Things were very different after the discovery of bronze had armed with invincible weapons the wild tribes of Eastern Europe and started the great all-conquering Celtic migration.

We know nothing of what happened in Scotland between the era of the Oban man and the builders of these chambered cairns. That great Mediterranean race known as the Dolmen builders, who have left their megalithic monuments all over Europe, England, and parts of Ireland, cannot have reached Scotland. They must have been followed by another race, perhaps from the Baltic,* who introduced the chambered cairn, whether in the form of long barrow, horned cairn or circular chambered cairn like this one. They settled on the Yorkshire coast, round the Firth of Forth, and penetrated to Gloucestershire and Wiltshire, which must have been their principal seat. In Ireland they were settled

* They have been tentatively equated with the Fir Gailleoin of Irish tradition (Brownlee's *Origin and Distribution of Racial Types in Scotland*).

in Meath, and they must have worked up the west coast of Scotland as far as Orkney. At Cairnholy they have left two cairns, perhaps more yet to be located. The builders of these cairns must have reached here either by coming up the Solway or by passing down from Ayrshire *via* Carsphairn, probably the latter, for another stream of them coming from Carsphairn passed into Dumfriesshire *via* Stroanfreggan and Moniaive. None of the Dumfriesshire long cairns has been excavated, so we don't know whether their chambers are similar to these or not. But in Dumfriesshire we have at Stroanfreggan a large circular cairn similar to this one containing a megalithic cist of the transitional period between the Bronze and Stone Ages. The so-called grave of King Galdus, with its chamber, passage and portals, can therefore probably be placed earlier than Stroanfreggan, but later than the long horned cairn that adjoins this site. No one yet dares to define the dates of these Stone Age burials, but it is generally agreed that in Scotland the Bronze Age commenced about eighteen hundred years before the birth of Christ. Stroanfreggan comes just before that—say 2000 B.C. This chambered cairn must therefore belong to some unknown date, perhaps not long before 2000 B.C.

So archæology tells us of this site a very different story. Instead of stirring tales of Roman invasions it takes us back to those misty ages which we call prehistoric and dates this sepulchre two or three thousand years before Rome was built.

There is only to add that the present name of the farm preserves in modern form this aged legend. Cairnholy as a place-name cannot be traced back beyond a century. The original name was Balmacrail.*

Mr J. M'Gowan Wilson, tenant of Cairnholy for over a quarter of a century, pointed out places in the vicinity in which lay several cup and ring marked stones, and indicated certain mounds where tombs of a similar character to that just described might be found on excavation, and stated that many of the gate posts in the district had obviously been slabs re-

* M'Kerlie, IV., 287.

moved from such monuments. The posts supporting the stables at Barholm were of that character.

In the next field is the horned cairn, and on this subject a few remarks were made by Mr J. Graham Callander, F.S.A., Scot., Director of the National Museum of Antiquities, Edinburgh, who was a member of the party.

Horned Cairn, Cairnholy.

By J. GRAHAM CALLANDER, Esq., F.S.A., Scot.

Mr Callander said that, as Mr Reid had remarked, they had only the merest fragments left of what must have been a very imposing monument. It had been a long, horned cairn, but whether it had had horns at both ends it was impossible to say. The burial chamber was of quite a different type from that found in the horned cairns of the north of Scotland. Instead of having long, trough-like chambers like the Cairnholy cairns, those in the north had chambers roughly of beehive shape, sometimes divided into three compartments. It seemed that the northern examples were meant to contain a sequence of burials, but they could hardly imagine people forcing in a dead body between the closely set portal stones of the cairn they were looking at. The chambers in the Cairnholy cairns to a certain extent resembled certain of those in cairns found in the Clyde area—in Bute, Arran, and Kintyre—and he believed that somewhat similar examples extended northwards as far as North Uist. Last week, when in Perthshire, he found one near Comrie, the only one of this class known, so far, in the East of Scotland. He did not think the chambered cairn builders of Scotland came from Norway, because the Arran cairns yielded some pottery, which was practically identical in shape with pottery that was found in Spain. This suggested that the people who built the long cairns in Scotland may rather have come up the west coast. It was, however, a very difficult thing to talk of these early migrations, and much more would have to be learned before they could speak about them with any degree of confidence. As for their period, Mr Reid had

said it was about 2000 B.C., and he thought this was very near it. Something had been said about cup-and-ring marks and their period. Some of the big chambered cairns in Ireland had many cup markings and spirals, but in Scotland they had cup-and-ring marked stones which had been used as the lids of short cists dating to the early part of the Bronze Age. That showed that cup-and-ring marks, if not contemporaries of the chambered cairns in Scotland, must have come in shortly after their time. Mr Callander went on to speak of a beautiful bronze handle of a Roman ewer which was found at Cairnholly and which is now in the National Museum at Edinburgh, and said that there was no evidence that the Romans ever occupied Galloway, but a few Roman relics had been found in different parts. These, no doubt, would be brought in by way of trade or possibly as loot, when some of the Galloway people raided the Roman forts farther east.

Mr Callander was thanked on the motion of Mr R. C. Reid. The next place visited was Carsluith Castle.

Carsluith Castle.

By G. W. SHIRLEY.

I should like to point out in the first place that Carsluith had a connection, an unexplained connection, with Dumfries. On the wall of the Midsteeple at Dumfries there are two stones which were built into the structure when it was restored by the late Mr James Barbour. One of these bears the initials of two of the Bailies of the town and the other the words, "A' Loreburn," and a coat-of-arms. The history of the stones is well known. They came from the first prison in Dumfries, which was built in 1579, and they were saved when the prison was taken down and built into the wall of the summer-house at Knockhill, Annandale. From there, by the good offices of Mr Barbour, they were restored to Dumfries and placed in the notable position they now occupy. They are the oldest inscribed stones possessed by the burgh of Dumfries. It might be supposed that the coat-of-arms adjacent to the slogan of the burgesses would

be that of the town itself, but that was not so.* The escutcheon of Dumfries, back to the thirteenth century at least, was St. Michael and the Dragon. The arms on the Midsteeples are those of the Browns of Carsluith. Their duplicate can be seen over the entrance door of Carsluith Castle—a chevron between three fleurs-de-lis. No explanation had been offered for their appearance on the old prison of Dumfries. It might be supposed that seeing the initials of the Bailies were given, the Provost might have his arms inscribed there as well, but that was not so, the Provost at that time being a member of the family of M'Briar—Archibald, to wit, who was afterwards executed in Edinburgh for murder.

It may be noted that in several points the description of Carsluith given in the Report of the Ancient Monuments Commission does not conform with the present condition. For instance, the Report stated that there were two curiously placed windows in each of the vaulted chambers of the basement, and that the upper ones had probably been constructed at a later date for the purpose of securing more light. While this might have been the case, the lower openings are shot holes. Again, the “saut” box in the kitchen fireplace was described as having two openings, whereas it has now at any rate only one from the “in go” of the fireplace. It is possible that the opening from the room was in existence prior to the reparations made by the Office of Works, who may have decided that it was an unintentional aperture. There was also no indication that the attic originally consisted of two apartments, as stated in the Report.

In dealing with the history of the Castle Mr R. C. Reid has provided me with some notes which confirm the state-

* “The Antient arms of the town of Dumfries is said to have been a Chevron and three fleurs de lis, which are still to be seen on the front of the Prison. It is probable that the stone on which they are carved might be part of the old Prison, which is said (Edgar's Manuscript) to have been erected about 350 years ago, and which occupied the site of the present Council Chambers. The arms used for a great many years past by the Town is St. Michael, the Tutelary Saint of the place. . . .”—Burnside's *MS. History*, 1791, p. 67.

ments made by Dr John Lindsay in his article on "The House of Fairgirth.*" The early portions of M'Kerlie's account of Carsluith may be discarded. Still we seem to be unable to get further back than the first decades of the fifteenth century. Fairgirth, in Colvend, was originally held by the Douglasses, but on their deprivation of their lands in 1455 Master James Lindsay was granted a new infeftment by the Crown. This indicates that he had held them previously from the Douglasses, and it is very likely he did, for he was Provost of the College of Lincluden under the patronage of the Lords of Galloway, and had previously been secretary to the 8th Earl of Douglas and was much favoured by him. It is likely he would settle the succession on a kinsman, a nephew, perhaps, and we find a James Lindsay in possession. An earlier Provost of Lincluden was Mr Alexander de Carnis or Cairns. He was chancellor or secretary to Archibald, 4th Earl of Douglas, and received from him a private grant of Gilkerscleuch in Crawfordjohn and Carsluith in the Stewartry. These lands he settled on his nephew, John Cairns, and Elizabeth, his wife, and the Duchess of Touraine in 1422 confirmed them by charter. Margaret Cairns who inherited was doubtless their daughter, and she married James Lindsay of Fairgirth. Thus these lands, with a curiously parallel history, were united in their ownership for a period. James Lindsay was Customer of Kirkcudbright from 1461 to 1469, and was prominent in the public life of the district. In addition to the lands he owned, he leased Corbieton, Carlingwark, Clonyard and Auchenhay, and must have been wealthy. He was appointed Chamberlain of Galloway in 1493. He was succeeded by his son Michael, who in 1506 had a Crown Charter of Fairgirth and Carsluith. He owned extensive properties, and was evidently opulent. The first building of Carsluith may be ascribed either to his father or to him. His son and heir, Herbert, appears to have been slain at Flodden, and the estate went to his young son, John. Though still a minor, he was entered upon his lands. This was by virtue of the

* *Publications of the Clan Lindsay Society*, Vol. 11, No. 6.

decree of the King and nobles in camp before Flodden that no casualty of ward should be exacted from the heirs of those who should die in the campaign. John, however, died young without issue, and his sister, Elizabeth Lindsay, was infeft in 1531. The estate had been entailed, but this must have been set aside. The heiress, however, partly carried it out, and James Lindsay, her uncle, was placed in possession of Fairgirth, Corsock and Auchenhay, while the lands in Lanarkshire went to another relative, James Lindsay, master falconer to the King. Carsluith she retained. She married Richard Brown. His origin is unknown, and it is mere speculation that connects him with the Brouns of Drum-brough and Bowness. The Browns of Carsluith, contracting marriages with adjacent families such as the Gordons of Craichlaw, continued an apparently undistinguished ownership, except for an occasional murder, such as that of the Laird of Barholm, as mentioned by Mr Morton, until 1748, when James Brown, an India merchant, sold Carsluith to Alexander Johnstone, a London chemist. At the beginning of the nineteenth century it was purchased by Ramsay Hannay of Kirkdale one of whose ancestors, on the distaff side, was Grace Brown of Carsluith.

It was noted by one of those present that the date above the entrance doorway, which could not be read beyond 156—, was in his youth quite clearly to be read 1564, the probable date of the reconstruction.

The Stone Circle on Glenquicken Moor was reached after a quick run, and there Mr Adam Birrell gave interesting information regarding the antiquities in the vicinity, including the old Military Road, the Stone Circles at Cairnharrow and Glauchreed, and told various old stories and legends associated with the district. He was cordially thanked on behalf of the Society by Mr R. C. Reid, not only for his remarks but for the trouble he had taken to make this the most successful outing it had been.

The last visit was to Cassencary, where Mrs Henryson Caird received the company. The following paper was read :—

Cassencary.

By W. A. F. HEPBURN, Esq.

A single glance at this stately pile will serve to show that a portion of it at least is of very considerable antiquity. The first mention of the actual building dates from the year 1684, when Symson refers to it as one of the considerable houses of the neighbourhood. Probably the oldest portion, the tower, goes back another hundred years, to the middle of the sixteenth century. Of the early history of the building it is difficult to say much. The names of the builder and of the early owners have not come down to us. In the centuries preceding the sixteenth the property seems to have been in the possession of the Church. Prior to the Reformation the lands connected with Cassencary were gifted by the Church, but to whom we do not know, for at the Reformation the records were destroyed, and we do not know the names of the early owners. The first family to be recorded as connected with Cassencary is the family of Mure, probably a branch of the Muirs of Torhousemuir, in the parish of Wigtown; and the first undisputable name and date is that of John Mure, possessing Cassencary in the year 1586. Alexander, son to John, married Helen, second daughter of William Maclellan of Balmangan, in the parish of Borgue. Through the direct line—Richard, John, William—the property descended to George, who became a lawyer, a Writer to the Signet in Edinburgh, and entered into possession in 1757. He married Margaret, daughter of Alex. Mackenzie of Delvine, in Perthshire. Alexander, son of this marriage, succeeded his father in Cassencary in 1784. He also succeeded to the estate of Delvine and assumed the name of Mackenzie. In 1805 he was created a baronet. He was followed by a son, John, who in turn was followed by his son, Alexander. In the time of Alexander, the third baronet, Cassencary was sold to Sir James Caird, M.P. for Stirling, who was Galloway born, his family hailing from Stranraer. The estate is still in the possession of the Caird family, who have modernised the house and added to its size and dignity. Cassencary is said to be the original of the “Woodburne”

of Guy Mannering, the house which Colonel Mannering rented after his failure to purchase Ellangowan. It was to this house that there came by sea from Liverpool as a legacy to Colonel Mannering, the library of his uncle, the Bishop. Forty cartloads of books were conveyed from the Ferry, and to Dominie Sampson was assigned the prodigious but congenial task of arranging, shelving and cataloguing them. As you go through the two libraries of the modern Cassencary it will not take much effort of fancy to imagine that some of the Dominie's handiwork is still before you. The name Cassencary is of doubtful derivation. M'Kerlie, in *Lands and their Owners*, claims that it is from the Gaelic "cas-a-carraig," which means "the steep cliff," and certainly the background of the house would lend colour to this interpretation. Others claim that it is a corruption of the two Gaelic words, "casan caora," and means "the footpaths of the sheep." Reasons of poetic appropriateness would incline one, I think, to prefer the second derivation, "the footpaths of the sheep."

The company were then entertained to tea and shown over the house by Mrs Caird.

A vote of thanks to Mrs Caird for her kindness and hospitality was awarded on the call of Mr Gladstone, to which Mrs Caird suitably replied.

Exhibits.

19th February, 1926.—Dr. Semple—Specimen of *Petasites Albus*, the White Butterburr, found by Mr Joseph Brown outside Irongray Manse garden wall, where it had established itself strongly. Not a native of Scotland, and now recorded for the first time for this district.

Presentations.

9th October, 1925.—Rev. J. Hamilton, Church of Scotland, Liverpool—Baton of the Criminal Officer, County of Dumfries, with painting of the Town Hall, formerly the Court-House, upon it.

Mrs M'Culloch, Lochanhead—Piece of brocade, traditionally believed to have been a portion of the wedding dress of the 3rd wife [?, 2nd, Jean M'Math, m. 24th March, 1649] of Samuel Rutherford. Stated by a London authority to be of 17th century date, and woven at Spitalfields from an Italian design. It is very rare, and another small portion has been accepted by the Victoria and Albert Museum. It was found under several other layers of material covering an old couch at Ardwall.

6th November, 1925.—Captain J. D. Ballantyne—Relief map of the site of Dumfries on a scale of 10 in. to the mile, and in elevation 30 in. to the mile, designed and made by Captain Ballantyne.

29th January, 1926.—Mr Robert Brown, Wanlockhead—Old-fashioned powder tester found at Wanlockhead. Used for ascertaining the strength of powder prior to blasting.

Abstract of Accounts

For Year ending 30th September, 1926.

I.—ON ACCOUNT OF CAPITAL.

Sum invested at close of last Account	..	£288	17	6	
Seventeen Life Members' Subscriptions	..	89	5	0	
					£378 2 6

II.—ON ACCOUNT OF REVENUE.

CHARGE.

Balance brought forward from last year	..	£132	7	7	
Annual Subscriptions	.. ..	144	15	0	
Life Members' Subscriptions	.. ..	89	5	0	
Interest on Investments	.. ..	17	17	11	
Donations	.. ..	114	16	0	
Sale of <i>Transactions</i>	.. ..	19	5	2	
Miscellaneous	.. ..	3	4	3	
					£521 10 11

DISCHARGE.

Rent and Insurance	.. ..	£13	6	6	
Publication of <i>Transactions</i> , Vols. IX., X.,					
XI., etc.	.. ..	373	3	1	
Stationery and Advertising	.. ..	26	1	9	
Miscellaneous	.. ..	11	11	3	
Transferred to Branch I.	.. ..	89	5	0	
					513 7 7
					£8 3 4

III.—DONATIONS TOWARDS PUBLICATIONS.

Sum at close of last Account		£141	19	6	
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Note.—The donations received during the past year, amounting to £114 16s, were utilised in assisting to pay the publication of Vols. IX., X., and XI.

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